TREASURY DEPARTMENT
UNITED STATES COAST GUARD

EXPLOSIVES OR OTHER DANGEROUS ARTICLES ON BOARD VESSELS

REGULATIONS GOVERNING THE TRANSPORTATION, STORAGE, STOWAGE, OR USE OF EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES, AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS

APRIL 9, 1941
(REVISED JULY 1, 1947)
CG 187

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1947

For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

UNITED STATES COAST GUARD HEADQUARTERS,
Washington, D. C., July 1, 1947.

The regulations in this booklet are applicable to all vessels subject to the provisions of R. S. 4472, as amended (46 U. S. C. 170). The requirements for handling, stowage, storage, and transportation of explosives or other dangerous articles or substances and combustible liquids on board vessels (foreign and domestic) on any navigable waters within the limits of the jurisdiction of the United States, including its territories and possessions, are set forth herein. These regulations do not cover the transportation of inflammable or combustible liquid cargo in bulk and such requirements are published in a separate pamphlet entitled, "Tank Vessel Regulations."

These regulations replace the publication entitled "Explosives or Other Dangerous Articles on Board Vessels," dated April 9, 1941, as amended. This edition contains all the amendments to the regulations promulgated and published in the Federal Register between April 9, 1941, and July 1, 1947.

General authority over and responsibility for the administration and enforcement of the laws and regulations governing the transportation, storage, stowage, or use of explosives or other dangerous articles or substances and combustible liquids on board vessels in the several Coast Guard districts are vested in and imposed upon the Coast Guard District Commanders in charge of such districts.

Shippers, shipowners, operators, vessels' operating forces, and all other persons transporting, carrying, conveying, handling, storing, or stowing on board vessels subject to the requirements of R. S. 4472, as amended, and the International Convention for the Safety of Life at Sea, 1929, any explosives or other dangerous articles or substances and combustible liquids should familiarize themselves with the provisions contained herein. To this end, Coast Guard personnel concerned with the administration and enforcement of these requirements will extend every possible assistance.

J. F. Farley

J. F. FARLEY,
Admiral, U. S. Coast Guard, Commandant.

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SUBCHAPTER N—EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES, AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS

UNITED STATES COAST GUARD

EXPLOSIVES OR OTHER DANGEROUS ARTICLES

AMENDMENT CONTROL SHEET

SEPT. 23, 1941.

Amendments and revisions to the regulations in Subchapter N—Explosives or Other Dangerous Articles or Substances, and Combustible Liquids on Board Vessels, dated April 9, 1941, are recorded hereon.

Loose-leaf reprint sheets containing amendments and revisions to the regulations, prepared for insertion within the printed copies, will be forwarded to holders of official copies and to persons having subscribed for such service through the Office of the Superintendent of Documents, Government Printing Office, Washington, D. C. Each issue of reprint sheets will be accompanied by a reissue of this control sheet showing the order number and date of publication of the amendment in the Federal Register, the numerical order of the amendment, the effective date of the amendment, and the page numbers upon which amendments or revisions occur.

Commencing with the third amendment, each reprint sheet when issued will have printed on the page affected by an amendment or a revision a footnote indicating that the sheet has been amended or revised, together with a brief description of the amendment or revision. For example, a page that has been amended will carry a footnote somewhat as follows: (5th Amend.—Sec. 146.23-12 added—July 1941); a page that has been revised will carry a footnote: (1st Rev.—Sec. 146.03-16—July 1941).

In the phraseology of these footnotes, "amendment" indicates an alteration has been made changing the effect of the regulation; "revision" indicates the text has been changed in some manner without altering the effect of the regulation as originally promulgated.

FIRST ISSUE, SEPT. 23, 1941

AMENDMENTS TO AND INCLUDING SEPT. 30, 1941

Order No. 94—3/27/41; 1st Amendment—Apr. 9, 1941.

Order No. 103—4/11/41; 2d Amendment—Apr. 9, 1941.

NOTE.—These amendments were made prior to the printing of copies of these regulations and were incorporated in the original printed issue dated April 9, 1941; therefore reprint sheets are unnecessary.

Order No. 113—5/14/41; 3d Amendment—May 13, 1941; page N-72.

Order No. 127—6/17/41; 4th Amendment—June 14, 1941; page N-347.

Order No. 129—7/1/41; 5th Amendment—July 1, 1941; pages N-4, 23, 27, 29, 37, 44, 45, 48, 61, 76, 77, 78, 79, 89, 97, 101, 102, 113, 114, 125, 126, 127, 128, 129, 130, 131, 133, 134, 135, 136, 137, 138, 139, 142, 143, 144, 146, 147, 148, 149, 150, 151, 153, 154, 155, 157,

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1st Revision—July 1, 1941; pages N-17, 41, 46, 47, 49, 71, 132, 156, 272, 320, 342, 360.

Order No. 148—9/23/41; 6th Amendment—Sept. 22, 1941; page N-346.

SECOND ISSUE, JUNE 1, 1942

AMENDMENTS FROM OCT. 1, 1941, TO AND INCLUDING JUNE 1, 1942

Order Nos. 167 and 168—11/19/41; 7th Amendment—Nov. 17, 1941; pages N-370, 370A.

Order No. 183—12/23/41; 8th Amendment—Dec. 20, 1941; pages N-219, 220, 220A.

Order No. 190—1/3/42; 9th Amendment—Dec. 31, 1941; pages (Appendix) N-384, 385.

Order No. 212—2/18/42; 10th Amendment—Feb. 17, 1942; pages N-4, 23, 27, 31, 33, 36, 37, 40, 43, 97, 111, 112, 123, 124, 145, 156, 169, 177, 191, 193, 194, 195, 206, 219, 222, 252, 256, 270, 271, 276, 297, 298, 385.

2d Revision—Feb. 17, 1942; pages N-31, 145, 146, 178, 206, 207, 220B, 349. (Title page also revised.)

Order No. (blank)—4/1/42; 11th Amendment—Mar. 19, 1942; page N-351.

Order No. (blank)—5/7/42 and 5/16/42; 12th Amendment—May 4, 1942; page N-385.

AMENDMENT SHEETS DISTRIBUTED JUNE 1, 1944

Amendments and revisions to the regulations in Subchapter N—Explosives or Other Dangerous Articles or Substances, and Combustible Liquids on Board Vessels, dated April 9, 1941, are furnished herewith.

Loose-leaf reprint sheets containing amendments and revisions to the regulations, prepared for insertion within the printed copies, will be forwarded to holders of official copies and to persons having subscribed for such service through the Office of the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Each issue of reprint sheets will be accompanied by control sheet showing the order number and date of publication of the amendment in the Federal Register, the numerical order of the amendment, the effective date of the amendment, and the page numbers upon which amendments or revisions occur.

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In the phraseology of these footnotes, "amendment" indicates an alteration has been made changing the effect of the regulation; "revision" indicates the text has been changed in some manner without altering the effect of the regulation as originally promulgated.

TITLE 46—SHIPPING

CHAPTER I—COAST GUARD: INSPECTION AND NAVIGATION

SUBCHAPTER N—EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES, AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS

PART 146—TRANSPORTATION OR STORAGE OF EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES, AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS

(5th Amend.—146.22-12 added—July 1941)
(16th Amend.—146.21-16 added;
146.22-12 changed—Feb. 1942)

(3rd Rev. §§146.24-15, 146.28-1 to 22 incl. added—Sept. 1943)

SUBPART—TRANSPORTATION OF MILITARY EXPLOSIVES ON BOARD VESSELS DURING PRESENT EMERGENCY [1]

[1] These regulations are published in a separate pamphlet entitled "Regulations Governing Transportation of Military Explosives on Board Vessels During Present Emergency," which may be obtained upon request from the Commandant, U. S. Coast Guard, Washington 25, D. C.

PREFACE

146.01-1 Purpose of regulations.—The purpose of the regulations in this subchapter is to promote safety in the handling, stowage, storage and transportation of explosives or other dangerous articles or substances, and combustible liquids, as defined herein, on board vessels on any navigable waters within the limits of the jurisdiction of the United States including its territories and possessions excepting only the Panama Canal Zone, and to make more effective the provisions of the International Convention for Safety of Life at Sea, 1929, relative to the carriage of dangerous goods.

146.01-2 Source of regulations.—The Commandant of the Coast Guard shall by regulation define, describe, name and classify all explosives or other dangerous articles or substances, and combustible liquids and shall establish such regulations as may be necessary to make effective the purpose intended.

146.01-3 Plan of regulations.—Regulations setting forth general requirements covering the transportation of explosives or other dangerous articles or substances, and combustible liquids will be found in §§ 146.01-1—146.10-50. Regulations setting forth detailed requirements applicable to individual substances will be found under their particular classification in §§ 146.20-1—146.27-100.

(3rd Rev. "Content table" relocated-Sep. 1943)

146.01–4 Classifications.—Explosives or other dangerous articles or substances, and combustible liquids are classified in the regulations in this part according to their principal characteristics and properties as follows:

Explosives:
- Class A—Dangerous Explosives.
- Class B—Less Dangerous Explosives.
- Class C—Relatively Safe Explosives.

Inflammable Liquids.
Inflammable Solids and Oxidizing Materials.
Corrosive Liquids.
Compressed Gases.

Poisons:
- Extremely Dangerous Poison, Class A.
- Less Dangerous Poison, Class B.
- Tear Gases or Irritating Substances, Class C.

Combustible Liquids.
Hazardous Articles.

146.01–5 Changes in regulations.—Changes in regulations usually result from the development of new information, altered conditions, improvement in manufacture, or modernized commercial practices. Proposals for changes will be considered by the Commandant of the Coast Guard on his own motion or upon a request submitted by any carrier interest, by industry, or other interested party.

146.01–6 Provision for notice and public hearing.—Additions, alterations, amendments or repeals of any of the regulations in this subchapter except in an emergency, shall be published and public hearings with respect thereto shall be held on such notice as the Commandant of the Coast Guard deems advisable under the circumstances. Any additions, alterations, amendments or repeals shall, unless a shorter time is authorized by the Commandant of the Coast Guard, take effect ninety (90) days after their promulgation.

146.01–7 Inflammable or combustible liquids in bulk.—Nothing in the regulations in this part shall be construed as affecting the transportation of inflammable or combustible liquids in bulk, such transportation being governed by the regulations promulgated under the provisions of section 4417a of the Revised Statutes, as amended (46 U.S.C. 391a).

146.01–8 Effective date of regulations.—The regulations in this subchapter shall become effective on and after April 9, 1941.

146.01–9 Supersedes existing rulings.—All rulings in existence on the effective date of the regulations in this part regarding transportation, packing, marking, labeling or storage, as cargo, of explosives or other dangerous articles or substances, and combustible liquids, on board vessels as promulgated by the office of the Director of the Bureau of Marine Inspection and Navigation are superseded by the regulations in this part; except nothing in this provision shall be construed as affecting the transportation of inflammable or combustible liquids in bulk under the provisions of section 4417a of the Revised Statutes, as amended (46 U.S.C. 391a).

146.01–10 Supersedes existing regulations.—General Rules and Regulations in existence on the effective date of the regulations in this part regarding the transportation, packing or stowage, as cargo, on board passenger vessels of hay, straw, baled cotton, baled hemp, or other inflammable material, and refined petroleum having a flashpoint of not less

vessel shall be subject to the provisions of R.S. 4472, as amended, with respect to explosives prohibited to be transported, stored, or stowed on board any vessel.

(c) Regulations with respect to explosives prohibited by subsection 3, of R.S. 4472, as amended, apply to all vessels.

(d) Regulations with respect to the transportation, storage, or stowage of high explosives on board passenger vessels apply to all vessels defined as "Passenger Vessels" in § 146.03–36.

(e) Regulations with respect to the transportation, storage or stowage of high explosives on board vessels, other than passenger-carrying vessels, apply to all vessels defined as "Barges" or "Cargo Vessels" in § 146.03–36.

(f) Regulations with respect to the transportation, storage or stowage of explosives (other than high explosives) or other dangerous articles or substances apply to all vessels, except vessels specifically exempted from such regulations by the provisions of R.S. 4472, as amended, or vessels that are, or may be, specifically exempted by the regulations in this part. Vessels specifically exempted by R.S. 4472, as amended, are:

(1) Vessels not exceeding fifteen (15) gross tons when not engaged in carrying passengers for hire;

(2) Vessels used exclusively for pleasure;

(3) Vessels, not exceeding five hundred (500) gross tons while engaged in the fisheries;

(4) Tugs or towing vessels, except as to fire prevention and extinguishing requirements provided for by subsection 6 (b) (4) of R.S. 4472, as amended;

(5) Cable vessels, dredges, elevator vessels, fireboats, ice-breakers, pile drivers, pilot boats, welding vessels, salvage and wrecking vessels.

(g) Inflammable or combustible liquid cargo in bulk is also exempt from the regulations in this part: *Provided, however,* That the handling and stowage of such liquid cargo in bulk, on board vessels to which the regulations in this part may apply, shall be subject to the provisions of section 4417a of the Revised Statutes, as amended.

(h) Regulations with respect to the transportation, storage, or stowage of combustible liquids packed in barrels, drums, or other packages apply only to passenger vessels.

146.02–3 Application to shippers.—Regulations with respect to definitions, descriptive name, shipping name, packing, marking, authorized containers, labeling and certification of shipments of explosives or other dangerous articles or substances, and combustible liquids, apply to all shippers offering such articles or substances for transportation or storage on board vessels to which the regulations in this part apply.

146.02–4 Application to others.—The provisions of the regulations in this part, insofar as applicable to them respectively, are binding upon owners, charterers, agents, masters, or persons in charge of vessels subject to these regulations and upon all other persons transporting, carrying, conveying, handling, storing or stowing on board such vessels any explosives, or other dangerous articles or substances, and combustible liquids.

146.02-5 Compliance.—The applicable provisions of the regulations in this part shall be observed by:

(a) All vessels, domestic or foreign, subject to the regulations in this part, and the owners, charterers, agents, masters or persons in charge of such vessels;

(b) Railway or highway carriers and their operators, owners, agents or representatives when vehicles operated by such carriers and loaded with explosives or other dangerous articles or substances, and combustible liquids are offered for transportation or enter on board a vessel;

(c) All shippers, their agents or other persons offering explosives or other dangerous articles or substances, and combustible liquids for transportation on board vessels;

(d) All persons engaged in the acceptance, handling, stowage, storage or transportation of explosives or other dangerous articles or substances, and combustible liquids on board vessels;

(e) All shippers or carriers of explosives or other dangerous articles or substances, and combustible liquids shall instruct their employees relative to the provisions of the regulations in this part.

146.02-6 Enforcement.—(a) The provisions of R.S. 4472, as amended, and the regulations in this subchapter, shall be enforced by the U. S. Coast Guard of the Department of the Treasury. Enforcement officers may, at any time and at any place within the jurisdiction of the United States board any vessel for the purpose of enforcing the provisions of the regulations in this subchapter.

(b) Any collector of customs may, when possessing knowledge that a vessel is violating any provisions of the statute or regulations established thereunder, by written order served on the master, person in charge of such vessel, or the owner or charterer thereof, or the agent of the owner or charterer, detain such vessel until such time as the provisions of the statute and the regulations in this subchapter have been complied with. The master, person in charge or owner or charterer, or the agent of the owner or charterer of a vessel so detained may, within five days, appeal to the Commandant of the Coast Guard who may, after investigation, affirm, set aside, or modify the order of the collector.

146.02-7 Military or naval forces.—The provisions of the regulations in this part shall not be construed to prevent the transportation of military or naval forces with their accompanying munitions of war and stores.

146.02-8 U. S. War or Navy Department shipments.—Shipments of explosives or other dangerous articles or substances by, for, or to the War or Navy Departments of the United States government shall be packed, including limitations of weight, in accordance with the Interstate Commerce Commission regulations for the transportation of explosives or other dangerous articles in effect at time of shipment, unless special packing is required by specific directions of the War or Navy Departments. Such shipments may be accepted for transportation under either method of packing.

146.02-9 Canadian shipments.—Shipments of explosives or other dangerous articles or substances, as defined herein, which are packed, marked and labeled in conformity with the regulations of the Board of Transport Commissioners for Canada, may be accepted and transported on board vessels within the navigable waters of the United States provided their acceptance and stowage on board the vessel is in accordance with the regulations in this part for the substances involved and provided further that the bill of lading or other shipping paper carries the certifying statement of the shipper that the goods are packed, marked and labeled in accordance with the regulations of the Board of Transport Commissioners for Canada.

146.02-10 Export shipments.—Shipments to a foreign country may be accepted for transportation when packed, marked, labeled and described in accordance with the regulations of the country of destination. The bill of lading or other shipping paper shall identify such shipments by the shipping name shown in the regulations in this part for the particular substance, and also shall certify that the packing, marking and labeling is in accordance with the foreign regulations and identify by title or otherwise such foreign regulations. Markings on export packages may be in the language of the country of destination. Labels as prescribed in the regulations in this part shall be affixed or printed or stamped upon such export packages when offered for transportation in lots of one hundred (100) or less packages. Stowage on board a vessel shall be in accordance with the regulations in this part as applicable to the particular character of vessel.

146.02-11 Import shipments.—(a) Import shipments of explosives or other dangerous articles destined upon arrival at domestic ports for further transportation, in original containers, by common carrier by rail, or by common or contract carrier by motor vehicle, shall comply with the Interstate Commerce Commission regulations for the transportation of explosives and other dangerous articles in effect at the time of shipment. The importer shall furnish with the order to the foreign shipper, and also to the forwarding agent at the port of entry, full and complete information as to packing, marking, labeling, and other requirements as prescribed by the Interstate Commerce Commission regulations. (See § 146.05-14)

(b) Import shipments of explosives and other dangerous articles, and combustible liquids, accepted for transportation in a foreign port in outside metal or wooden barrels or drums not exceeding 110 gallons capacity, wooden boxes not exceeding 300 pounds weight of box and contents, or fiberboard boxes not exceeding 65 pounds weight of box and contents,

which upon arrival at domestic ports are not destined for transportation in these original import containers by common carrier by rail or common or contract carrier by motor vehicle may be accepted on board vessels provided the shipper certified upon the bill of lading or other shipping paper that the container is in conformity with the regulations of the country of origin. If the country of origin has no regulations governing the transportation by vessel of the explosives and dangerous substances involved, the shipper shall certify that the container is so constructed as to maintain its complete integrity under all conditions likely to be encountered during transportation. The master of the vessel, before accepting such import shipments, shall satisfy himself that the containers are sufficiently strong to stand, without rupture or leakage of contents, all risks ordinarily incident to transportation.

(c) Stowage of import shipments on board vessels shall be in accordance with the provisions of the regulations in this part.

146.02–12 Inspection of cargo.—(a) On all vessels, other than barges and magazine vessels storing explosives, an inspection of cargoes of explosives or other dangerous articles or substances shall be ordered by the master of the vessel during a voyage to insure that such cargo is carried with safety and that no damage caused by shifting cargo, spontaneous heating, leaking or sifting of containers or from other causes has been sustained since loading and stowage. On such vessels that have dangerous cargo stowed on board for a period exceeding twenty-four (24) hours temperature readings shall be taken at proper intervals and such temperatures recorded and retained as a record for each voyage. When any cargo is discovered to be in a dangerous condition from leakage, sifting, heating, wetting or other causes, such condition shall be corrected in such manner as the judgment of the master may dictate. All unusual circumstances divulged during inspection of dangerous cargo and any action taken as a result thereof shall be a subject for log entry.

(b) On all barges an inspection of the cargo shall be made by the person responsible to the owner, charterer or agent who is in charge of loading and stowing the cargo on board the barge after the stowage has been completed to insure that such stowage has been properly accomplished and that there are no visible signs of damage to any of the containers or apparent evidence of heating, leaking or sifting of containers or escape of any of the contents of the containers.

(c) On all magazine vessels storing explosives an inspection of the cargo shall be made by the person in charge of the magazine vessel after the stowage has been completed to insure that such stowage has been properly accomplished and that there are no visible signs of damage to any of the containers or apparent evidence of heating, leaking or sifting of containers or escape of any of the contents of the containers.

(d) When inspecting cargoes of dangerous articles capable of evolving inflammable vapors as required in (a), (b), and (c) any artificial means of illumination shall be of a vapor proof type.

146.02–13 Report fires.—The Master of any ocean-going vessel having on board explosives or other dangerous articles or substances as cargo and about to enter a port of

the United States shall make or cause to be made an inspection immediately prior to entering such port. If the inspection discloses the presence of fire or any other hazardous condition, such condition shall immediately be reported to the district commander of the United States Coast Guard having supervision over the port or place to which the vessel is bound and the master or person in charge of such vessel shall comply with the instructions given by the district commander as to the procedure to be followed in entering the port or place.

146.02-14 Damaged containers.—(a) Any outside container that is sufficiently damaged as to permit the escape of the contents therein, or shows marks of having leaked, or the securing means give evidence of failure to properly contain the package, shall not be accepted on board any vessel for transportation or storage, nor shall such damaged containers be on board any vessel entering the navigable waters of the United States except in accordance with the provisions of § 146.02-15.

(b) Any damaged outside container, as described in (a) when restored or repaired to the satisfaction of the owner or master of the vessel may be accepted. Special attention shall be given to containers of substances that are required by the regulations to be shipped "wet" to be certain that any escaped liquid is replaced before the restored container is accepted.

(c) Damaged, leaking or insecure outside containers which it is not feasible to restore shall be refused and promptly reported by the owner or master of the vessel to the nearest Officer in Charge, Marine Inspection. This provision shall be complied with by all vessels to which the regulations in this part apply when upon the navigable waters of the United States.

(d) Containers of a particular type that frequently show damage, leakage or other failure shall also be reported to the Officer in Charge, Marine Inspector for the district in which the cargo was laden. Such information as will assist in correcting faults of such containers should be included in the report.

146.02-15 Emergency shipments.—(a) In event of a casualty occuring to or on board a vessel involving explosives or other dangerous articles or substances on board the vessel as cargo, the master or person in charge of the vessel is authorized to adopt such procedure as will, in his judgment, provide a maximum safety to the vessel, its passengers and crew. When such a casualty results in damaged containers or the emergency use of unauthorized containers, such containers upon arrival at a port shall not be offered to any forwarding carrier for transportation. The vessel, owner, agent, charterer, master or other person in charge of the vessel shall report immediately to the nearest Officer in Charge, Marine Inspection and request instructions as to disposition of the damaged or unauthorized containers.

(b) Explosives or other dangerous articles or substances found on board a vessel in an unsafe condition may be disposed of by jettisoning or otherwise destroyed or rendered innocuous or may be continued in transportation to the nearest port whichever course may, in the judgment of the master or person in charge, provide maximum safety to the vessel, its passengers and crew. If such substance is brought into port, delivery shall not be made to the consignee or any forwarding carrier and a report shall immediately be made to the

nearest Officer in Charge, Marine Inspection, with a request for instructions as to disposition of the substance. A report shall likewise be made covering the disposition by jettisoning or otherwise of dangerous substances.

146.02–16 Shipments in violation.—(a) Shipments of explosives or other dangerous articles or substances found by a vessel's owner, agent, charterer, master, or person in charge to have been tendered or delivered for transportation on board a vessel under a false or deceptive descriptive name, marking, invoice, shipping paper or other declaration, or without the shipper furnishing information in writing of the true character thereof at or before the time of delivery, shall be refused transportation and the Officer in Charge, Marine Inspection, for the district in which such cargo was offered shall promptly be notified, in writing, of all the facts in connection with such violation.

(b) When any such shipments are found in transit the master of the vessel is authorized to adopt such procedure as will in his judgment provide maximum safety to the vessel, its passengers and crew. If brought into port, delivery shall not be made to the consignee or any forwarding carrier and a report shall immediately be made to the nearest Officer in Charge, Marine Inspection, with a request for instructions as to disposition of the shipment.

146.02–17 Handling and stowage of cargo.—Explosives or other dangerous articles or substances as cargo shall be handled or stowed on board vessels under the direction and observation of a qualified person assigned for such duty. For vessels engaged in voyages coastwise, or on rivers, bays, sounds or lakes, including the Great Lakes when the voyage is not foreign-going, such person may be an employee of the vessel owner or charterer and so assigned by said owner or charterer or he may be a licensed officer attached to the vessel and assigned by the master of the vessel. For domestic vessels engaged in voyages foreign-going or intercoastal such person shall be an officer possessing an unexpired license issued by the U. S. Coast Guard and assigned to such duty by the owner, charterer, agent or master of the vessel. For foreign vessels such person shall be an officer of the vessel assigned to such duty by the master of the vessel.

146.02–18 Shipments via common carrier vessels.—(a) Regulations promulgated by the Interstate Commerce Commission under the title of "Regulations for the Transportation of Explosives and Other Dangerous Articles" in effect at the time of shipment with respect to definitions, descriptions, descriptive names and classifications of explosives, inflammable liquids, inflammable solids, oxidizing materials, corrosive liquids, compressed gases and poisonous articles; and with respect to specifications of containers for such articles and with respect to the packing, marking, labeling and certification of such articles are adopted and form part of the regulations in this part and shall be complied with by all persons packing and preparing, and all shippers offering such articles for transportation by vessels that are common carriers: *Provided, however,* That the acceptance on board vessels of containers laden with such articles or bulk shipments of such articles shall comply with the provisions of the regulations in this part. Import or export shipments of such articles shall comply with the provisions of §§ 146.02–10 and 146.02–11.

(b) Shipments of combustible liquids or hazardous articles, when prepared, packed and offered for transportation by vessels that are common carrier vessels shall, with respect to definitions, descriptions, descriptive names and classifications, and with respect to containers for such articles or substances; and with respect to the packing, marking and certification of such articles or substances conform to the applicable provisions of the regulations contained in this part. Import or export shipments of such articles or substances shall comply with the provisions of §§ 146.02–10 and 146.02–11.

146.02–19 Shipments via vessels other than common carriers.—(a) Explosives or other dangerous articles or substances packed in barrels, drums, boxes, cylinders, carboys or bags and offered for transportation or storage on board vessels that are not common carrier vessels shall with respect to definitions, descriptions, descriptive names and classifications of explosives, inflammable liquids, oxidizing materials, corrosive liquids, compressed gases, and poisonous articles, and with respect to specifications of containers for such articles or substances, and with respect to the packing, marking, labeling and certification of such articles or substances conform to the requirements of the regulations in effect at the time of shipment as promulgated by the Interstate Commerce Commission under the title of "Regulations for the Transportation of Explosives and Other Dangerous Articles" except as may be otherwise required by the regulations in this part. Import or export shipments of such articles or substances shall comply with the provisions of §§ 146.02–10 and 146.02–11.

(b) Shipments of combustible liquids or hazardous articles, prepared, packed, and offered for transportation by vessels other than common carrier vessels, shall, with respect to definitions, descriptions, descriptive names and classifications; and with respect to containers for such articles or substances; and with respect to the packing, marking and certification of such articles or substances conform to the applicable provisions of the regulations contained herein.

146.02–20 Repairs.—(a) A vessel having on board explosives or other dangerous articles of cargo shall not proceed to a ship repair plant or enter upon a drydock or marine railway, or otherwise undertake repairs except in compliance with the following conditions:

(1) No repairs, other than emergency repairs to the vessel's main propelling plant or auxiliaries thereto or the boilers or auxiliaries thereto, shall be undertaken while having on board any explosives as cargo.

(2) Repairs shall not be undertaken in holds after the discharge of any cargo of explosives until all precautions are taken to see that no residue of cargo is left to create a hazard.

(3) No repairs shall be undertaken in holds containing any other dangerous articles of cargo, nor shall any repairs be undertaken in compartments adjoining holds in which other dangerous articles of cargo are stowed except normal maintenance repairs to the vessel's main propelling or boiler plant or auxiliaries thereto including tail shaft and propeller.

(4) Before undertaking repairs in holds that have lately contained substances capable of giving off inflammable or explosive vapor, it is required that such holds be gas free.

(5) Repairs shall not be undertaken in holds that have lately contained cargo consisting of inflammable solids or oxidizing materials until all precautions are taken to see that no residue of cargo is left to create a hazard.

(b) None of the foregoing provisions shall apply to permitted articles of ships' stores and supplies of a dangerous nature although provisions shall be taken to afford safe storage and protection to such stores from any risk incident to the repair work.

(c) Emergency repairs, contrary to the provisions set forth above, may be undertaken when in the judgment of the master such repairs are necessary for the safety of the vessel, its passengers and crew.

146.02–21 Statements of characteristic properties.—In the second column of the tables shown in §§ 146.20–100; 146.21–100; 146.22–100; 146.23–100; 146.24–100; 146.25–100; 146.26–100; and 146.27–100 are statements in italics setting forth certain characteristic properties of the substances listed therein. It is not intended, that these statements set forth all the characteristic properties of a particular substance and such statements as are shown are informative only.

146.02–22 Preservation of records.—(a) Where the regulations in this part require the preparation of shipping orders, manifests, or other shipping documents, cargo lists, cargo stowage plans, reports and any other papers or records, it shall be the duty of the owner of the vessel to preserve such records or copies thereof in his office or place of business in the United States for a period of at least one year. Persons or corporations chartering or engaging or contracting for the use of vessels under such terms and conditions that they have full and exclusive control of the management and operating of such vessels shall be subject to the same requirement for preservation of records as are imposed upon owners of vessels by this section and in such cases the owners shall not be required to preserve such records.

(b) Any records required to be so preserved shall be produced to the Commandant of the Coast Guard upon his request therefor.

DEFINITIONS OF WORDS AND TERMS CONTAINED WITHIN THE REGULATIONS IN THIS SUBCHAPTER

146.03–1 Deleted.

146.03–2 Deleted.

146.03–3 Bulk.—The word "Bulk" means substances which are loaded and carried on board a vessel without benefit of containers or wrappers, and received and delivered by the vessel carrier without mark or count: *Provided, however,* That this definition does not apply to initiating or priming explosives.

146.03–4 Deleted.

146.03–5 Cargo.—For the purposes of the regulations in this part "Cargo" is defined as any explosive or other dangerous article or substance, and combustible liquids, as defined within the regulations in this part, laden on board a vessel, with or without being confined within a container, for the purpose of transporting or storing such goods in the vessel.

146.03–6 CFC.—The initials "CFC" refer to Consolidated Freight Classification.

146.03–7 Character of vessel.—The term "Character of Vessel" means the type of service in which the vessel is engaged at the time of carriage of the explosives or other dangerous articles or substances subject to the regulations in this part, i. e., a cargo vessel, a passenger vessel, a ferry vessel, a railroad car ferry or a barge.

146.03–8 Dangerous articles defined.—A dangerous article within the meaning of the regulations in this subchapter is an article falling within any of the following classifications:

Explosives.	Compressed Gases.
Inflammable Liquids.	Poisons.
Inflammable Solids and Oxidizing Materials.	Hazardous Articles.
Corrosive Liquids.	Ships' Stores and Supplies of a Dangerous Nature.

For definitions covering these classifications see the appropriate section within this subchapter. These are §§ 146.20–1—146.20–4; §§ 146.21–1—146.21–2; §§ 146.22–1—146.22–3; §§ 146.23–1—146.23–2; §§ 146.24–1—146.24–2; §§ 146.25–1—146.25–5; §§ 146.27–1—146.27–2; and §§ 147.02–1—147.02–2. Combustible Liquids are defined in §§ 146.26–1—146.26–2.

146.03–9 Deleted.

146.03–10 Explosive range.—The vapors of inflammable liquids (and to a lesser extent of combustible liquids) when mixed with air will in proper proportions form an explosive concentration. The low or "lean" limit and the high or "rich" limit vary in accordance with the characteristics of the liquid involved. The mixture or percent by volume between the "lean" and the "rich" mixtures is termed the "explosive range." Any percentage of the vapor in air between these limits will be likely, upon ignition, to continue to burn with rapidity and violence, sometimes with explosive effects.

146.03–11 Finely divided metals.—The phrase "Finely Divided Metals" is used to describe metals that have been divided into small parts such as aluminum powder, bronze powder, metal cuttings or borings such as are produced in working metals.

146.03–12 Finely divided organic material.—This phrase is used to describe organic material such as charcoal, peat moss, sugar, sulfur, sawdust, powderous materials such as flour, granular materials such as seeds, grains, and cereals, or like substances.

146.03–13 Fire point.—The term "Fire Point" denotes the temperature at which the vapors given off by the substance, if ignited, will continue to burn. The fire point is generally higher than the flash point, although occasionally they coincide as in the case of ether, carbon disulfide, and a few other substances.

146.03–14 Flashpoint.—The term "Flashpoint" means the temperature at which the substance gives off inflammable vapors which in contact with spark or flame will ignite.

146.03–15 Hermetically sealed.—The term "Hermetically sealed" means perfectly closed or closed airtight by, or as by, fusion, or crimping, so that no gas nor vapor can enter or escape.

146.03–16 Holds gas tight.—This term means that the structural boundaries of the hold are free of openings and constructed sufficiently tight to withstand a gas pressure not in excess of 1 pound per square inch. A hold that will withstand a hose test without leakage may be assumed as being gas tight. Cargo or other openings in the structural boundaries of such holds (except over deck cargo hatches) shall be provided with tight closing means. Cargo hatch openings in the over deck provided with hatch covers and tarpaulins are accepted as satisfactory closing means for such compartment or hold.

146.03–17 ICC.—The initials "ICC" refer to Interstate Commerce Commission.

146.03–18 ICC Regulations.—The term "ICC Regulations" when used in the regulations in this part refers to regulations of the Interstate Commerce Commission for the "Transportation of Explosives and Other Dangerous Articles" in effect at the time a shipment is moving and subject to the regulations in this part.

146.03–19 Inside containers.—The following abbreviations when used in the tables indicate that the substance is packed in "Inside Containers" of the following descriptions:

"WIC" means With Inside Containers—which may be glass, earthenware, metal, or liners.
"WIL" means With Inside Liners.
"WIMC" means With Inside Metal Containers.
"WIML" means With Inside Metal Liners.
"WPL" means With Inside Paper Liners.

146.03–20 Label.—The term "Label" means the caution label required by the regulations in this subchapter and the regulations of the ICC to be affixed to outside containers of explosives or other dangerous articles or substances.

146.03–21 Marking.—The term "Marking" refers to the descriptive name, instructions, cautions, weight data, or specification marks that are required by the regulations in this subchapter and the regulations of the ICC to be placed upon outside containers of explosives or other dangerous articles or substances or combustible liquids.

146.03–22 Miscible.—For the purpose of the regulations in this part the term "Miscible" is applied only to liquids, and means such liquids are capable of mixing freely, in many cases in all proportions, with water.

146.03–23 Miscibility with water.—This term "Miscibility with Water" is shown in the regulations for the purpose of indicating the adaptability of water in volume in the event of ignition of the liquid.

146.03–24 Navigable waters.—Where used in the regulations in this part the term "Navigable Waters" includes the navigable waters of the United States, its territories and possessions, but not the navigable waters of the Panama Canal Zone.

146.03–25 N. O. S.—The abbreviation "N. O. S." means not otherwise specified by name in the regulations in this part.

146.03–26 Not permitted.—The term "Not Permitted" means the dangerous articles or substances shall not be offered, placed on board, transported, or stored on a vessel subject

to the regulations in this subchapter, when the term is specifically applied in the regulations in this subchapter to a particular substance or vessel.

146.03–27 Outside containers.—The term "Outside Containers" means the outer over-all container which is authorized by the regulations in this part to be used for the packing of the particular substance. As a rule they are specification containers, but in some instances nonspecification outside containers are authorized.

146.03–28 Prohibited.—The term "Prohibited" is applied to the Explosive Substances named and described in subsection (3) of R.S. 4472, as amended, and means such Explosive Substances shall not be offered to any vessel, placed on board, transported, or stored on board any vessel within the navigable waters of the United States.

146.03–29 Shipping papers.—For definition of "Shipping Papers" see §§ 146.05–12, 146.05–13 and 146.05–14.

146.03–30 Soluble.—For the purpose of the regulations in this part, the term "Soluble" means capable of being dissolved in water, forming homogeneous or uniform mixtures. (It is to be noted that some substances freely dissolve and others dissolve very slowly.)

146.03–31 STC.—The term "STC" means the barrel or drum is a "Single Trip Container."

146.03–32 Storage.—The term "Storage" as used in the regulations in this part means the placing of explosives or other dangerous articles or substances on board a vessel for purposes of safekeeping or accumulation, pending removal therefrom in whole or in part at a subsequent time; the process of "placing on board" and "removing therefrom" occurring without movement of the vessel being involved.

146.03–33 Stowage.—For the purposes of the regulations in this subchapter, the term "Stowage" embraces the art of placing and securing goods on board a vessel within the holds of the vessel, or on the decks, in such manner as to enhance safety during the period of transportation.

146.03–34 Stowage terms defined.—For the purposes of the regulations in this part the following stowage terms are defined:

(a) *On deck in open* means the articles may be stowed on the open weather deck of a vessel. Such cargo may be protected from the elements if necessary or advisable.

(b) *On deck protected* means the articles may be stowed on the open weather deck of a vessel. It is required that dangerous cargo stowed under such conditions shall be protected from the elements by structural erections or from the direct rays of the sun by means of awnings or dunnaging.

(c) *On deck under cover* means the articles may be stowed on the weather deck of a vessel under covered erections, such as forecastle, bridge house, poop, and deck houses, having permanent structural openings to the atmosphere, but no structural openings such as doors, hatches, companionways, or manholes to any living quarters, cargo carrying, or other compartments, unless such doors, hatches, companionways, or manholes are provided with hinged means for closing off and securing such openings. Stowage shall not be utilized in any deck house containing living quarters, a steering engine or refrigerating unit or refrigerated

stowage boxes unless the areas occupied by such units are isolated from the stowage area by permanent and tight metallic division bulkheads.

(d) *Cargo hatch trunkway* means the articles may be stowed in a cargo hatch trunkway provided the trunk is constructed of steel without openings except such openings as are fitted with positive closing means: *Provided further*, That noncombustible hatch closing means, or combustible hatch covers metal lined all over, are fitted at the lower terminus of the trunk securely closing off the cargo hold from the trunkway. A cargo hatch trunkway the upper terminus of which is located in a tween deck space shall not be utilized for such stowage unless fitted with steel hatch covers and then only when such terminus is always visible and accessible during the voyage.

(e) *Tween decks readily accessible* means the articles may be stowed in upper cargo spaces below or off the weather deck, and so stowed as to be readily accessible from the cargo openings (but not in the square of the hatch if the latter is made up of wooden hatch covers) or in a shelter deck directly inboard of structural openings from the weather deck. A vessel having cargo carrying holds which extend from the tank top or lower flat to the weather deck and having no enclosed cargo stowage space imposed above such single holds may substitute "Under deck away from heat" in lieu of "Tween decks readily accessible" stowage.

(f) *Tween decks* means the articles may be stowed in an upper cargo space below or off the weather deck, or in a shelter deck space. Any openings in the bulkheads forming boundaries of such Tween deck spaces shall be fitted with positive closing means. Hatches shall be provided with a full complement of covers. After stowage of cargo all openings shall be closed and remain closed during the voyage, except for such ingress and egress as is necessary in the operation of the vessel.

(g) *Under deck away from heat* means the articles may be stowed in a cargo space in a deep hold or a Tween Deck hold capable of being ventilated and not subject to heat from any artificial source. Holds of which any boundary bulkhead or deck forms part of the boundary of a boiler room, engine room, coal bunker, or galley shall not be utilized for this type of stowage unless the dangerous substances are stowed not less than twenty (20) feet away from such bulkheads: *Provided, however*, That this limitation shall not apply to cargo spaces in holds adjacent to the engine room of vessels fitted with internal combustion engines.

(h) *Under deck* means that the articles may be stowed in a cargo space in a deep hold or a Tween Deck hold capable of being ventilated. A hold is defined as an area allotted entirely to the carriage of cargo and is bounded by permanent steel bulkheads and decks, and the shell of the vessel, the deck openings being provided with means for effectively closing the hold against the weather, and in the case of superimposed holds, effectively closing off each hold. A cargo space or hold coming within the above definition shall not be used for the stowage of explosives (except fireworks or Relatively Safe—Class C—explosives) unless closed off to traffic while the vessel is on its voyage. A cargo space or hold containing a crew passage formed by battens or by a mesh or wire screen bulkhead shall not

be used for stowage of other dangerous articles or substances, including fireworks and Relatively Safe Explosives—Class C, unless watchman service is provided for such areas.

(j) *Under deck but not overstowed* means the articles may be stowed in a cargo space in any hold as defined under (h), the characteristics of dangerous articles so stowed being such as to prevent the stowage of any other type of cargo over same.

(k) *Ferry stowage* (*AA*) means that a highway vehicle loaded with any permitted explosives or other dangerous articles or substances, or combustible liquids in conformity with all the applicable provisions of these regulations, may be transported on board a ferry vessel when stowed as directed by the vessel's representative. The vehicle need not be in a position to jettison but should be stowed as to be easily accessible.

(l) *Ferry stowage* (*BB*) means that a railroad vehicle loaded with any permitted explosives or other dangerous articles or substances or combustible liquids in conformity with all the applicable provisions of the regulations in this part, may be transported on board a railroad car ferry when stowed in a location away from sources of artificial heat. The vehicle need not be in position to jettison but should be easily accessible. Railroad car ferries accepting highway vehicles loaded with any permitted dangerous substances indicated as utilizing "Ferry Stowage (AA)" shall stow such vehicle away from sources of artificial heat and easily accessible.

146.03–35 Vapor density.—The term "Vapor Density" is the relative density of the vapor given off by an inflammable liquid as compared with air. A figure less than one (1) indicates a vapor lighter than air and a figure greater than one (1) indicates a vapor heavier than air.

146.03–36 Vessels defined.—For the purposes of the regulations in this subchapter passenger carrying vessels or passenger vessels, barges and cargo vessels are defined as follows:

(a) *Passenger carrying vessels or passenger vessels.*—(1) A passenger carrying vessel or a passenger vessel is any vessel which carries passengers; provided that no vessel of the following classes shall be considered a passenger carrying vessel or a passenger vessel:

(i) Any vessel subject to any of the provisions of the International Convention for Safety of Life at Sea, 1929, which neither carries nor is authorized to carry more than twelve passengers.

(ii) Any cargo vessel documented under the laws of the United States and not subject to that Convention which neither carries nor is authorized to carry more than sixteen persons in addition to the crew.

(iii) Any cargo vessel of any foreign nation that extends reciprocal privileges and not subject to that Convention which neither carries nor is authorized to carry more than sixteen persons in addition to the crew.

(2) Any passenger vessel that is not designed and built to receive railroad vehicles shall be considered a passenger ferry if it is engaged in a ferry operation.

(3) Any passenger vessel that is designed and built to receive railroad vehicles shall be considered a railroad car ferry.

(b) *Barge.*—Any non self-propelled vessel having no passengers on board, shall be considered a barge.

(c) *Cargo vessel.*—(1) Any vessel other than a passenger vessel or a barge shall be considered a cargo vessel.

(2) Any passenger ferry or railroad car ferry shall be considered a cargo vessel during any period it is being operated under authority of a change of character certificate issued by a Board of Local Inspectors.

146.03–37 Volatility.—The term "Volatility" is used to indicate the tendency of a liquid to assume the vapor state. The tendency of a liquid to evaporate is influenced by other factors than the vapor pressure. Increased volatility will result from the influence of a rise in temperature.

146.03–38 W. T.—The abbreviation "W. T." means Watertight.

LIST OF EXPLOSIVES OR OTHER DANGEROUS ARTICLES CONTAINING THE SHIPPING NAME OR DESCRIPTION OF ARTICLES SUBJECT TO THE REGULATIONS IN THIS SUBCHAPTER

146.04–1 Proper shipping name.—The proper shipping name which shall be used and shown on bill of lading or other shipping paper and on outside of shipping containers where required by the regulations in this subchapter, appears in this list in roman type (not *italics.*).

146.04–2 Dangerous articles not named.—Any article not properly described by a name shown in this commodity list when such article classifies under the definitions contained herein as a dangerous article shall be prepared and offered for shipment in compliance with the regulations in this part.

146.04–3 Classification.—This list shows the classification of each permitted article or substance. It also shows the articles or substances that are prohibited by the provisions of R. S. 4472, as amended, or that are not permitted by the regulations in this part, for transportation or storage on board vessels.

146.04–4 Signs and abbreviations.—The meaning of the signs and abbreviations used in § 146.04–5 are as follows:

Asterisk (*) indicates the article may or may not come within the classification shown. If, in accordance with the definitions contained in this subchapter, the article does come within the classification it is subject to the regulations in this part.

Inf. L	Inflammable Liquid.
Inf. S	Inflammable Solid.
Oxy. M	Oxidizing Material.
Cor. L	Corrosive Liquid.
Inf. G	Inflammable Compressed Gas.
Noninf. G	Noninflammable Compressed Gas.
Pois. A	Poison Gas or Liquid, Class A.
Pois. B	Poisonous Liquid or Solid, Class B.
Pois. C	Tear Gas, Class C.
Expl. A	Class A Explosives.
Expl. B	Class B Explosives.
Expl. C	Class C Explosives.
Comb. L	Combustible Liquid.
Haz	Hazardous Article.
Prohibited	Means prohibited by R. S. 4472, as amended.
Not permitted	Means not permitted by the regulations in this subchapter.
No restrictions	Means this item is shown in the regulations only to distinguish it from articles under similar name that are classed as dangerous.

146.04–5 List of explosives and other dangerous articles and combustible liquids

Article	Classed as	Label req.[1]	Page No.
Acetaldehyde (ethyl aldehyde)	Inf. L	Red	125
Acetic acid (*Aqueous solution*)	Comb. L		301
Acetic acid, glacial	Comb. L		301
Acetic anhydride	Comb. L		301
Acetone	Inf. L	Red	125
Acetone oils	Comb. L		302
Acetyl chloride	Cor. L	White	220
Acetylene	Inf. G	Red	245
Acid carboys, empty (see: "Carboys, empty")	Haz		323
Acids, liquid, N. O. S	Cor. L	White	220
Acid, picric. (See: "Picric acid.")			
Acid, sludge. (See: "Sludge acid.")			
Acrolein	Pois. A	Poison gas	258
Acrylonitrile	Inf. L	Red	125
Aeroplane flares. (See: "Fireworks.")			
Air, compressed	Noninf. G	Green	245
Alcohol, allyl, liquid	Pois. B	Poison	264
Alcohol, amyl (*normal primary, normal secondary, iso-amyl*)	Comb. L		302
Alcohol, amyl tertiary	Inf. L	Red	126
*Alcohol, butyl	Comb. L		302
Alcohol, butyl, secondary	Inf. L	Red	127
Alcohol, butyl, tertiary	Inf. L	Red	127
Alcohol, denatured	Inf. L	Red	126
Alcohol, ethyl	Inf. L	Red	126
Alcohol, isobutyl	Comb. L		302
Alcohol, isopropyl	Inf. L	Red	127
*Alcohol, N. O. S	Comb. L		302
*Alcohol, N. O. S	Inf. L	Red	127
*Alcohol, propyl	Inf. L	Red	127
*Alcohol, propyl (see: "Alcohol, N. O. S.")	Comb. L		302
Alcohol, wood	Inf. L	Red	127
Alkaline corrosive battery fluid	Cor. L	White	221
Alkaline corrosive battery fluid with storage battery. (See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries.")			
Alkaline corrosive liquids, N. O. S	Cor. L	White	221
Allyl alcohol. (See: "Alcohol, allyl, liquid.")			
*Aluminum liquid. (See: *Bronzing liquid.)			
Aluminum nitrate (see: "*Nitrates*")	Oxy. M		194
Aluminum powder, uncoated	Haz		323
Ammonia, anhydrous. (See: "Anhydrous ammonia.")			
Ammonium arsenate, solid	Pois. B	Poison	265
Ammonium bichromate	Oxy. M	Yellow	171
Ammonium nitrate (see: "*Nitrates*")	Oxy. M		195
Ammonium perchlorate	Oxy. M	Yellow	200
Ammonium permanganate	Oxy. M	Yellow	201
Ammonium picrate. (See: "High explosives.")			
Ammonium picrate, wet (*When wet with not less than 10% of water and in a quantity not exceeding 16 ounces in one outside package*).	Inf. S		172

[1] Unless otherwise exempt by the provisions of the detailed regulations.

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Ammunition, chemical (containing class A poisons, liquids, or gases). (See: "*Chemical ammunition.*")			
Ammunition, chemical (containing class B poisons, liquids, or gases). (See: "*Chemical ammunition.*")			
Ammunition, chemical (containing class C poisons, liquids or solids). (See: "*Chemical ammunition.*")			
Ammunition, chemical, explosive. (See: "*Ammunition—Projectiles, grenades, bombs, mines, and torpedoes.*")			99, 100
Ammunition for cannon, nonexplosive	No restrictions		98
Ammunition for cannon with empty projectiles. (See: "*Ammunition for cannon with nonexplosive projectile.*")	Expl. B		107
Ammunition for cannon with explosive gas, smoke, or incendiary projectiles.	Expl. A		98
Ammunition for cannon with nonexplosive projectiles			107
Ammunition for cannon with sand-loaded projectiles. (See: "*Ammunition for cannon with nonexplosive projectile.*")	Expl. B		107
Ammunition for cannon with solid projectiles. (See: "*Ammunition for cannon with nonexplosive projectile.*")	Expl. B		107
Ammunition for cannon without projectiles. (See: "*Ammunition for cannon with nonexplosive projectile.*")	Expl. B		107
Ammunition for small arms	Expl. C		114
Ammunition for small arms with explosive bullets	Expl. A		100
*Amyl acetate	Inf. L	Red	128
*Amyl acetate	Comb. L		302
Amyl chloride	Inf. L	Red	128
Amyl nitrite	Inf. L	Red	129
Anhydrous ammonia	Noninf. G	Green	245
Aniline oil drums empty	Has		323
Aniline oil, liquid	Pois. B	Poison	265
*Anti-freeze compounds, liquid	Comb. L		302
*Anti-freeze compounds, liquid	Inf. L	Red	129
Antimony pentachloride	Cor. L	White	221
Argon	Noninf. G	Green	246
Arsenate of lead. (See: "Lead arsenate.")			
Arsenic acid, liquid	Pois. B	Poison	266
Arsenic acid, solid	Pois. B	Poison	267
Arsenic bromide, solid	Pois. B	Poison	267
Arsenic chloride (arsenous) liquid	Pois. B	Poison	266
Arsenic iodide, solid	Pois. B	Poison	268
Arsenic metal, solid	Pois. B	Poison	268
Arsenic pentoxide, solid	Pois. B	Poison	268
Arsenic, solid. (See: "Arsenic metal, solid.")			
Arsenic sulfide (powder), solid	Pois. B	Poison	269
Arsenic trichloride, liquid. (See: "Arsenic chloride (arsenous) liquid.")	Pois. B	Poison	266
Arsenic trioxide, solid	Pois. B	Poison	269
Arsenic, white, solid	Pois. B	Poison	269
Arsenical compounds or mixtures, N. O. S., liquid	Pois. B	Poison	271
Arsenical compounds or mixtures, N. O. S., solid	Pois. B	Poison	270
Arsenical dip, liquid (sheep dip)	Pois. B	Poison	271

(5th Amend.—Amyl chloride added—July 1941)
(10th Amend.—Arsenical comp. or mix., N. O. S. Liq. added—Feb. 1942)

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Arsenical dust. (See: "Insecticide, dry.")			
Arsenical flue dust. (See: "Insecticide dry.")			
Arsenous and mercuric iodide solution, liquid	Pois. B	Poison	271
Arsenous acid, solid	Pois. B	Poison	269
*Asphalt, cut-back. (See: "Road asphalt or tar, liquid.")			
*Asphaltic surfacing material. (See: "Road asphalt or tar, liquid.").			
*Asphalt	Haz		323
Automobiles, motorcycles, tractors, or other self-propelled vehicles, *new or used, when offered for transportation, without boxing or crating and containing no gasoline, or other motor fuel, within the fuel tanks.*	Haz		324
Automobiles, motorcycles, tractors, or other self-propelled vehicles, *new or used, when offered for transportation without boxing or crating and containing gasoline, or other motor fuel, within the fuel tanks.*	Haz		325
Automobiles, motorcycles, tractors, or other self-propelled vehicles, *new or used, within boxes or crates, when shipped as cargo, and containing no lubricating oil, gasoline, or other motor fuel within the motor or fuel tank.*	Haz		324
Bags, nitrate of soda, empty and unwashed	Inf. S	Yellow	172
Bags, nitrate of soda empty and washed. (See: "Burlap bags, used and washed.")			
Barium binoxide (see: "Barium peroxide")	Oxy. M	Yellow	173
Barium chlorate (see: "*Chlorates*")	Oxy. M	Yellow	181
Barium chlorate, wet (see: "*Chlorates, wet*")	Oxy. M	Yellow	181
Barium cyanide, solid	Pois. B	Poison	271
Barium dioxide (see: "Barium peroxide")	Oxy. M	Yellow	173
Barium nitrate (see: "*Nitrates*")	Oxy. M		195
Barium perchlorate (see: "*Perchlorates*")	Oxy. M	Yellow	200
Barium permanganates (see: "*Permanagnates*")	Oxy. M	Yellow	201
Barium peroxide	Oxy. M	Yellow	173
Barrels, empty. (See: "Drums, empty.")			
Batteries, dry	No restrictions		221
Batteries, electric, storage wet	Cor. L	White	222
Batteries, electric, storage, wet, with containers of corrosive battery fluid. (See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries.")			
Battery charger with electrolyte (acid) or alkaline corrosive liquid. (See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with battery charger or radio current supply device or parts thereof.")			
Battery fluid. (See: "Electrolyte (acid) battery fluid" or "Alkaline corrosive battery fluid.")			
Battery parts (*Plates, grids, etc., unwashed, exhausted*)	Haz		325
Benzaldehyde	Comb. L		303
Benzene	Inf. L	Red	130
Benzine	Inf. L	Red	130
Benzol. (See: "Benzene.")			
Benzoyl chloride	Cor. L	White	223

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Benzoyl peroxide, dry (*Granular form*)	Inf. S	Yellow	173
Benzoyl peroxide, wet (*with not less than 30% water*)	Inf. S	Yellow	173
Benzyl chloride	Cor. L	White	223
Black blasting powder. (See: "Black powder.")			
Black pellet powder. (See: "Black powder.")			
Black powder	Expl. A		101
Black powder igniters with empty cartridge bags. (See: "*Igniters*").	Expl. C		116
Black rifle powder. (See: "Black powder.")			
Blasting caps, electric. (See: "Electric blasting caps.")			
Blasting caps—1,000 or less	Expl. C		115
Blasting caps—more than 1,000	Expl. A		103
Blasting caps with safety fuse—more than 1,000	Expl. A		103
Blasting caps with safety fuse—1,000 or less caps	Expl. C		115
Blasting gelatin. (See: "High explosives.")			
Blasting powder. (See: "Black powder.")			
Bleaching powder	Haz		326
Bombs, explosive. (See: "Explosive bombs.")			
Bombs, explosive, gas, smoke, or incendiary. (See: "Explosive bombs.")			
Bombs, fireworks. (See: "Fireworks.")			
Bombs, gas, smoke, or incendiary nonexplosive. (See: "*Chemical ammunition.*")			
Bombs, sand-loaded or empty. (See: "*Ammunition for cannon, nonexplosive.*")			
Bone, chipped (*heat treated*)	Haz		326
Boosters (explosive)	Expl. A		104
Bordeaux arsenites, liquid	Pois. B	Poison	271
Bordeaux arsenites, solid	Pois. B	Poison	271
Boron trichloride	Cor. L	White	223
Boron trifluoride	Noninf. G	Green	246
Bottles, *acid or other corrosive liquid*, empty	Haz		326
Box toe board (*nitrocellulose base*)	Haz		327
*Box toe gum	Comb. L		303
*Box toe gum	Inf. L	Red	131
Bromacetone, liquid	Pois. A	Poison	258
Brombenzyl cyanide, liquid	Pois. C	Tear gas	296
Bromine	Cor. L	White	223
Bromobenzene	Comb. L		303
Bromomethane, liquid. (See: "Methyl bromide, liquid.")			
*Bronzing liquid	Inf. L	Red	132
Brucine, solid	Pois. B	Poison	272
Burlap bags, new	Haz		327
Burlap bags, used and unwashed	Haz		327
Burlap bags, used and washed. (See: "Burlap bags, new.")			
Burlap cloth (*hessian*)	Haz		327
Burnt cotton (not repicked)	Inf. S	Yellow	174
Burnt fibers. (See: "Fibers, burnt, wet or damp.")			
Butadiene. (See: "Liquefied petroleum gas or liquefied hydrocarbon gas.")			
Butane. (See: "Liquefied petroleum gas.")			
Butyl acetate	Comb. L		303
Butyl ether	Comb. L		303
Butyraldehyde	Inf. L	Red	132

(14th Amend.—Butadiene and butyraldehyde added—Apr. 1943)

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Article	Classed as	Label req.	Page No.
Cacodylic acid, solid	Pois. B	Poison	272
Calcium arsenate, solid	Pois. B	Poison	272
Calcium arsenite solid	Pois. B	Poison	272
Calcium carbide	Haz		328
Calcium chlorate (See: "*Chlorates*")	Oxy. M	Yellow	181
Calcium chlorite	Oxy. M	Yellow	174
Calcium cyanamide, not hydrated	Haz		328
Calcium cyanide. (See: "Cyanide of calcium.")			
Calcium hypochlorite. (See: "Bleaching powder.")			
Calcium hypochlorite compounds, dry, containing more than 8.80% available oxygen (39% available chlorine).	Oxy. M	Yellow	175
Calcium metallic	Inf. S	Yellow	175
Calcium nitrate (See: "*Nitrates*")	Oxy. M		195
Calcium percholate (See: "*Percholates*")	Oxy. M	Yellow	200
Calcium permanganate (See: "*Permanganates*")	Oxy. M	Yellow	201
Calcium peroxide	Oxy. M	Yellow	176
Calcium phosphide	Inf. S	Yellow	176
Camphene	Haz		329
Camphor (*Crude, refined, or synthetic*)	Haz		329
Camphor oil	Comb. L		304
Cannon powder. (See: "Black Powder.")			
Cannon primers. (See: "Primers.")			
Caps, blasting. (See "Blasting caps.")			
Caps, toy. (See: "Toy caps.")			
Carbolic acid, fused solid. (See: "Carbolic acid, solid.")			
Carbolic acid, liquid (*Liquid tar acid containing over 50% Benzophenol*).	Pois. B	Poison	273
Carbolic acid, solid	Pois. B	Poison	274
Carbon bisulfide	Inf. L	Red	133
Carbon dioxide, liquefied	Noninf. G	Green	246
Carbon dioxide syphon bulbs	Noninf. G		247
Carbon disulfide. (See: "Carbon bisulfide.")			
Carbon monoxide	Inf. G	Red	247
*Carbon remover, liquid	Comb. L		304
*Carbon remover, liquid (See: "*Compounds, cleaning, Liquid").	Inf. L	Red	133
Carbonyl chloride. (See: "Phosgene.")			
Carboys, empty	Haz		329
Cartridge bags, empty, with black powder igniters	Expl. C		116
Cartridge cases, empty, primed (See: "Primers.")	Expl. C		118
Case oil. (See: under proper shipping name as "Benzene," "benzine", "gasoline", etc.)			
Casinghead gasoline. (See: Natural gasoline.)			
Caustic potash, liquid	Cor. L	White	224
Caustic potash, solid	Haz		330
Caustic soda, liquid	Cor. L	White	224
Caustic soda, solid	Haz		330
*Cement, leather	Comb. L		304
*Cement, leather	Inf. L	Red	134
*Cement, liquid, N. O. S	Comb. L		304
*Cement, liquid, N. O. S.	Inf. L	Red	134
*Cement, roofing, liquid	Comb. L		304
*Cement, roofing, liquid	Inf. L	Red	134
*Cement, rubber	Comb. L		304
*Cement, rubber	Inf. L	Red	134

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Article	Classed as	Label req.	Page No.
Charcoal, activated	Inf. S	Yellow	177
Charcoal, briquets	Inf. S		177
Charcoal screenings, *made from "pinon" wood*	Inf. S		178
Charcoal screenings, wet	Not permitted		179
Charcoal, shell	Inf. S		179
Charcoal, wet	Not permitted		179
Charcoal, wood, crushed, granulated, ground or pulverized.	Inf. S	Yellow	180
Charcoal, wood, lump	Inf. S		180
Charcoal, wood screenings, *other than "pinon" wood screenings.*	Inf. S		179
Chemical ammunition (containing class A poisonous gases or liquids).	Pois. A		259
Chemical ammunition (containing class B poisons, liquids or gases).	Pois. B		275
Chemical ammunition (containing Class C poisons, liquids, or gases).	Pois. C		296
Chemical ammunition, explosive. (See: Ammunition for cannon with explosive gas, smoke or incendiary projectiles.)			
Chloracetophenone, gas, liquid or solid	Pois. C	Tear gas	296
Chloracetyl chloride	Cor. L	White	224
Chlorate explosives, dry. (See: "High explosives.")			
Chlorate powders. (See: "High explosives.")			
Chlorate of potash (see: *"Chlorates"*)	Oxy. M	Yellow	181
Chlorate of soda (see: *"Chlorates"*)	Oxy. M	Yellow	181
Chlorates	Oxy. M	Yellow	181
Chlorates, N. O. S. (see: *"Chlorates"*)	Oxy. M	Yellow	181
Chlorates, N. O. S. wet (see: *"Chlorates, wet"*)	Oxy. M	Yellow	181
Chlorates, wet	Oxy. M	Yellow	181
Chlorbenzene. (See: Monochlorbenzene.)			
Chloride of lime. (See: "Bleaching powder.")			
Chloride of phosphorus. (See: "Phosphorus trichloride.")			
Chloride of sulfur. (See: "Sulfur chloride.")			
Chlorinated Lime (see: "bleaching powder")	Has		326
Chlorine	Noninf. G	Green	247
Chlorosulfonic acid	Cor. L	White	225
Chlorosulfonic acid-sulfur trioxide mixture	Cor. L	White	225
Chlorpicrin absorbed	Pois. A	Poison gas	259
Chlorpicrin, liquid	Pois. A	Poison gas	259
Chlorpicrin mixtures	Pois. A	Poison gas	259
Chromic acid	Oxy. M	Yellow	181
Chromic acid solution	Cor. L	White	225
*Cleaning fluid or liquid	Comb. L		304
*Cleaning fluid or liquid (see: *Compounds, cleaning, liquid).	Inf. L	Red	134
Cloud gas cylinders. (See: *"Chemical ammunition."*)			
Coal briquets, hot	Not permitted		330
Coal facings	Inf. S	Yellow	182
Coal gas	Inf. G	Red	247
Coal oil (export shipment only—see "Kerosine").			
*Coal tar distillate	Inf. L	Red	135

(5th Amend.—Chlorate of potash; Chlorate of soda added—July 1941)
(13th Amend.—Charcoal, animal; Charcoal, bone deleted—Feb. 1942)

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Article	Classed as	Label req.	Page No.
*Coal tar distillate, N. O. S.	Comb. L.		305
Coal tar light oil. (See: "Benzene.")			
Coal tar naptha	Inf. L.	Red	135
*Coal tar oil. (See: *Coal tar distillate.)			
Cobalt resinate, fused	No restrictions		183
Cobalt resinate, precipitated	Inf. S.	Yellow	183
Cocculus, solid (fishberry)	Pois. B.	Poison	275
Coir. (See: "Fibers.")			
Coke, hot	Not permitted		330
Collodion	Inf. L.	Red	136
Collodion cotton, wet with an inflammable liquid (export shipments only). (See: "Nitrocellulose, wet with an inflammable liquid.")			
Collodion cotton, wet with water (export shipments only.) (See: "Nitrocellulose, wet with water.")			
Cologne spirits (alcohol). (See: "Alcohol, ethyl.")			
Colored fire. (See: "Fireworks.")			
*Columbian spirits (wood alcohol). (See: Alcohol. wood.)			
Combination fuzes	Expl. C.		116
Combination primers	Expl. C.		
Combustible liquid, N. O. S.	Comb. L.		305
*Compounds, cleaning, liquid	Inf. L.	Red	137
*Compounds, cleaning, liquid	Cor. L.	White	226
*Compounds, cleaning, liquid	Comb. L.		306
*Compounds, lacquer, paint or varnish reducing, liquid.	Comb. L.		306
*Compounds, lacquer, paint or varnish reducing, liquid (see: "Paint liquid").	Inf. L.	Red	137
*Compounds, lacquer, paint or varnish removing, liquid.	Comb. L.		306
*Compounds, lacquer, paint or varnish removing, liquid (see: "Paint liquid").	Inf. L.	Red	137
*Compounds, lacquer, paint or varnish removing, liquid.	Cor. L.	White	226
*Compounds, lacquer, paint or varnish thinning, liquid.	Comb. L.		306
*Compounds, lacquer, paint, or varnish thinning, liquid (see: "Paint liquid").	Inf. L.	Red	138
*Compounds, polishing, liquid (see: "Polishing compounds, liquid").	Inf. L.	Red	138
*Compounds, type-cleaning, liquid (see: "Compounds, cleaning, liquid").	Inf. L.	Red	138
*Compounds, vulcanizing liquid	Cor. L.	White	226
*Compounds, vulcanizing, liquid (see: "Cement, rubber").	Inf. L.	Red	138
Compressed gases, N. O. S.	Inf. G. or Non inf. G.	Red or Green	247
Containers, empty. (See: Bottles, empty; carboys, empty; cylinders, empty; or drums, empty.)			
Copper acetoarsenite, solid	Pois. B.	Poison	275
Copper arsenite, solid	Pois. B.	Poison	275
Copper cyanide. (See: "Cyanide of copper.")			
Copra	Haz.		331

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Article	Classed as	Label req.	Page No.
Cordeau detonant	Expl. C		115
Cork, granulated	Has		331
Cork, ground	Has		331
Corrosive liquid, N. O. S	Cor. L	White	227
Cotton	Has		332
Cotton batting	Has		334
Cotton batting dross	Has		334
Cotton, burnt (not repicked). (See: "Burnt cotton (not repicked).")			
Cotton seed hull fiber or shavings, pulp or cut linters	Has		334
Cotton sweepings. (See: "Cotton waste.")			
Cotton wadding	Has		334
Cotton waste	Has		334
Cotton waste, oily. (See: "Fibers, or fabrics, with animal or vegetable oil.")			
Cotton, wet. (See: "Fibers, burnt, wet or damp.")			
*Cresol, liquid (*cresylic acid*)	Comb. L		307
*Creosote, coal tar	Comb. L		307
Creosote oil. (See: "Creosote, coal tar.")			
**Cresylic acid.* (See: "Cresol liquid.")			
Crotonaldehyde	Inf. L	Red	138
*Crude nitrogen fertilizer solution	Noninf. G	Green	248
*Crude oil, petroleum	Comb. L		307
*Crude oil, petroleum	Inf. L	Red	139
Cyanide mixtures, dry	Pois. B	Poison	276
Cyanide of calcium, solid	Pois. B	Poison	276
Cyanide of copper	No restrictions		276
Cyanide of lead	No restrictions		276
Cyanide of potassium, liquid	Pois. B	Poison	277
Cyanide of potassium, solid	Pois. B	Poison	276
Cyanide of silver	No restrictions		276
Cyanide of sodium, liquid	Pois. B	Poison	277
Cyanide of sodium, solid	Pois. B	Poison	276
Cyanide of zinc	No restrictions		276
Cyanides, dry	Pois. B	Poison	276
Cyanogen gas	Pois. A	Poison gas	260
Cyclopropane	Inf. G	Red	248
Cylinders, empty	Has		335
Dead oil. (See: "Creosote, coal tar.")			
*Decahydronaphthalene	Comb. L		308
Decalin. (See: "Decahydronaphthalene.")			
Delay electric igniters	Expl. C		116
Depth bombs. (See: "Explosive bombs.")			
Deteriorated smokeless powder for cannon	Expl. B		113
Deteriorated smokeless powder for small arms	Expl. B		113
Detonating fuses	Expl. A		104
Diazodinitrophenol. (See: "Initiating explosive.")			
Dichlorethylene. (See: "Ethylene dichloride.")			
Dichlorodifluoromethane	Noninf. G	Green	248
Dichloropentanes	Comb. L		308
Diethylamine	Inf. L	Red	139
Diisobutyl ketone	Comb. L		308
Dimethoxy strychnine. (See: "Brucine, solid.")			
Dimethylamine, anhydrous	Inf. L	Red	140

(54th Amend.—Diethylamine added—July 1941)
(3rd Rev.—* added—Sep., 1943)

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Article	Classed as	Label req.	Page No.
Dimethylamine solution	Inf. L	Red	140
Dimethylarsenic acid, solid. (See: "Cacodylic acid, solid.")			
Dimethyl ether	Inf. G	Red	248
Dimethyl sulfate	Cor. L	White	227
Dimethyl sulfide	Inf. L	Red	139
Dinitrobenzol, liquid	Pois. B	Poison	277
Dinitrobenzol, solid	Pois. B	Poison	278
Dinitrochlorbenzol, solid	Pois. B	Poison	278
Dinitrotoluene, liquid (*Dinitrotoluol, liquid*)	Comb. L		308
Diphenylaminechlorarsine, gas liquid or solid	Pois. C	Tear gas	297
Diphenylchlorarsine, solid	Pois. C	Tear gas	297
Diphosgene. (See: "Phosgene.")			
*Disinfectant, liquid	Comb. L		309
*Dressing, leather	Comb. L		309
*Dressing, leather (see: "Paint, liquid")	Inf. L	Red	140
*Driers, paint or varnish	Comb. L		309
*Driers, paint or varnish (see: "Paint, liquid")	Inf. L	Red	140
Drill cartridges. (See: "*Ammunition for Cannon, nonexplosive.*")			
*Drugs, chemicals, medicines, or cosmetics	Inf. L		141
*Drugs, chemicals, medicines, or cosmetics, N. O. S.	Inf. L	Red	142
*Drugs, chemicals, medicines, or cosmetics	Inf. S. or Oxy. M		184
*Drugs, chemicals, medicines, or cosmetics, N. O. S.	Inf. S. or Oxy. M	Yellow	185
*Drugs, chemicals, medicines, or cosmetics	Cor. L		228
*Drugs, chemicals, medicines, or cosmetics, N. O. S.	Cor. L	White	228
*Drugs, chemicals, medicines, or cosmetics	Comb. L		309
*Drugs, chemicals, medicines, or cosmetics, N. O. S.	Comb. L		310
*Drugs, chemicals, medicines, or cosmetics	Pois. B		279
*Drugs, chemicals, medicines, or cosmetics, N. O. S.	Pois. B	Poison	280
*Drums, empty	Has		335
Dummy cartridges. (See: "*Ammunition for cannon, nonexplosive.*")			
Dynamite. (See: "High explosives.")			
Electric blasting caps—1,000 or less	Expl. C		115
Electric blasting caps—more than 1,000	Expl. A		103
Electric squibs	Expl. C		116
Electrolyte (acid) or alkaline corrosive battery fluid packed with battery charger or radio current supply device or parts thereof.	Cor. L	White	229
Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries.	Cor. L	White	229
Electrolyte (acid) battery fluid	Cor. L	White	229
Empty cartridge bags—black powder igniters (see: "*Igniters*").	Expl. C		116
Empty cartridge cases, primed	Expl. C		118
*Eradicators, paint or grease, liquid	Comb. L		310
*Eradicators, paint or grease, liquid (see "Paint, liquid").	Inf. L	Red	142
Essence (export shipments only). (See: "Gasoline.")			
Ethane	Inf. G	Red	249
Ether, anesthetic	Inf. L	Red	143
Ether, diethyl	Inf. L	Red	143

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Article	Classed as	Label req.	Page No.
Ether, ethyl	Inf. L	Red	143
Ether, sulfuric	Inf. L	Red	143
Ether, technical or commercial grade	Inf. L	Red	143
Ethyl acetate	Inf. L	Red	144
Ethyl aldehyde (see: Acetaldehyde)	Inf. L	Red	125
Ethyl benzene	Comb. L		311
Ethyl bromide	Inf. L	Red	144
Ethyl butyl acetate	Comb. L		311
Ethyl butyrate	Comb. L		311
Ethyl chloroacetate	Comb. L		311
Ethyl chloride	Inf. L	Red	145
Ethyl formate	Inf. L	Red	145
Ethyl hexaldehyde	Comb. L		313
Ethyl lactate	Comb. L		311
Ethyl methyl ketone	Inf. L	Red	145
Ethyl nitrate	Inf. L	Red	146
Ethyl nitrite	Inf. L	Red	146
Ethyl silicate	Comb. L		312
Ethyldichlorarsine	Pois. A	Poison gas	260
Ethylene	Inf. G	Red	249
Ethylene chlorhydrin	Comb. L		312
Ethylene dichloride	Inf. L	Red	147
Ethylene glycol diethyl ether	Comb. L		312
Ethylene glycol monomethyl ether	Comb. L		312
Ethylene glycol monoethyl ether	Comb. L		312
Ethylene glycol monomethyl ether acetate	Comb. L		312
Ethylene glycol monoethyl ether acetate	Comb. L		313
Ethylene oxide	Inf. L	Red	147
Excelsior (*shredded wood*)	Has		335
Explosive bombs	Expl. A		99
Explosive compositions containing an ammonium salt and a chlorate.	Prohibited		106
Explosive compositions that ignite spontaneously	Prohibited		106
Explosive compositions that undergo marked decomposition when subjected for 48 consecutive hours to a temperature of 167° F.	Prohibited		106
Explosive hand grenades	Expl. A		99
Explosive rifle grenades	Expl. A		99
Explosive mines	Expl. A		99
Explosive projectiles	Expl. A		99
Explosive torpedoes	Expl. A		99
Explosives, samples of. (See: Sections 146-20-5 and 146.20-6.)			
*Extracts, liquid flavoring	Comb. L		313
*Extracts, liquid flavoring (see: "Alcohol, N. O. S")	Inf. L	Red	147
Feed, wet, mixed	Has		336
Felt waste. (See: "Cotton waste.")			
Felt, waste, wet. (See: "Fibers, burnt, wet or damp.")			
Ferric arsenate, solid	Pois. B	Poison	281
Ferric arsenite, solid	Pois. B	Poison	281
Ferrophosphorus	Has		336
Ferrophosphorus briquets	No restrictions		336
Ferrosilicon briquets	Has		338

(10th Amend.—Ethyl formate added—Feb. 1942)
(2nd Rev. Page reference changed Feb. 1942)

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Article	Classed as	Label req.	Page No.
Ferrosilicon, *containing between 45% and 48% or containing between 65% and 70% silicon.*	Haz		337
Ferrosilicon, *containing between 48% and 65% silicon*	Haz		337
Ferrosilicon, *containing less than 45% or more than 70% silicon.*	Haz		338
Ferrous arsenate, solid	Pois. B	Poison	281
*Fertilizer, ammoniating solution, *containing free Ammonia.*	Noninf. G	Green	249
Fiberboard scrap (*when dry, clean, and free from oil*). (See: "Paper scrap.")			
Fibers, burnt, wet or damp	Inf. S	Yellow	185
Fibers (*Jute, hemp, flax, sisal, coir, kapok, and similar vegetable fibers*).	Haz		338
Fibers or fabrics, with animal or vegetable oil	Inf. S	Yellow	185
Film support, *nitrocellulose base.* (See: "Pyroxylin plastics, rods, rolls, sheets, tubes.")			
Firecrackers. (See: "Fireworks.")			
Firecracker salutes. (See: "Fireworks.")			
Fire extinguisher charges	Cor. L		229
Fire extinguishers, hand (*containing nonliquefied gas*)	Noninf. G		249
Fireworks	Expl. B	Fireworks	109
Fireworks, forbidden	Not permitted		108
Fish oils	Haz		339
Fish scrap, or fish meal (*containing at least 6% and not more than 12% moisture*).	Haz		339
Fish scrap or fish meal, (*containing less than 6% or more than 12% moisture*).	Inf. S	Yellow	186
Fish scrap, wet acidulated	Haz		339
Flares. (See: "Fireworks.")			
Flares, aeroplane. (See: "Fireworks.")			
Flares, signal. (See: "Fireworks.")			
Flash cartridges. (See: "Fireworks" and "Low explosives.")			
Flash crackers. (See: "Fireworks.")			
Flash powder. (See: "Fireworks" and "Low explosives.")			
Flash sheets. (See: "Fireworks" and "Low explosives.")			
Flax. (See: "Fibers.")			
Formaldehyde	Comb. L		314
Formalin. (See: "Formaldehyde.")			
Formic acid	Cor. L	White	230
Fuel oil, C. S. No. 1	Comb. L		315
*Fuel oil, C. S. No. 2	Comb. L		315
*Fuel oil, C. S. No. 3	Comb. L		315
*Fuel oil	Comb. L		315
Fulminate of mercury, dry	Prohibited		104
Fulminate of mercury, wet. (See: "Initiating explosive.")			
Furfural	Comb. L		315
*Furniture stain, liquid (see: "Paint, liquid")	Inf. L	Red	147
Fuses, railway. (See: "Fireworks.")			
Fuse igniters	Expl. C		117

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Article	Classed as	Label req.	Page No.
Fuse, instantaneous. (See: "Instantaneous fuse.")			
Fuse lighters	Expl. C		117
Fusel oil	Comb. L		315
Fuse, safety	Expl. C		118
Fuzes, combination, percussion, time or tracer	Expl. C		116
Fuzes, detonating	Expl. A		104
Garbage tankage (*containing less than 8% moisture*)	Inf. S	Yellow	186
Garbage tankage (containing 8% or more of moisture)	Haz		340
Gas drips, hydrocarbon	Inf. L	Red	148
Gas identification sets	Pois. C	Poison gas	297
Gas identification sets	Pois. A	Poison gas	260
*Gas oil	Comb. L		315
Gasoline	Inf. L	Red	148
Gasolina (export only). (See: "Gasoline.")			
Gasoline (export shipments only.) (See: "Gasoline.")			
Gelatine dynamite. (See: "High explosives.")			
Gravure ink. (See: *Ink.)			
Grenades, empty, primed (see: "Primers")	Expl. C		118
Grenades, hand, explosive. (See: "Explosive hand grenades.")			
Grenades, rifle, explosive. (See: "Explosive rifle grenades.")			
Ground bituminous coal. (See: "Coal facings.")			
Guanyl nitrosamino guanylidene hydrazine. (See: "Initiating explosive.")			
Guanyl nitrosamino guanyl tetrazene. (See: Initiating explosive.")			
Guanidine Nitrate	Inf. S	Yellow	195
Guncotton. (See: "High explosives.")			
Hair, wet	Inf. S	Yellow	186
Hay	Haz		340
Hay or straw (loose, wet or damp)	Not permitted		340
Helium	Noninf. G	Green	249
Hemp. (See: "Fibers.")			
Hemp, wet. (See: "Fibers, burnt, wet or damp.")			
Hessian. (See: "Burlap cloth.")			
Hexaldehyde	Comb. L		316
High explosives	Expl. A		101
Highway signals. (See: "Fireworks (*fuses*)".)			
Hydriodic acid	Cor. L	White	231
Hydrobromic acid	Cor. L	White	231
Hydrocarbon gas, liquefied	Inf. G	Red	249
Hydrocarbon gas, nonliquefied	Inf. G	Red	250
Hydrochloric acid	Cor. L	White	231
Hydrochloric acid, anhydrous. (See: "Hydrogen chloride.")			
Hydrochloric acid mixtures	Cor. L	White	231
Hydrocyanic acid, liquid	Pois. A	Poison gas	261
Hydrocyanic acid solutions	Pois. B	Poison	281
Hydrocyanic acid, unstabilized	Not permitted		201
Hydrofluoric acid	Cor. L	White	232
Hydrofluoric acid, anhydrous	Cor. L	White	233
Hydrofluosilicic acid	Cor. L	White	234
Hydrogen	Inf. G	Red	250
Hydrogen chloride	Noninf. G	Green	250
Hydrogen dioxide. (See: "Hydrogen peroxide.")			

(10th Amend.—Guanidine nitrate added—Feb. 1942)
(14th Amend.—Hydrochloric acid, anhydrous and Hydrogen chloride added—Apr. 1943)

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Article	Classed as	Label req.	Page No.
Hydrogen peroxide (*containing over 7.41% (25 volume)* H_2O_2).	Cor. L	White	235
Hydrogen sulfide	Inf. G	Red	250
Igniters	Expl. C		116
Illuminating projectiles. (See: "Fireworks.")			
Inflammable liquids, N. O. S	Inf. L	Red	149
Inflammable solids, N. O. S	Inf. S	Yellow	187
Initiating explosives	Expl. A		103
*Ink	Comb. L		316
*Ink	Inf. L	Red	150
*Insecticide, dry	Pois. B	Poison	282
*Insecticide, liquid	Pois. B	Poison	283
*Insecticide, liquid (*vermin exterminator*)	Comb. L		
*Insecticide, liquid (*vermin exterminator*)	Inf. L	Red	151
Instantaneous fuse	Expl. C		117
Insulation tape (*varnished cloth type*). (See: "Oiled textiles.")			
Iron arsenate, solid. (See: "Ferrous or ferric arsenate, solid.")			
Iron oxide. (See: "Iron sponge.")			
Iron sponge	Has		340
Iron sponge, spent	Has		341
Isobutane. (See: "Liquefied petroleum gas.")			
Isopropanol. (See: "Alcohol, isopropyl.")			
Jute. (See: "Fibers.")			
Jute, wet. (See: "Fibers, burnt, wet, or damp.")			
Kapok. (See: "Fibers.")			
Kerosine (*coal oil*)	Comb. L		316
Kerosene (export shipment only—see: "Kerosine").			
*Lacquer	Comb. L		317
*Lacquer. (See: "paint, liquid")	Inf. L	Red	151
*Lacquer base, liquid	Comb. L		317
*Lacquer base, liquid	Inf. L	Red	152
Lacquer base, or lacquer chips, dry, *nitrocellulose base*	Inf. S	Yellow	188
Lacquer base or lacquer chips, plastic (wet with an inflammable liquid).	Inf. L	Red	152
Lead arsenate, solid	Pois. B	Poison	283
Lead arsenite, solid	Pois. B	Poison	283
Lead aside. (See: "Initiating explosive.")			
Lead cyanide. (See: "Cyanide of lead.")			
Lead dross	Has		341
Lead nitrate (see: "*Nitrates*")	Oxy. M		195
Lead scrap	Has		341
Lead styphnate (*lead trinitroresorcinate*). (See: "Initiating explosive.")			
Lead type dross	No restrictions		341
*Leather bleach (see: "Paint, liquid")	Inf. L	Red	152
Lewisite	Pois. A	Poison gas	261
Lime-nitrogen. (See: "Calcium cyanamide, not hydrated.")			
Lime, unslaked	Has		342
Liquefied carbon dioxide. (See: "Carbon dioxide, liquefied.")			

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Liquefied hydrocarbon gas. (See: "Hydrocarbon gas, liquefied.")			
Liquefied petroleum gas	Inf. G	Red	251
London purple, solid	Pois. B	Poison	284
Long time burning oil (export shipment only—see: "Kerosine.").			
Low blasting explosive. (See: "Low explosives.")			
Low explosives	Expl. A		101
Lye. (See: "Caustic soda, solid.")			
Machines or apparatus (*assembled for shipment containing not over 15 pounds weight of gas or liquid for their operation*).	Noninf. G		251
Magnesium arsenate, solid	Pois. B	Poison	284
Magnesium metallic, powder	Inf. S	Yellow	289
Magnesium nitrate (see: "*Nitrates*")	Oxy. M		196
Magnesium perchlorate	Oxy. M	Yellow	200
Magnesium peroxide	Oxy. M	Yellow	190
Manganese dioxide	Has		340
Matches, block. (See: "Matches, strike-anywhere.")			
Matches, book	Inf. S		191
Matches, card	Inf. S		191
Matches, strike-anywhere	Inf. S	Yellow	191
Matches, strike-on-box	Inf. S		191
Mercuric acetate	Pois. B	Poison	284
Mercuric-ammonium chloride, solid	Pois. B	Poison	285
Mercuric benzoate, solid	Pois. B	Poison	285
Mercuric bromide, solid	Pois. B	Poison	285
Mercuric cyanide, solid	Pois. B	Poison	285
Mercuricyanamid, solid	Pois. B	Poison	285
Mercuric iodide, solid	Pois. B	Poison	285
Mercuric oleate, solid	Pois. B	Poison	285
Mercuric oxide (red), solid	Pois. B	Poison	285
Mercuric oxide (yellow), solid	Pois. B	Poison	285
Mercuric oxycyanide, solid	Pois. B	Poison	285
Mercuric-potassium iodide, solid	Pois. B	Poison	285
Mercuric salicylate, solid	Pois. B	Poison	285
Mercuric subsulfate, solid	Pois. B	Poison	286
Mercuric sulfate, solid	Pois. B	Poison	286
Mercuric sulfo cyanate, solid	Pois. B	Poison	286
Mercurol, solid	Pois. B	Poison	286
Mercurous bromide, solid	Pois. B	Poison	286
Mercurous gluconate, solid	Pois. B	Poison	286
Mercurous iodide, solid	Pois. B	Poison	286
Mercurous nitrate, solid	Pois. B	Poison	286
Mercurous oxide, black, solid	Pois. B	Poison	286
Mercurous sulfate, solid	Pois. B	Poison	286
Mercury acetate, solid	Pois. B	Poison	286
Mercury bichloride, solid	Pois. B	Poison	286
Mercury bisulfate, solid	Pois. B	Poison	286
Mercury compounds, N. O. S. (solid)	Pois. B	Poison	286
Mercury cyanide, solid	Pois. B	Poison	286
Mercury nucleate, solid (see: "Mercurol, solid")	Pois. B	Poison	286
Methane	Inf. G	Red	252

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Methanol (see: "Alcohol, wood")	Inf. L	Red	127
Methyl acetate	Inf. L	Red	153
Methyl acetone	Inf. L	Red	153
Methyl alcohol (see: "Alcohol, wood")	Inf. L	Red	127
Methyl amyl acetate	Comb. L		317
Methyl amyl ketone	Comb. L		317
Methyl bromide, liquid	Pois. B	Poison	287
Methyl chloride	Inf. G	Red	252
Methyldichlorarsine	Pois. A	Poison gas	261
Methyl formate	Inf. L	Red	153
Mesityl oxide	Comb. L		317
*Mineral spirits. (See: "Compounds, lacquer, paint or varnish reducing, liquid.")			
Mines, explosive. (See: "Explosive mines.")			
Mixed acid	Cor. L	White	236
Monobromobenzene. (See: "Bromobenzene.")			
Monochloracetone, stabilized	Pois. C	Tear gas	297
Monochlorbenzene (*Chlorbenzene*) (*Chlorbenzol*)	Comb. L		317
Monochloroacetone	Pois. A	Poison gas	261
Monochlorodifluoromethane	Noninf. G	Green	252
Monochlorotetrafluoroethane	Noninf. G	Green	252
Monomethylamine	Inf. G	Red	252
*Mortar stain, liquid. (See: "Paint, liquid")	Inf. L	Red	153
Moth Balls. (See: "Naphthalene.")			
Motion-picture film (cellulose acetate base)	No restrictions		193
Motion-picture film, (*nitrocellulose base, positive or negative*).	Inf. S	Yellow	192
Motion-picture film, old and wornout (cellulose acetate base).	No restrictions		193
Motion-picture film, old and wornout (*nitrocellulose base*).	Inf. S	Yellow	193
Motion-picture film, scrap (*cellulose acetate base*)	No restrictions		193
Motion-picture-film scrap (*nitrocellulose base*). (See: "Pyroxylin plastic scrap.")			
Motion-picture film, toy	Inf. S		194
Motion-picture film, toy, standard width	Inf. S	Yellow	194
Motion-picture film, unexposed (*nitrocellulose base*)	Inf. S	Yellow	192
Motor fuel (export shipments only.) (See: "Gasoline.")			
Motor-fuel antiknock compound	Pois. B	Poison	287
*Motor fuel, N. O. S.	Comb. L		318
*Motor fuel, N. O. S.	Inf. L	Red	154
Motor spirit (export shipments only.) (See: "Gasoline.")			
Muriatic acid. (See: "Hydrochloric acid.")			
Mustard gas	Pois. A	Poison gas	262
Nafta (export shipments only). (See: "Gasoline.")			
Naphtha, coal tar. (See: "Coal tar naphtha.")			
Naphtha distillate. (See: "Petroleum distillate.")			
Naphthalene	Haz		343
Naphthalin	Haz		343
*Naphtha, petroleum. (See: "Benzine.")			
Naphtha solvent. (See: "Coal tar naphtha.")			
Natural gasoline (casinghead gasoline)	Inf. L	Red	155
Negative cotton. (See: "High explosives.")			
Neon gas	Noninf. G	Green	252

(10th Amend.—Monochlorodifluoromethane; Monochlorotetrafluoroethane added—Feb. 1942)

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Nickel carbonyl	Inf. L	Red	155
Nickel cyanide, solid	Pois. B	Poison	288
Nicotine hydrochloride	Pois. B	Poison	288
Nicotine, liquid. (See: "Insecticide, liquid.")			
Nicotine salicylate	Pois. B	Poison	288
Nicotine sulfate, solid or liquid. (See: "Insecticide, dry or liquid.")			
Nicotine tartrate	Pois. B	Poison	289
Nitrate of ammonia explosives. (See: "High explosives.")			
Nitrates	Oxy. M		194
Nitrates, N. O. S. (see: "*Nitrates*")	Oxy. M		196
Nitrating acid. (See: "Mixed acid.")			
Nitric acid	Cor. L	White	236
Nitrobenzene, liquid	Pois. B	Poison	289
Nitrobenzol, liquid. (See: "Nitrobenzene, liquid.")			
Nitro-carbo nitrate. (See: "*Nitrates.*")	Oxy. M		196
Nitrocellulose colloided, granular or flake-wet with an inflammable liquid.	Inf. L	Red	156
Nitrocellulose colloided, granular or flake, wet with 20 percent water.	Inf. S	Yellow	198
Nitrocellulose, dry. (See: "High explosives.")			
Nitrocellulose, wet with an inflammable liquid	Inf. L	Red	156
Nitrocellulose, wet with water	Inf. S	Yellow	198
Nitrochlorobenzene, meta or para, solid	Pois. B	Poison	290
Nitrochlorobenzene, ortho, liquid	Pois. B	Poison	289
Nitrogen	Noninf. G	Green	253
Nitrogen dioxide, liquid	Pois. A	Poison gas	262
Nitrogen peroxide	Pois. A	Poison gas	262
Nitrogen tetroxide	Pois. A	Poison gas	262
Nitroglycerin, liquid	Expl. A		106
Nitroglycerin, spirits of	Inf. L	Red	157
Nitroguanidine, dry. (See "High explosives.")			
Nitroguanidine, wet with water	Inf. S	Yellow	198
Nitro mannite. (See: "Initiating explosive.")			
Nitrosoguanidnine. (See: "Initiating explosive.")			
Nitrostarch, dry. (See: "High explosives.")			
Nitrostarch, wet with an inflammable liquid (see: "Nitrocellulose wet with an inflammable liquid.")	Inf. L	Red	156
Nitrostarch, wet with water	Inf. S	Yellow	199
Nitrosyl chloride	Noninf. G	Green	253
Nitrourea. (See: "High explosives.")			
Nitrous oxide	Noninf. G	Green	253
Nonliquefied gases. (See: "Compressed gases, N. O. S.".)			
Oakum. (See: "Twisted jute packing (rope).")	Haz		343
*Oil	Inf. L	Red	157
Oiled Clothing (*manufactured articles properly dried to prevent spontaneous heating*).	Haz		344
Oiled Paper (*manufactured articles properly dried to prevent spontaneous heating*).	Haz		344
Oiled Textiles (*manufactured articles properly dried to prevent spontaneous heating*).	Haz		344
*Oil, N. O. S	Inf. L	Red	157
Oil of Mirbane (see: "Nitrobenzene, liquid")	Pois. B	Poison	287
Oil of Vitriol. (See: "Sulfuric acid.")			
Oleum. (See: "Sulfuric acid.")			

(5th Amend.—*Nitroguanidine, dry;* Nitrourea: Oleum added—July 1941)
(10th Amend.—Nitrocellulose colloided, granular or flake added—Feb. 1942)
(14th Amend.—Nitrocellulose Coll. gran. or flake added—Apr. 1943)

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Phenyldichlorarsine, liquid	Pois. B	Poison	290
Phosgene	Pois. A	Poison gas	263
Phosphoric anhydride	Inf. S	Yellow	201
Phosphorus amorphous, red	Inf. S	Yellow	202
Phosphorus oxychloride	Cor. L	White	237
Phosphorus pentachloride	Inf. S	Yellow	202
Phosphorus sesquisulfide	Inf. S	Yellow	203
Phosphorus tribromide	Cor. L	White	237
Phosphorus trichloride	Cor. L	White	238
Phosphorus, white or yellow, dry	Inf. S	Yellow	202
Phosphorus, white or yellow, in water	Inf. S	Yellow	203
Photographic film (cellulose acetate base)	No restrictions		204
Photographic film (*nitrocellulose base*)	Inf. S	Yellow	204
Photographic film scrap (cellulose acetate base)	No restrictions		204
Photographic film scrap (*Nitrocellulose base*). (See: "Pyroxylin plastic scrap.")			
Photographic flash lamps (*capable, upon breakage, of igniting inflammable vapors or finely divided combustible substances.*)	Has		345
Photographic flash lamps (*that will not, upon breakage, ignite inflammable vapors or finely divided combustible substances*).	No restrictions		345
Photographic flash powder. (See: "Fireworks.")			
Picrates, dry. (See: "High explosives.")			
Picric acid, dry. (See "High explosives.")			
Picric acid, wet with not less than 10% water, *in excess of 16 ounces but not exceeding 25 pounds.*	Inf. S	Yellow	205
Picric acid, wet with not less than 10% water, over 25 pounds. (See: "High explosives.")			
*Pine oil	Comb. L		316
Pintsch gas	Inf. G	Red	254
Pinwheels. (See: "Fireworks.")			
Poisonous liquid or gas, N. O. S	Pois. A	Poison gas	263
Poisonous liquids, N. O. S	Pois. B	Poison	291
Poisonous liquids, N. O. S	Pois. C	Tear gas	297
Poisonous solids, N. O. S	Pois. B	Poison	292
Poisonous solids, N. O. S	Pois. C	Tear gas	297
Police grenades (liquid)	Pois. A	Poison gas	263
Police grenades, tear gas	Pois. C	Tear gas	298
*Polish, furniture, liquid	Inf. L	Red	160
*Polishing compounds, liquid	Comb. L		319
*Polishing compounds, liquid	Inf. L	Red	160
*Polish, metal, liquid	Inf. L	Red	160
*Polish, stove, liquid	Inf. L	Red	160
Potassium arsenate, solid	Pois. B	Poison	293
Potassium arsenite, solid	Pois. B	Poison	293
Potassium bromate	Oxy. M	Yellow	205
Potassium chlorate (see: "*Chlorates*")	Oxy. M	Yellow	181
Potassium cyanide. (See: "Cyanide of potassium.")			
Potassium hydroxide. (See: "Caustic potash, solid.")			
Potassium hydroxide solution. (See: "Caustic potash, liquid.")			
Potassium metallic	Inf. S	Yellow	206

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Potassium nitrate (see: "*Nitrates*")	Oxy. M		197
Potassium nitrate mixed (fused) with sodium nitrite	Oxy. M		206
Potassium nitrite	Oxy. M	Yellow	206
Potassium perchlorate (see: "*Perchlorates*")	Oxy. M	Yellow	200
Potassium permanganate (see: "*Permanganates*")	Oxy. M	Yellow	201
Potassium peroxide	Oxy. M	Yellow	207
Potassium sulfide (fused or concentrated and ground)	Inf. S	Yellow	207
Potassium sulfide (fused or concentrated but not ground—*May be chipped or broken*).	Inf. S	Yellow	208
Potato spray (arsenical), liquid. (See: "Insecticide liquid.")			
Primers	Expl. C		118
Projectiles, explosives. (See: "Explosive projectiles.")			
Projectiles, gas, smoke, or incendiary, nonexplosive. (See: "*Chemical ammunition, class A, B, or C.*")			
Projectiles, illuminating. (See: "Fireworks.")			
Projectiles, sand-loaded, empty or solid. (See: "*Ammunition for Cannon, Nonexplosive.*")			
Propane. (See: "Liquefied petroleum gas.")			
Propanol. (See: "Alcohol, propyl.")			
Propylene	Inf. G	Red	254
Prussic acid. (See: "Hydrocyanic acid, liquid.")			
Prussic acid, unstabilized. (See: "Hydrocyanic acid, unstabilized.")			
*Pyridine	Inf. L	Red	161
Pyrosulfuryl chloride	Cor. L	White	238
Pyroxylin plastics, rods, rolls, sheets, tubes	Inf. S	Yellow	208
Pyroxylin plastic scrap	Inf. S	Yellow	209
Pyroxylin solutions. (See: "Lacquer base liquid")	Inf. L	Red	161
*Pyroxylin solvents, N. O. S. (See: "*Solvents, N. O. S.")	Inf L	Red	162
Quicklime. (See: "Lime unslaked")	Haz		342
Rags, oily. (See: "Fibers or fabrics with animal or vegetable oil.")			
Rags, scrap (*when dry, clean and free from oil*)	Haz		345
Rags, wet. (See: "Fibers, burnt, wet or damp.")			
Railway fusees. (See: "Fireworks.")			
*Range oil	Comb. L		315
Refined oil (export shipment only). (See: "Kerosine.")			
Refined petroleum (export shipment only). (See: "Kerosine.")			
Refrigerating machines (*Assembled for shipment and containing not over 15 pounds of an inflammable liquid for their operation*).	Inf. L		162
Refrigerating machines (*of the self-contained type containing not over 25 lbs., weight of gas, or of the remote-control type, consisting of separate units shipped separately and each containing not over 25 lbs. weight of gas*).	Inf. G. or noninf. G.		254
*Resin	Haz		346
Rifle powder. (See: "Black powder.")			
*Road asphalt or tar, liquid	Inf. L	Red	163
*Road asphalt or tar, liquid	Comb. L		319
*Road asphalt or tar (see: "Asphalt.")	Haz		323
*Road oil	Comb. L		319

(10th Amend.—Potassium nitrite added—Feb. 1942)
(14th Amend.—Potassium nitrate mixed (fused) with sod. nitrite added—Apr. 1943)

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Rockets. (See: "Fireworks.")			
Roman candles. (See: "Fireworks.")			
Rosin (*Colophony*)	Haz		346
Rough ammoniate tankages (*containing less than 7% moisture*). (See: "*Tankages.*")	Inf. S	Yellow	214
Rough ammoniate tankages (*containing 7% or more of moisture*). (See: "*Tankages.*")	Haz		346
Rubber buffings	Inf. S	Yellow	209
Rubber scrap, *ground, powdered or granulated*	Inf. S	Yellow	209
Rubber shoddy, regenerated rubber, or reclaimed rubber.	Inf. S	Yellow	209
*Rum, denatured. (See: "Alcohol, denatured.")			
*Rust preventive coating	Comb. L		320
Safety fuse	Expl. C		118
Safety squibs	Expl. C		117
Saltpeter. (See: "Potassium nitrate.")			
Saltpeter, Chile. (See: "Sodium nitrate.")			
Salutes. (See "Fireworks.")			
Sawdust (*when dry, clean, and free from oil*)	Haz		346
Scheele's green, solid. (See "Copper arsenite, solid.")			
Sea coal. (See: "Coal facings.")	Inf. S	Yellow	182
Shellac, liquid. (See: "Paint, liquid.")	Inf. L	Red	163
Shellac, raw	Haz		347
Shells, fireworks. (See: "Fireworks.")			
Signals, highway. (See: "Fireworks.")			
Silicon chloride (tetrachloride)	Cor. L	White	238
Silver cyanide. (See: "Cyanide of silver.")			
Sisal. (See: "Fibers.")			
Sludge acid	Cor. L	White	238
Small-arms ammunition. (See: "Ammunition for small arms.")	Expl. C		114
Small-arms ammunition, tear gas cartridges (see: "Ammunition for small arms.")	Expl. C	Tear gas	114
Small-arms primers	Expl. C		118
Smoke candles. (See: "Fireworks.")	Expl. B		109
Smoke generators. (See: "*Chemical ammunition, class B or C.*")			
Smokeless powder for cannon	Expl. B		112
Smokeless powder for cannon or small-arms in water	Expl. B		113
Smokeless powder for small-arms	Expl. B		113
Smoke pots. (See: "Fireworks.")			
Sodium arsenate, solid	Pois. B	Poison	293
Sodium arsenite (solution) liquid	Pois. B	Poison	294
Sodium cacodylate, solid	Pois. B	Poison	293
Sodium chlorate. (See: "*Chlorates.*")	Oxy. M	Yellow	181
Sodium chlorite. (See: Calcium chlorite)	Oxy. M	Yellow	210
Sodium cyanide. (See: "Cyanide of sodium.")			
Sodium dimethylarsenate. (See: "Sodium cacodylate, solid.")	Pois. B	Poison	293
Sodium hydrosulfite	Inf. S	Yellow	210
Sodium hydroxide. (See: "Caustic soda, solid.")			
Sodium hydroxide solution. (See: "Caustic soda, liquid.")			

(1st Rev.—Tear gas label corr.—July 1941
(3rd Rev.—* added—Sep. 1943)

146.04-5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
Tetraethyl lead, liquid	Pois. B	Poison	294
Tetrazene (*guanyl nitrosamino guanyl tetrazene*). (See: "Initiating explosive.")			
Tetryl. (See: "High explosive.")			
Textile waste. (See: "Cotton waste")	Haz		334
Textile waste, wet. (See: "Fibers, burnt, wet or damp.")			
Thallium salts, solid	Pois. B	Poison	295
Thallium sulfate, solid	Pois. B	Poison	295
*Thinners for rust preventive coating	Comb. L		320
Time fuzes	Expl. C		116
Tin tetrachloride, anhydrous	Cor. L	White	241
Titanium tetrachloride	Cor. L	White	241
Toluene	Inf. L	Red	165
Toluol. (See: "Toluene.")			
Torches. (See: "Fireworks.")			
Torpedoes, cap. (See: "Fireworks.")			
Torpedoes empty. (See: "*Ammunition for cannon, nonexplosive.*")			
Torpedoes, explosive. (See: "Explosive torpedoes.")			
Torpedoes, toy, railway or track. (See: "Fireworks.")			
Toy caps	Expl. C		119
Tracer fuzes	Expl. C		116
Treated paper (*manufactured articles properly dried to prevent spontaneous heating*) (see: "Oiled clothing").	Haz		344
Treated textiles (*manufactured articles properly dried to prevent spontaneous heating*) (see: "Oiled clothing").	Haz		344
Trinitrobenzene. (See: "High explosives.")			
Trinitrobenzene, wet (*when wet with not less than 10% water and in a quantity not exceeding 16 ounces in one outside package*).	Inf. S	Yellow	214
Trinitroresorcinol. (See: "High explosives.")			
Trinitrotoluene. (See: "High explosives.")			
Trinitrololuene, wet (*when wet with not less than 10% of water and in a quantity not exceeding 16 ounces in one outside package*).	Inf. S	Yellow	214
Turpentine	Comb. L		321
*Turpentine substitutes	Comb. L		321
*Turpentine substitutes	Inf. L	Red	166
Twisted jute packing (rope) (treated or untreated)	Haz		343
Unstable explosives	Prohibited		106
*Varnish (see: "Paint, liquid")	Inf. L	Red	166
*Varnish	Comb. L		321
Vermin exterminator. (See: "Insecticide liquid.")			
Very signal cartridges. (See: "Fireworks.")			
Water white (export shipment only). (See: "Kerosine.")			
*Waxes, liquid	Comb. L		321
Wet nitrocellulose (30% inflammable liquid). (See: "Nitrocellulose wet with an inflammable liquid".)			
Wet nitrocellulose (20% water). (See: "Nitrocellulose, wet with water.")			
*Wood filler, liquid (see: "Paint, liquid")	Inf. L	Red	166
*Wood filler, liquid	Comb. L		321
Wood shavings (*when dry, clean, and free from oil*)	Haz		346
*Wood stain, liquid (see: "Paint, liquid")	Inf. L	Red	167
*Wood stain, liquid	Comb. L		321
Wool waste. (See: "Cotton waste.")			
Wool waste, wet. (See: "Fibers, burnt, wet or damp.")			

146.04–5 List of explosives and other dangerous articles and combustible liquids—Con.

Article	Classed as	Label req.	Page No.
X-Ray film (cellulose acetate base)	No restrictions		214
X-Ray film (*nitrocellulose base*). (See: "Photographic film (*Nitrocellulose base.*")			
X-Ray film scrap (cellulose acetate base)	No restrictions		215
X-Ray film scrap (*Nitrocellulose base*). (See: "Pyroxylin plastic scrap.")			
*Xylene	Inf. L	Red	167
*Xylol (see: "*Xylene")	Inf. L	Red	167
Xylol bromide	Pois. C	Tear gas	298
Zinc arsenate	Pois. B	Poison	295
Zinc arsenite, solid	Pois. B	Poison	295
Zinc chlorate (see: "*Chlorates*")	Oxy. M	Yellow	181
Zinc cyanide. (See: "Cyanide of zinc.")			
Zinc ethyl	Not permitted		167
Zinc nitrate (see: "*Nitrates*")	Oxy. M		197
Zinc permanganate (see: "*Permanganates*")	Oxy. M	Yellow	201
Zirconium metallic, dry	Inf. S	Yellow	215
Zirconium metallic, sludge	Inf. S	Yellow	215
Zirconium metallic, wet	Inf. S	Yellow	215
Zirconium nitrate (see: "*Nitrates*")	Oxy. M		198
Zirconium picramate wet with 20% water	Oxy. M	Yellow	215

SHIPPER'S REQUIREMENTS RE: PACKING, MARKING, LABELING AND SHIPPING PAPERS

146.05–1 Shipments in violation of the regulations in this part.—No permitted explosives or other dangerous articles or substances and combustible liquids shall be tendered for shipment on board vessels except when in compliance with the provisions of the regulations in this part.

146.05–2 Acceptable shipments.—(a) Permitted explosives or other dangerous articles or substances may be offered to vessels for transportation and storage provided they are in proper condition for transportation or storage and are as defined and are packed, marked, labeled, described, certified and otherwise acceptable as provided for herein. Methods of preparation, packing, testing and records, insofar as they effect safety in transportation shall be open to inspection by a duly authorized representative of the U. S. Coast Guard.

(b) When quantity limitations are specified in the regulations in this part by U. S. liquid measure or by avoirdupois weight it is authorized that quantities measured by the metric system may be substituted, up to but not exceeding 1 gallon for liquids and 10 pounds for solids, on the basis of 1 liter per quart specified and 500 grams per pound specified.

146.05–3 Mixed packing.—Outside containers having interior packages containing substances possessing different dangerous characteristics, the mixture of which is liable to cause evolution of heat or gas or produce a corrosive acting substance, shall not be offered for transportation or storage on board vessels to which the regulations in this part apply unless so packed as to prevent admixture.

(5th Amend.—146.05-2(b) added—July 1941)

146.05–4 Prescribed containers.—The regulations in this subchapter prescribe four groups of outside containers for use in shipping permitted explosives or other dangerous articles or substances as follows:

(a) I.C.C. specification containers.
(b) M.I.N. specification containers. (See § 146.05–6.)
(c) C.F.C. specification containers. (See § 146.05–7.)
(d) Non-specification containers.

146.05–5 I.C.C. specification containers.—(a) Interstate Commerce Commission containers authorized herein for use in the transportation of permitted explosives or other dangerous articles or substances must have been made and marked in compliance with specifications prescribed by the Interstate Commerce Commission in effect at date of manufacture of containers.

(b) Containers not specified herein, made previous to effective date of the regulations in this part and authorized for use under the regulations of the Interstate Commerce Commission effective October 1, 1930, which may be continued in use, are as follows:

When the regulations in this part call for specification Nos.	These specification containers may also be used—		When the regulations in this part call for specification Nos.	These specification containers may also be used—	
1A	1	Boxed carboy, glass, or earthenware.	6B	20A	Metal drum.
1B	1	Boxed carboy, lead.	6C	20B	Metal drum.
1C	1	Carboy in keg, glass or earthenware.	10A	9	Wooden barrel.
3A	3, 25, 26	Cylinder.	10B	10	Wooden barrel.
3B	26	Cylinder.	10C	10	Wooden barrel.
3C	7	Cylinder.	12B	23A, 23B, 23D, 24A, 24B, 24D.	Fiberboard box.
3D	33	Cylinder.	12C	23C, 24C	Fiberboard box.
3E	3	Cylinder.	17C	5J	Metal drum.
4A	26	Cylinder.	17E	5E	Metal drum.
4B	26, 33	Cylinder.	37D	6D	Metal drum.
4C	7	Cylinder.	37E	6E	Metal drum.
5H	5A, lead-lined	Lead-lined metal barrel or drum.	37F	6F	Metal drum.
6A	20	Metal drum.	37G	6G	Metal drum.
			37H	6H	Metal drum.

(c) For compressed gases when tank cars marked ICC–105A300 are authorized, tank cars marked ICC–105A400, 105A500, and 105A600 may also be accepted; when ICC–104A tank cars are authorized, tank cars marked ICC–105A300, 105A400, 105A500, and 105A600 may also be accepted; and when ICC–106A500 tank cars are authorized, tank cars marked ICC–106A800 may also be accepted.

(d) Tank cars. The regulations of the Interstate Commerce Commission governing the transportation of explosives and other dangerous articles, effective January 7, 1941, authorize the use of fusion welded tanks on tank cars. The fusion welded tank cars corresponding to the specification shown in the tables herein as an acceptable container are also authorized for acceptance on board vessels. These cars will be marked by a "W" added to the specification marking; *for example*, "ICC–103A" will carry the marking "ICC–103A–W", etc.

(5th Amend.—Effective date corrected; text rearranged—July 1941)

(e) Cylinders of foreign manufacture received from foreign countries for charging with compressed gas may be charged and shipped for export when in compliance with regulations governing such charging and shipping as promulgated by the Interstate Commerce Commission. Bill of lading or other shipping paper shall, when possible, identify the cylinder and shall carry the following certification:

These cylinders have been retested and refilled in accordance with the Interstate Commerce Commission requirements for export.

146.05-6 M.I.N. specification containers.—Specification containers of the U. S. Coast Guard are prescribed herein for use in the transportation of combustible liquids and hazardous articles and for export shipments of inflammable liquids. Such containers shall be made and marked in compliance with specifications of these regulations. Containers that do not comply with such specifications shall not be marked to indicate compliance.

NOTE: Certain other specifications are also set forth herein such as for built-in magazines, portable magazines, portable multiunit containers, and metal lockers, used in the stowage on board vessels of explosives or other dangerous articles.

146.05-7 C.F.C. specification containers.—(a) Metal barrels or drums, constructed and marked in accordance with specifications of the Consolidated Freight Classification, Rule 40, section 5, of capacities not exceeding 110 gallons, are permitted by these regulations for use in transportation or storing combustible liquids on board passenger vessels. Single-trip containers, manufactured under Rule 40, are not authorized for such use.

(b) For shipments comprising C.F.C. specification metal barrels or drums the bill of lading or other shipping paper is required to show the following certificate over the written or stamped facsimile signature of the shipper or his duly authorized agent:

The C.F.C. metal barrels or drums used for this shipment are marked in compliance with requirements of Rule 40, section 5, of Consolidated Freight Classification.

(c) The requirements as to marking will not be necessary for metal barrels or drums, equivalent to C.F.C. Rule 40 barrels or drums, when manufactured in foreign countries, but bill of lading or other shipping paper shall bear the following certificate over the written or stamped fascimile signature of the shipper or his duly authorized agent:

The metal barrels or drums used for this shipment are of foreign manufacture and conform toconstruction requirements of Rule 40, section 5, of the Consolidated Freight Classification.

(d) Solid fiberboard or double-faced corrugated fiberboard boxes constructed in accordance with specifications of the Consolidated Freight Classification, Rule 41, section 2, of capacities not exceeding 90 pounds weight of box and contents, are permitted by these regulations for use in transporting or storing combustible liquids, in inside containers, on board passenger vessels.

(e) Fiberboard boxes that are made to conform to specifications of Rule 41, section 2, must bear certificate of box maker showing that the boxes do so conform. Boxes used for shipment of combustible liquids shall be marked by printing or stenciling or stamping thereon: (1) The name of the commodity within the container: or, (2), The words "Com-

bustible Liquid". This marking shall be block type, not less than ½ inch high, and shall be imposed under, above or to either side of the box maker's certificate. Marking shall be in block type letters, inside a heavy black-line border.

146.05–8 Non-specification containers.—Metal barrels or drums, wooden barrels or kegs, wooden boxes, fiberboard boxes, burlap bags, multiwall paper bags and bales comprise the type of non-specification containers that are permitted for certain regulated substances. The detailed regulations in the tables for the various classifications set forth the requirements governing such containers where permitted. The design and construction of non-specification containers must be such as to prevent the occurrence of defects that permit leakage of their contents and strong enough to stand, without failure, all shocks ordinarily incident to handling and stowage during transit. The shipper's attention is called to the regulation in the various tables which requires the officer in charge of loading the vessel to satisfy himself that a non-specification container offered for transportation, when containing a permitted substance, is sufficient in all respects for the purpose intended.

146.05–9 Specification containers packed in outside packages.—Outside specification shipping containers that do not contain explosives or corrosive liquids, except electrolyte or alkaline corrosive battery fluid or electric storage batteries containing electrolyte or alkaline corrosive battery fluid or fire extinguisher charges, may be shipped when tightly packed in specification boxes or barrels or in non-specification boxes, barrels or crates. Such outside package shall be marked with the prescribed name of contents and labeled as required by these regulations. Containers required by these regulations to be marked "This Side Up" shall be packed in the outside package with filling holes up and the outside package must be marked "This Side Up". The outside package shall also be marked "Inside Containers Comply With Prescribed Specifications" unless the specification marking on the inside container is visible through openings in the outside package.

146.05–10 Reuse of containers.—(a) Containers used more than once (refilled and reshipped after having been previously emptied) shall be in such condition, including closing devices and cushioning materials, that they will protect their contents during transit as efficiently as new containers. Repairs must be made in an efficient manner and parts that are weak, broken, or otherwise deteriorated shall be replaced.

(b) Markings applied as prescribed by the specifications shall be maintained in a legible condition.

(c) If, on account of painting or any other reason, the markings as prescribed for any container can not be kept plain and legible, a metal plate, brazed or soldered or otherwise securely fastened to the container, with a reproduction of the prescribed markings plainly stamped thereon, may be permitted.

(d) Containers previously used for the shipment of any explosive or other dangerous article shall have old marks of contents, addresses, and labels, if any, thoroughly removed or obliterated before being used for the shipment of other articles.

(e) Boxes previously used for high explosives containing a liquid explosive ingredient shall not be again used for shipments of any character.

(f) Kegs previously used for any chlorate shall not be again used for shipments of any character.

(g) Metal kegs previously used for black powder not contained in an interior package shall not be again used for shipments of any explosive.

(h) Single-trip I.C.C. specification containers, from which contents have once been removed following use for shipment of any article, shall not be again used as shipping containers for explosives, inflammable liquids, inflammable solids, oxidizing materials, corrosive liquids or poisonous articles as defined herein. Where specific permission is given in these detailed regulations in the tables for Combustible Liquids or Hazardous Articles such single-trip containers are permitted for reuse when in compliance with (a), (b), and (c) hereof.

146.05–11 Certification.—(a) The shipper offering for transportation by vessels subject to these regulations any Class A or Class B explosive and blasting caps or electric blasting caps in any quantity, and any inflammable liquid, inflammable solid, oxidizing material, corrosive liquid, compressed gas, or poison, requiring labels, shall show the following certificate in the lower left-hand corner of the originating shipping paper over the written or stamped facsimile signature of the shipper or of his duly authorized agent:

This is to certify that the above articles are properly described by name, and are packed and marked and are in proper condition for transportation according to the regulations prescribed by the Interstate Commerce Commission.

(b) For shipments of Combustible Liquids or Hazardous Articles, the certificate shall read as follows:

This is to certify that the above articles are properly described by name, and are packed and marked and are in proper condition for transportation according to the regulations established by the Commandant of the Coast Guard.

(c) For the relief of shippers from multiplicity of certifications required for packages which may move by rail freight, highway, and water, and pending further consideration and order of the Interstate Commerce Commission, such shipments may in lieu of the certification required by (a) or (b) be certified as follows:

This is to certify that the above articles are properly described by name, and are packed and marked and are in proper condition for transportation according to the applicable regulations prescribed by the Interstate Commerce Commission and the Commandant of the Coast Guard.

(d) Detailed regulations in sections 146.21–100 to 146.27–100, inclusive, require specific certification for certain substances. When these substances are required to be certificated under (a), (b), or (c) the certificate required by the detailed regulations shall be in addition thereto.

146.05–12 Originating shipping order, transfer shipping paper.—(a) The requirements of this section apply to domestic shipments offered for transportation, carriage, or conveyance on board vessels.

(5th Amend.—11 (c) altered; 11 (d) added; text rearranged—July 1941)

(b) A shipper of any permitted explosives or other dangerous articles or substances, and combustible liquids for transportation, carriage, or conveyance on board vessels subject to these regulations under the conditions set forth in (a) hereof shall prepare an originating shipping order (1) describing the shipment as required herein. A vessel acting as initial carrier shall require presentation of the original shipping order. A vessel acting as a connecting carrier shall require delivery of a transfer shipping paper (2) prepared from the originating shipping order or subsequent transfer paper and upon which shall be shown all the information that is required by this section.

NOTE (1) "Originating shipping order" may be the second sheet that carries the notation in bold face type "THIS SHIPPING ORDER" of the domestic bill of lading form, or a delivery paper (known as a delivery receipt or dock receipt) or an order prepared upon the shipper's letterhead.

NOTE (2) "Transfer shipping paper" refers to such papers as freight way bill, way bill, express way bill, vessel manifest, vessel cargo list, or exchange bill of lading shipping order, under authority of which a shipment is moving by other than the initial carrier. Such transfer papers shall show thereon all the information required by this section and shall also contain information sufficient to identify the preceding shipping paper.

(c) A shipper or his authorized agent or representative shall not tender to an initial carrier vessel partial deliveries of a shipment of explosives or other dangerous articles or substances, and combustible liquids, except under cover of a delivery paper (known as a delivery receipt or dock receipt) which paper shall show all the information as required for an originating shipping order in subsection (f) hereof. Delivery receipts covering either full or partial deliveries shall be furnished at least in duplicate and after acknowledgment, one copy shall be retained by the vessel operator. Unit deliveries of the same substance requiring more than eight (8) hours of normal continuous operation to effect complete delivery shall not be construed to be partial deliveries.

(d) If a shipment is being transported, carried or conveyed under a bill of lading issued in exchange or in substitution for an original bill of lading it shall be the duty of the carrier executing such bill of lading to accurately transfer from the original bill of lading the information shown thereon as required by this section.

(e) No person other than the shipper or his duly authorized agent or representative shall prepare an originating shipping order covering transportation, carriage, conveyance or storage of explosives or other dangerous articles or substances, and combustible liquids that are to be transported, carried, conveyed or stored on board vessels subject to the regulations in this part.

(f) The minimum information required by this section to be shown upon an originating shipping order is as follows:

(1) Shipper's name and address.

(2) Consignee's name and address. (When required by the detailed regulations.)

(3) Either the number of packages or pieces or the quantity or weight, as the case may be, and the type of packages (cylinders, barrels, boxes, etc.)

(4) Shipping or leading marks and numbers if appearing on packages.

(5) Shipping name of each article, as shown in roman type in the commodity list herein. Further description not inconsistent with the shipping name may be shown. Unauthorized abbreviations shall not be used.

(6) In connection with the entry of each dangerous article, show the kind and color of label applied to the package or the markings upon the package when label or marking is required by the regulations in this part.

(7) Gross weight of container and contents when such information is required to be shown on a package by the regulations in this part.

(8) Certification over the written or stamped facsimile signature of the shipper or of his duly authorized agent as required by these regulations. (Not required except on originating bill of lading and shipping order.)

(g) Any person or carrier preparing a transfer shipping paper shall show thereon all the information required by this section that is given on the preceding shipping paper and shall also indicate thereon information sufficient to identify the preceding shipping paper.

(h) When a shipment of explosives or other dangerous articles or substances, and combustible liquids is being transported, carried, conveyed, or stored on board a vessel subject to these regulations under a special contract of affreightment, the provisions required by paragraphs (a) (b) (c) (d) and (e) of this section need not be complied with: *Provided, however,* That the owner, charterer, agent or master of the vessel shall have in his possession a memorandum describing the shipment, which description shall contain at least the information required by subsection (f) hereof. This memorandum must be in the carrier's possession previous to the time the explosives or other dangerous articles or substances, and combustible liquids, are transported, carried, conveyed, stored or stowed.

146.05–13 Originating export shipping paper.—(a) The requirements of this section apply when an export shipment is offered for transportation by vessel.

(b) A shipper of any explosive or other dangerous article or substance to be offered for export on board vessels subject to these regulations shall prepare an originating shipping order (1) or otherwise describe the shipment in writing (2) as required by this section.

NOTE (1) This "originating shipping order" may be any one of the following papers: (i) Uniform through export bill of lading. (ii) Ocean bill of lading. (iii) Dock receipt. (iv) Delivery receipt. (v) Government bill of lading. (vi) Engagement note. (vii) Permit.

NOTE (2) By "otherwise describe the shipment in writing" is meant that the shipper or his authorized agent or representative shall in writing advise the vessel operator in advance regarding the characteristics of the shipment and such description shall conform to the provisions of this section.

(c) For a shipment originating in the interior and moving to the seaboard under a domestic bill of lading the shipper or his authorized agent or representative shall advise the vessel regarding the shipment in the manner set forth under Note (2) of this section.

(d) A carrier actually preparing for a shipper an ocean bill of lading from written information furnished by the shipper shall accurately show such information upon the bill of lading and shall also indicate thereon information sufficient to identify the original paper describing such shipment. Upon acknowledgment by the shipper or his authorized agent

or representative, the ocean bill of lading shall then be considered the properly executed document of the shipper.

(e) A shipper or his authorized agent or representative shall not offer to an initial carrier vessel partial deliveries of a shipment of explosives or other dangerous articles except under cover of a dock receipt or other partial delivery receipt, which receipt shall show all the information as required for the originating shipping order. Delivery receipts covering such shipments shall be furnished in duplicate and after acknowledgment one copy shall be retained by the vessel operator. Separate delivery receipts shall accompany each partial delivery.

(f) No person other than the shipper or his duly authorized agent or representative shall prepare an originating shipping order or written instrument otherwise describing the shipment covering transportation of explosives or other dangerous articles or substances.

(g) The minimum information required by this section to be shown upon an originating shipping order or written instrument "otherwise describing the shipment" is as required by § 146.05–12 (f).

(h) A shipment of explosives or other dangerous articles or substances being delivered to a carrier vessel under the provisions of a booking contract, engagement note, permit or contract of affreightment shall be accompanied by one of the shipping papers required by the provisions of § 146.05–13 (b).

146.05–14 Import shipping papers.—An importer of explosives or other dangerous articles or substances shall furnish the foreign shipper full and complete information required by § 146.05–12 (f) to be shown on shipping papers. Bills of lading, manifests, consular invoices or other important shipping papers shall show such information. Applicable certifications as required by § 146.02–3, §146.02–9, or § 146.02–11 (b) and § 146.05–11 shall also be shown thereon. (See Carrier Regulations re Import Shipments § 146.06–1.) (Attention of importers is called to § 146.02–11 re Import Shipments.)

146.05–15 Marking and labeling applying to domestic shipments only.—(a) Interstate Commerce Commission regulations in effect at time of shipment with respect to the marking and labeling of containers of explosives, inflammable liquids, inflammable solids, oxidizing materials, corrosive liquids, compressed gases and poisonous articles apply to shippers preparing shipments for transportation or storage on board vessels that are common carrier vessels and subject to the regulations in this part.

(b) Provisions of the regulations of the Interstate Commerce Commission with respect to marking and labeling of containers of Explosives, Inflammable Liquids, Inflammable Solids, Oxidizing Materials, Corrosive Liquids, Compressed Gases and Poisonous Articles, as applicable to shipments thereof on board common carrier vessels are adopted and form part of these regulations for any such shipments on vessels that are not common carriers and shall apply to all shippers preparing such shipments for transportation or storage on board such vessels except as may be otherwise required by the regulations herein.

NOTE: For marking and labeling requirements applying to export shipments see § 146.02–10. For marking and labeling requirements applying to import shipments see § 146.02–11 (a) and (b).

(c) The marking of containers of Combustible Liquids prepared for transportation or storage on board passenger vessels or Hazardous Articles prepared for transportation or storage on board any vessel subject to these regulations shall be in accordance with the requirements of the regulations in this part.

(d) The marking and labeling of containers of Explosives shall be as follows: (1) Each package containing explosives shall be marked with its proper shipping name as shown in the commodity list herein and such other marking as prescribed by the Interstate Commerce Commission regulations for the explosive in the shipment.

(2) Packages containing explosives shall show on top the marking "This Side Up" when required by the Interstate Commerce Commission regulations.

(3) Each package of explosives shall show the name and address of the consignee; or in lieu thereof the shipping mark and number. When such system of marks and numbers is used they shall be indicated as such upon the originating and subsequent shipping paper. Packages comprising carloads and highway truckloads need not be so marked when delivered to a vessel, provided the vessel delivers the shipment complete to a connecting carrier or a single consignee. Such delivery must be accompanied by a shipping paper showing thereon at least the following information:

Name of consignee.
Number of packages.
Name of commodity in accordance with the regulations in this part.

(4) Each package of explosives containing a poison gas or tear gas shall also have securely attached to it the labels prescribed by the Interstate Commerce Commission regulations.

(5) Each outside container of samples of explosives when offered for transportation on board vessels shall bear the "red label for samples of explosives" and each outside container of fireworks in addition to the markings prescribed shall bear the "red label for fireworks" as prescribed by the Interstate Commerce Commission regulations.

(6) Each package of explosives shall be marked with the Interstate Commerce Commission specification number as prescribed by the specification, if an I.C.C. specification container is required.

(e) The marking of containers of Other Dangerous Articles or Substances shall be as follows: (1) Each package containing inflammable liquids, inflammable solids, oxidizing materials, corrosive liquids, compressed gases, or poisons as defined herein shall be marked with the proper shipping name as shown in the commodity list of these regulations. For tank cars this marking shall appear either on the placards or commodity cards.

(2) Except as otherwise exempted by the provisions of the regulations in this part, each package of dangerous articles, as enumerated in (1) above, shall show the name and address of the consignee; or in lieu thereof the shipping mark and number. When such system of marks and numbers is used they shall be indicated as such upon the originating and subsequent shipping paper. Packages comprising carloads and highway truckloads need not be

so marked when delivered to a vessel, provided the vessel delivers the shipment complete to a connnecting carrier or a single consignee. Such delivery must be accompanied by a shipping paper showing thereon at least the following information:

Name of consignee.
Number of packages.
Name of commodity in accordance with the regulations in this part.

Shipments offered to an initial carrier vessel that comprise a full cargo or sufficient to occupy a full compartment or hold, or that exceed one hundred (100) packages, need not show the name and address of the consignee upon the individual packages, provided delivery is made to a connecting carrier or a consignee in not less than truckload or carload consignments.

(3) Packages containing inflammable liquids in inside containers of one quart capacity or larger and corrosive liquids in any quantity, except when packed in carboys not completely boxed, shall be marked on top "This Side Up."

(4) Each package shall show the specification marking as required if a specification container is prescribed.

(5) Additional shipping information not inconsistent with these regulations may be shown on a container if so desired but no such label or marking shall be of a design, or form, or size, as may be confused with the labeling and marking required by the regulations in this part.

(f) The marking of containers of "Combustible Liquids" or "Hazardous Articles" shall be as follows: (1) Each outside container of a combustible liquid, as defined herein, shall be marked with either the proper shipping name as shown in the commodity list herein or the legend "Combustible Liquid." This marking shall be in block letters not less than ½ inch high and may be printed or stenciled or stamped upon the container.

(2) Each outside barrel, box, or bag containing a hazardous article as defined herein shall be marked with the proper shipping name as shown in the commodity list herein. These markings shall be in block letters not less than ½ inch high and may be printed or stenciled upon the container.

(3) Except as otherwise exempted by the provisions of these regulations, outside containers of hazardous articles or combustible liquids shall show the name and address of the consignee or in lieu thereof the shipping marks and number. Packages comprising carloads and highway truckloads need not be so marked when delivered to a vessel, provided the vessel delivers the shipment complete to a connecting carrier or a single consignee. Such delivery must be accompanied by a shipping paper showing thereon at least the following information:

Name of consignee.
Number of packages.
Name of commodity in accordance with these regulations.

(4) Packages containing combustible liquids or hazardous articles in liquid form packed in inside containers of 1 quart capacity or larger shall be marked on top "This Side Up."

(5) Additional shipping information not inconsistent with these regulations may be shown on an outside container if so desired but no such marking shall be of a design or form or size as may be confused with the marking required by these regulations.

(g) Each package containing "Any Other Dangerous Article" as defined by these regulations shall be conspicuously labeled by the shipper as follows except as otherwise provided:

(1) "Red label" as described and illustrated in § 146.05–17 (f) on containers of inflammable liquids except when exempted by these regulations.

(2) "Yellow label" as described and illustrated in § 146.05–17 (g) on containers of inflammable solids and oxidizing materials, except when exempted by these regulations.

(3) "White label" as described and illustrated in § 146.05–17 (h) on containers of acids or corrosive liquids except when exempted by these regulations.

(4) "Red label" as described and illustrated in § 146.05–17 (j) on containers of inflammable compressed gases except when exempted by these regulations.

(5) "Green label" as described and illustrated in § 146.05–17 (k) on containers of noninflammable compressed gases except when exempted by these regulations.

(6) "Poison gas" label as described and illustrated in § 146.05–17 (l) on containers of Class A poisons.

(7) "Poison" label as described and illustrated in § 146.05–17 (m) on containers of Class B poison liquids or solids, except when exempted by these regulations.

(8) "Tear gas" label as described and illustrated in § 146.05–17 (n) on containers of Poisons, Class C.

(9) "Bung label" as described and illustrated in § 146.05–17 (s) on metal barrels or drums containing inflammable liquids the vapor pressure exceeding 16 lbs. per. sq. inch absolute.

(10) "Empty label" as described and illustrated in § 146.05–17 (r) shall be applied to empty containers when such application is required by these regulations.

(h) Labels are not required on packages comprising shipments received and delivered in carloads or highway truck loads when such shipments are in conformity with the provisions of § 146.05–15 (d) (3), § 146.05–15 (e) (2) or § 146.05–15 (f) (3). This exception does not apply to Class A or Class C poisons.

146.05–16 Labels for mixed packing.—(a) Use Red label only when red and other labels are prescribed.

(b) Use White acid label only (corrosive liquid) when white acid and yellow or poison labels are prescribed.

(c) Use Yellow label only when yellow and poison labels are prescribed.

146.05–17 Labels.—(a) Shippers shall furnish and attach the labels prescribed for their packages.

(b) Labels shall not be applied to packages containing articles which are not subject to the regulations in this part.

(c) Shippers shall not apply labels which by their size, shape and color, may readily be confused with standard caution labels prescribed herein.

(d) Labels shall conform to standard as required by the Interstate Commerce Commission regulations.

(e) A combination diamond-shaped label-tag of proper size and color, bearing on one side the shipping information and on the reverse side the wording prescribed herein, will be permitted.

(f) *Red label for inflammable liquids*

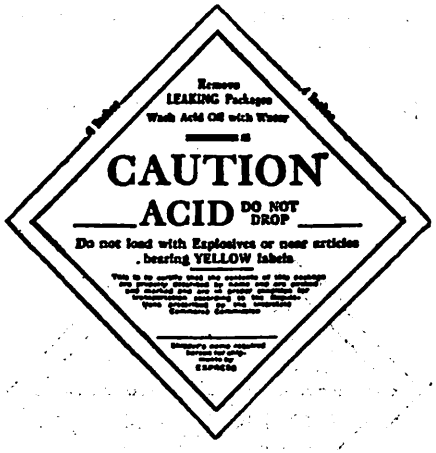
(Reduced size)

(g) *Yellow label for inflammable solids and oxidizing materials*

(Reduced size)

(h) *White label for acids and corrosive liquids*

(Reduced size)



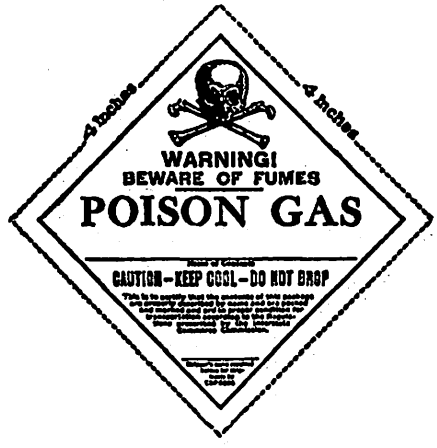
(For corrosive liquids other than acid, the words "Corrosive liquid" may be substituted for the word "Acid" on the white "Acid" labels if desired.)

(j) *Red label for inflammable gases*

(Reduced size)

(k) *Green label for noninflammable gases*
(Reduced size)

(l) *Poison gas label*
(Reduced size)



(m) *Poison label*

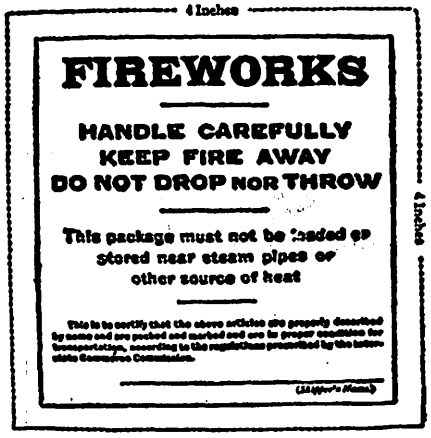
(Reduced size)

(n) *Tear gas label*

(Reduced size)

(p) *Red label for fireworks*

(Reduced size)



(q) *Red label for samples of explosives*

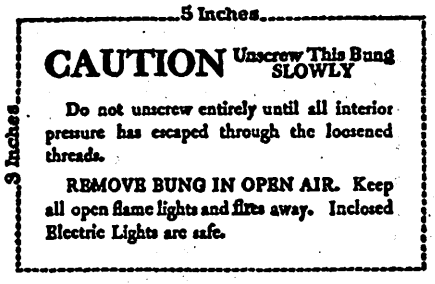
(Reduced size)

(r) *White label for empty containers*

(Reduced size)

(s) *Bung label*

(Reduced size)



VESSEL'S REQUIREMENTS RE: ACCEPTANCE, HANDLING, STOWAGES, ETC.

146.06–1 Acceptance on board vessels.—Explosives or other dangerous articles or substances or combustible liquids that are permitted by the regulations in this part to be placed on board vessels, or to be on board a vessel within the navigable waters of the United States, may be accepted and transported or stored on board vessels subject to the regulations in this part when such articles are described upon the shipper's originating shipping order or a transfer shipping paper or otherwise in writing by a shipping name as shown in the commodity list of explosives and other dangerous articles herein, and provided label notations are shown on the shipping paper as they apply to the various substances. The owner, charterer, agent, master or person in charge of a vessel shall ascertain to his own satisfaction that the outside container is one of the acceptable containers as shown in the tables for

the particular substance named on the shipping paper. Shipments tendered in United States ports to vessels which are initial carriers shall not be accepted unless the originating shipping order carries the shipper's certification as to description, packing, marking, and condition as required by § 146.05–11. Shipments tendered in United States ports to vessels which are connecting carriers shall not be accepted unless the transfer shipping paper contains sufficient information to identify the preceding shipping paper. Shipments originating in a foreign port shall not be transported, carried, conveyed, or stowed by any vessel upon the navigable waters of the United States unless accompanied by bills of lading upon which the shipper or his agent has certified that the goods are described, packed and marked in accordance with the regulations in this part.

146.06–2 Explosives prohibited on any vessel.—No explosive or explosive composition expressly prohibited by the provisions of subsection 3 of R. S. 4472, as amended, shall be transported, carried, conveyed, stored, stowed or used on board any vessel.

146.06–3 Articles not permitted on vessels.—No high explosive or other explosive or other dangerous article or substance or combustible liquid shall be transported, carried, conveyed, stored, stowed or used on board any vessel unless such transportation, carriage, conveyance, storage, stowage or use is permitted by the regulations in this subchapter.

146.06–4 Acceptance of permitted articles.—The commodity list and the tables forming part of the regulations in this subchapter indicate the explosives and other dangerous articles and combustible liquids that are permitted to be transported, carried, conveyed, stored, stowed, or used on board any vessel. No such articles shall be transported, carried, conveyed, stored, stowed, or used on board any vessel unless they comply with the conditions as shown for the substance in the commodity list and tables and the other provisions of the regulations in this subchapter as they apply to the particular character of vessel.

146.06–5 "Order-Notify" or "C. O. D." shipments.—Except on through bills of lading to a foreign port, shipments of Class A dangerous explosives or blasting caps in any quantity shall not be transported, carried or conveyed on board a vessel when consigned to "Order-Notify" or "C. O. D." Such articles shall not be transported, carried or conveyed on board any vessel when a shipper consigns a shipment to himself unless the shipper has a resident representative authorized to receive the shipment at the port of discharge.

146.06–6 Canadian shipments.—Explosives or other dangerous articles or substances or combustible liquids, as defined herein, which are described, packed, marked and certified in conformity with the regulations of the Board of Transport Commissioners of Canada may be transported, carried or conveyed on board such vessels as are permitted by the regulations in this part to transport, carry or convey the particular explosive or other substance contained within the package.

146.06–7 Emergency shipments.—For conditions of the regulations governing emergency shipments see § 146.02–15.

146.06–8 Handling on board vessels.—Explosives or other dangerous articles or substances, and combusible liquids shall be handled on board vessels in conformity with the

(5th Amend.—146.06-7 altered—July 1941)

provisions of the detailed regulations preceding each table of the various classifications and the provisions set forth for the particular substance as shown in the tables: *Provided, however*, That a railroad vehicle in which is loaded any permitted explosives or other dangerous articles or substances shall be handled on board a vessel in accordance with the provisions of §§ 146.07–01—146.07–8 and a highway vehicle in which is loaded any permitted explosives or other dangerous articles or substances shall be handled on board vessels in accordance with the provisions of §§ 146.08–01—146.08–11.

146.06–9 Stowage on board vessels.—(a) Stowage of a particular explosive or other dangerous article or substance or a combustible liquid on board a vessel may be any permitted stowage in accordance with the provisions as shown in the tables as applying to the character of vessel upon which the substance is permitted to be transported or stored.

(b) When only one stowage is shown, no other stowage shall be utilized. When more than one stowage is indicated any or all of the indicated stowages may be utilized. When "Tween decks" is authorized for stowage "Tween decks readily accessible" may also be used, but not the reverse thereof. When "Under deck" is authorized for stowage "Under deck away from heat" may also be used, but not the reverse thereof.

(c) Explosives of different classes or characteristics shall not be stowed together in the same compartment or magazine nor with other dangerous articles or substances or combustible liquids except as indicated in the "Stowage and storage chart of explosives and other dangerous articles" and the detail regulations shown in §§146.20–01—146.20–100.

(d) The provisions of this section shall not be applicable to railroad vehicles in which are loaded any permitted explosives or other dangerous articles in compliance with the ICC regulations governing such loading. For such stowages see § 146.07–7.

(e) The provisions of this section shall not be applicable to highway vehicles in which are loaded any permitted explosives or other dangerous articles in compliance with the ICC regulations governing such loading, or combustible liquids when loaded in compliance with the regulations in this part. For stowage of highway vehicles on board vessels see § 146.08–11.

146.06–10 Labels.—Vessels or their owners, charterers or agents shall keep on hand an adequate supply of labels. Lost or detached labels shall be replaced from information given on shipping order, delivery, receipt or transfer shipping paper applying to the shipment.

146.06–11 "No smoking" signs.—Where smoking is prohibited during the loading, stowing, storing, transporting or unloading of explosives or other dangerous articles or substances by these regulations, the owner, master or person in charge of the vessel is required to cause "NO SMOKING" signs to be posted.

146.06–12 Manifests required.—All vessels transporting or storing explosives or other dangerous articles or substances, and combustible liquids, as cargo, shall have on board during the period of transportation or storage a manifest, or list, upon which is correctly described all such articles as defined by these regulations. This record may be referred to as "Dangerous Cargo Manifest" or "Dangerous Cargo List."

146.06–13 Form of manifest or list.—The manifest or list shall be a form containing spaces for all of the information required. If a vessel elects to show the information with regard to dangerous cargo as required by § 146.06–14 upon either the outward foreign manifest (Customs Form 1374) or the inward foreign manifest (Customs Form 7527 (a) or (b)) and a copy of either of these papers is retained on board the vessel, such procedure, executed in conformance with the requirements of the regulations in this part will be considered as in full compliance: *Provided, however,* That separate sheets shall be allotted for entries of dangerous articles of cargo in order to segregate the record of such substances as are on board the vessel.

146.06–14 Information required on manifests or lists.—(a) For vessels on foreign or intercoastal voyages the dangerous cargo manifest or list shall show thereon the following information:

(1) Port and date of departure.
(2) Nationality of vessel.
(3) Name of vessel.
(4) Net tonnage of vessel.
(5) Official number (if any).
(6) Custom House number (if any).
(7) Name of master.
(8) Vessel bound for.
(9) Name of agent.
(10) Address of agent.

(b) Entries of items descriptive of the dangerous cargo on board vessels on foreign or intercoastal voyages that appear upon the dangerous cargo manifest or list shall include the following information:

(1) Name of consignor.

(2) Name of consignee, or the marks and numbers when such marks and numbers are used in lieu of the consignee's name.

(3) The true shipping name as given in the commodity list of these regulations for the substance.

(4) The number and description of packages (such as barrels, drums, cylinders, boxes, etc.).

(5) The gross weight of the package.

(6) The classification of the substance in accordance with these regulations (such as Explosives, Inflammable Liquid, Compressed Gas, Hazardous Article, etc.)

(7) Such classification shall be shown in enlarged size of letter and underlined in order to be easily distinguished upon the manifest. (As an example: INFLAMMABLE LIQUID.)

(8) Kind and type of label applied to the package. If no label is required, so state.

(9) The stowage actually provided for the substance on board the vessel.

(c) For vessels on coastwise, rivers, bays, sounds, lakes, including Great Lakes, voyages the manifest or dangerous cargo list required to accompany a vessel navigating these waters shall show:

(1) Port and date of departure.
(2) Name of vessel.

(3) Name of master.

(4) Vessel bound for.

(5) True shipping name as given in the commodity list of explosives and other dangerous articles and combustible liquids herein for the substance or substances being transported.

(6) The number of packages or units.

(7) The classification of the substance in accordance with these regulations.

(8) The stowage actually provided for the substance on board the vessel.

(d) For barges the manifest or dangerous cargo list (or check list) required to accompany a barge in which explosives or other dangerous articles are stowed shall show at least the following information:

(1) Name or identification number of the barge.

(2) Destination of the barge.

(3) The true shipping name as given in the commodity list of explosives and other dangerous articles herein for the substance or substances being transported.

146.06–15 Source of information shown on manifest or list.—(a) The information required to appear on a dangerous cargo manifest or list by the provisions of §146.06–14 (b), (c) and (d) shall be the information actually furnished to the vessel by the shipper of the dangerous substances upon his bill of lading or other shipping paper; and the owner, charterer, agent, master or person under whose supervision the actual preparation of the manifest or list is made, shall cause the information required to be correctly transcribed.

(b) Every entry made upon the dangerous cargo manifest or list shall be a true statement to the best knowledge and belief of the master of the vessel. The provision of this paragraph shall not apply to barges.

(c) The master, shall, by his signature, acknowledge the correctness of the dangerous cargo manifest or list. The provisions of this paragraph shall not apply to barges.

146.06–16 Completeness of manifest or list.—The dangerous cargo manifest or list shall have entered thereon every article of explosives or other dangerous articles or substances that is on board the vessel as cargo, and passenger vessels shall in addition show every article of combustible liquids in outside containers that is on board the vessel as cargo. No article of explosives or other dangerous articles or substances shall be on any vessel as cargo unless shown upon a manifest or list. No article of combustible liquid in outside containers shall be on board any passenger vessel as cargo unless shown upon the manifest or list.

146.06–17 Produce manifest or list upon demand.—Any vessel transporting or storing explosives or other dangerous articles or substances including a passenger vessel transporting combustible liquids in outside containers shall, when in the navigable waters of the United States, have on board a dangerous cargo manifest or list describing such articles in accordance with the regulations in this part and shall produce the manifest or list upon demand of any officer of the Coast Guard, Department of the Treasury, or any officer or employee of

any executive department, independent establishment or agency of the government who is authorized by the Commandant of the Coast Guard to enforce the provisions of the regulations in this part. The provisions of this section requiring the production of manifest or list on demand shall not apply to barges

146.06–18 Record copy of manifest or list.—Owners, charterers or agents of vessels transporting or storing explosives or other dangerous articles or substances, and combustible liquids, as cargo, shall retain ashore a copy of the dangerous cargo manifest or list and shall produce said manifest or list in accordance with the provisions of § 146.02–22.

146.06–19 Cargo stowage plan or cargo stowage list.—Vessel owners, charterers or agents shall cause to be prepared a cargo stowage plan or cargo stowage list covering each ocean going voyage of any domestic cargo vessel transporting explosives or other dangerous articles or substances and of any domestic passenger vessel transporting such explosives, or other dangerous articles or substances or combustible liquids in outside containers. The cargo stowage plan or cargo stowage list shall show in all necessary detail the exact location of the stowage of such explosives, articles or substances. The descriptive name thereof as given in the commodity list herein shall be the name used to identify these explosives, or other dangerous articles or substances. Trade names, marks or other designations shall not be used to identify the dangerous cargo shown upon the stowage plan or list. When articles defined by the regulations in this part as dangerous are stowed in a compartment in which other cargo not of a dangerous nature is stowed, such other cargo that is stowed nearest adjacent to the dangerous articles of cargo shall be accurately described and identified on the stowage plan or list. At least one copy of the stowage plan or list shall be retained ashore and shall be produced in accordance with the provisions of § 146.02–22.

146.06–20 Manifest—Storage vessels.—(a) Magazine vessels used for the storage of explosives and other vessels used only for the storage of other dangerous articles or substances shall be subject to the provisions of §§ 146.06–12, 146.06–16 and 146.06–17 applying to "Dangerous Cargo Manifest" or "Dangerous Cargo List."

(b) The dangerous cargo manifest or list for storage vessels shall show thereon the following information:

(1) Name and address of vessel's owner.

(2) Location of vessel's mooring.

(3) Name of person in charge of vessel.

(4) The number and description of packages, the true descriptive (shipping) name of the substances within the package and the name and address of the owner of the cargo.

(c) Storage vessel manifests or lists shall be kept in such form as will show a complete record, by time intervals of one week, of all receipts and disbursements of explosives or other dangerous articles or substances. The name and address of the consignor shall be shown against all receipts and the name and address of the consignee against all deliveries.

RAILROAD VEHICLES LOADED WITH DANGEROUS SUBSTANCES AND TRANSPORTED ON BOARD CARGO VESSELS OR RAILROAD CAR FERRIES

146.07–1 Prohibited articles.—A railroad vehicle in which is loaded any explosives prohibited by subsection 3 of R.S. 4472, as amended, or any other explosive or dangerous articles or substances and combustible liquids not permitted by the regulations in this part shall not be accepted, transported, carried or conveyed on board any vessel.

146.07–2 Permitted articles.—(a) A railroad vehicle in which is loaded any permitted explosive or other dangerous articles or substances as defined herein may be transported, carried or conveyed on board a cargo vessel provided there is compliance with the provisions of § 146.07–4 (a) and (b), § 146.07–6 (a) and (b) and § 146.07–7 (a), (b) and (c).

(b) A railroad vehicle loaded with explosives or other dangerous articles or substances, or combustible liquids shall not be transported, carried or conveyed on board a passenger vessel unless such explosives or other dangerous articles or substances, or combustible liquids are specifically permitted by these regulations to be transported, carried, or conveyed on board such vessel and provided there is compliance with the provisions of § 146.07–4 (a) and (b), § 146.07–6 (a) and (b) and § 146.07–7 (a), (b) and (c).

146.07–3 Tank containers.—A railroad vehicle to which is attached a tank containing any explosives or other dangerous articles or substances as defined herein shall not be offered or accepted for transportation on board any vessel unless specifically permitted by the regulations in this part and when conforming to the provisions of § 146.07–4 (a) and (b), §146.07–6 (a) and (b) and § 146.07–7 (a), (b) and (c).

146.07–4 Acceptance on board vessels.—(a) The master, owner, charterer, agent or other person in charge of the vessel shall require the shipper or his agent or the delivering carrier to furnish a copy of the shipper's shipping order or a waybill prepared from information furnished in the shipper's shipping order before accepting any railroad vehicles in which are loaded explosives or other dangerous articles or substances as defined by the regulations in this part. This shipping paper shall have entered upon it the amounts and the true shipping name of the contents of the car, which name shall be in accordance with the names as shown in the commodity list herein, and the names of the consignor and the consignee. In lieu of the consignee's name, shipping marks may be substituted. A transfer shipping paper shall show sufficient information to identify the preceding shipping paper.

(b) The master or other person in charge of the vessel shall assign an officer of the vessel to supervise the acceptance and stowage of railroad vehicles containing explosives or other dangerous articles or substances and combustible liquids which are permitted by the regulations in this part to be transported on board a vessel. This officer shall examine all railroad vehicles for signs of leaking or sifting of contents. For tanks, he shall examine dome covers to ascertain they are fitted securely in place; check the valves, piping, and the tank for leakage; check the tank for any excess residue of lading adhering thereto. Any vehicles found to be leaking or which show sifting of contents or having excess residue of lading adhering thereto shall not be accepted for transportation.

146.07-5 Empty tank railroad vehicles.—For conditions governing transportation of empty tanks, forming part of a railroad vehicle, which formerly contained a substance defined as dangerous by the regulations in this part, see § 146.27-100.

146.07-6 Exemption of railroad vehicles from detail handling or stowage requirements.—(a) Detailed regulations governing handling and stowage of permitted explosives, inflammable liquids, inflammable solids, oxidizing materials, corrosive liquids, compressed gases or poisons on board vessels do not apply to such substances loaded in railroad vehicles, provided such substances remain within the vehicle and are certified as being properly described by name and packed and marked and in proper condition for transportation according to the regulations prescribed by the Interstate Commerce Commission in effect at the time of shipment. This certification is required by the ICC regulations to be shown upon the original shipping order. Railroad vehicles moving under authority of a way bill or other transfer shipping paper may be accepted as conforming with this requirement of certification, provided the way bill or other transfer shipping paper shows thereon an identification of the preceding shipping paper.

(b) Detailed regulations governing handling and stowage of hazardous articles or combustible liquids on board vessels do not apply to such articles, or substances loaded in railroad vehicles, provided such articles or substances are properly described by name and packed and marked and in proper condition for transportation according to the regulations in this part.

146.07-7 Stowage of railroad vehicles.—(a) Railroad vehicles in which are loaded any permitted explosives or other dangerous articles or substances which are certified on the shipping papers as being described, packed, marked and labeled in accordance with the I.C.C. regulations shall when taken on board a cargo vessel be stowed in accordance with the following provisions:

(1) *Explosives.*—Vehicles loaded with permitted explosives are not required to be given magazine stowage. Such vehicles may be stowed "Under deck" and away from all sources of heat. Inflammable placarded vehicles (other than explosives), corrosive placarded vehicles, dangerous placarded vehicles and poison placarded vehicles shall not be stowed adjacent to vehicles loaded with explosives nor within a distance of two car lengths of vehicles loaded with explosives. In "anchoring" vehicles loaded with explosives securing means shall be fitted over the top of the car so as to completely secure the entire vehicle to prevent any movement of the body of the car.

(2) *Other Dangerous Articles.*—Vehicles loaded with any other permitted dangerous articles shall be stowed on board the vessel in accordance with the stowages required in the tables for the substances within the vehicle. Such stowages are not feasible in each instance for railroad freight vehicles stowed below deck on cargo vessels; and, for the purpose of adopting these stowages to the conditions incident to transportation of railroad freight vehicles in this method of transportation, a conversion table is shown in this paragraph. Permitted stowages as shown in the tables for the substance loaded within the vehicle may be converted

in accordance with the table and when so converted the stowage in column 2 of subparagraph (3) may be utilized in lieu of the stowage indicated under column 1 of subparagraph (3).

(3) *Conversion table of stowage*

(1)	(2)
Substances required by the tables forming part of these regulations to be stowed as follows:	May be stowed in the following locations when contained in railroad vehicles:
On deck in open.	Weather deck.
On deck protected.	Weather deck or 1st deck below.
On deck under cover.	Weather deck or 1st deck below.
Tween decks readily accessible.	Weather deck or 1st deck below.
Tween decks.	Any deck.
Cargo hatch trunkway.	Any deck.
Under deck.	Any deck.
Under deck but not overstowed.	Any deck.
Under deck away from heat.	Any deck but at least 1 car length from heat bulkhead.

(b) Stowage on board a railroad car ferry operating as a cargo vessel of railroad vehicles in which are loaded any permitted explosives or other dangerous articles or substances which are certified on the shipping papers as being described, packed, marked and labeled in accordance with the ICC regulations may be any location on the car deck away from heat.

(c) Stowage on board a railroad car ferry operating as a passenger vessel of railroad vehicles in which are loaded any permitted explosives or other dangerous articles or substances which are certified on the shipping papers as being described, packed, marked and labeled in accordance with the ICC regulations; or, combustible liquids certified on the shipping papers as being described, packed, marked and labeled as required by these regulations, shall be in a location on the car deck in accordance with the provision of "Ferry stowage (BB)" as shown in §146.03–34 (l).

146.07–8 Retain shipping papers.—The master or the officer in charge of accepting railroad vehicles on board a vessel shall endorse or otherwise identify as to date and trip the shipping paper under authority of which the vehicle was in transit on board the vessel, and the vessel operator shall retain such paper as a matter of record for at least one year. These shipping papers, after serving their purpose in the transportation of the vehicle, shall not be carried on board the vessel, but shall be retained ashore. See § 146.02–22.

HIGHWAY VEHICLES LOADED WITH DANGEROUS SUBSTANCES AND TRANSPORTED ON BOARD VESSELS

146.08–1 Prohibited articles.—A highway vehicle in which is loaded any explosives prohibited by subsection 3 of R.S. 4472, as amended, or any other explosive or other dangerous articles or substances and combustible liquids not permitted by the regulations in this part shall not be accepted, transported, carried or conveyed on board any vessel.

146.08–2 Permitted articles.—(a) A highway vehicle in which is loaded any permitted explosives or other dangerous articles or substances as defined herein may be transported, carried or conveyed on board a cargo vessel provided there is compliance with the provisions of § 146.08–4 (a), (b), (c), and § 146.08–5.

(b) A highway vehicle loaded with explosives or other dangerous articles or substances, and combustible liquids shall not be transported, carried or conveyed on board a passenger vessel unless such explosives or other dangerous articles or substances, and combustible liquids are specifically permitted by the regulations in this part to be transported, carried or conveyed on board such vessels and provided there is compliance with the provisions of § 146.08–4 (a), (b), and (c).

146.08–3 Tank containers.—A highway vehicle to which is attached a tank containing any explosives or other dangerous articles or substances as defined herein shall not be transported, carried or conveyed on board any vessel unless such explosives or other dangerous articles or substances are specifically permitted by the regulations in this part to be transported, carried or conveyed on board a vessel and provided there is compliance with the provisions of § 146.08–4 (a), (b), and (c).

146.08–4 Acceptance on board vessels.—(a) The vessel owner, master, or officer in charge of accepting highway vehicles on board a vessel shall require the operator of the vehicle to present a shipping paper which describes the lading of the vehicle in accordance with the regulations in this part and the provisions of paragraph (c).

(b) The owner or master of a vessel shall assign an officer of the vessel or other competent person to supervise the acceptance and stowage of highway vehicles containing explosives or other dangerous articles or substances and combustible liquids that are permitted by these regulations to be transported on board a vessel.

(c) *Highway vehicle carrier's statement.*—The person in charge of a highway vehicle loaded with permitted explosives or other dangerous articles or substances and combustible liquids that it is desired to transport on board a vessel shall deliver to the master, his representative or other person in charge a shipping paper or true copy thereof describing the articles of lading within the vehicle. The information given shall include at least all of the following:

(1) Date.

(2) Name of highway vehicle owner.

(3) Name of operator of vehicle.

(4) Identification of vehicle (by mark or number or registration if a motor vehicle).

(5) Description of explosives or other dangerous articles and combustible liquids laden in the vehicle. This description shall be in accordance with the terms used in the regulations in this part and shall state the approximate weight or quantity of the dangerous articles within the vehicle and the shipping name of the dangerous substances in accordance with the commodity list herein.

(6) Such shipping paper shall bear the following certification over the written or stamped facsimile signature of the vehicle owner or his agent:

This is to certify that the above statement accurately describes the articles within this vehicle in accordance with the information furnished by the shipper thereof, and to the best of my knowledge there are no articles within this vehicle that are not permitted to be transported on board the vessel utilized in accordance with regulations of the Commandant of the Coast Guard.

146.08–5 Exemption of highway vehicles from detail handling or stowage requirements.—Detailed regulations governing handling and stowage of permitted explosives, inflammable liquids, inflammable solids, oxidizing materials, corrosive liquids, compressed gases, poisons, hazardous articles or combustible liquids on board vessels do not apply to such substances loaded in highway vehicles, provided such substances remain within the vehicle and are certified in accordance with the requirements of § 146.08–4 as being in proper condition for transportation according to the regulations in this part.

146.08–6 Stowage of highway vehicles.—Highway vehicles in which are loaded any permitted explosives or other dangerous articles or combustible liquids which are certified by the vehicle operator in accordance with the provisions of § 146.08–4 shall when taken on board a vessel be stowed in accordance with the provisions for "Ferry stowage (AA)" as shown in § 146.03–34 (k).

146.08–7 Empty tank containers.—For conditions governing transportation of empty tanks, forming a part of a highway vehicle, and which recently contained a substance defined as dangerous by the regulations in this part, see § 146.27–100.

146.08–8 Control of highway vehicle.—(a) The operator or person in charge of a highway vehicle containing any of the permitted dangerous articles as defined by these regulations, when entering upon or while being transported upon any vessel, shall observe the following rules:

(1) Deliver to the vessel's representative the vehicle carrier's statement covering the lading of the vehicle as required by § 146.08–4.

(2) Drive the vehicle to the location indicated by the vessel's representative.

(3) Securely set the brakes of the vehicle to prevent movement.

(4) Shut off the motor and do not restart same until the vessel has completed its voyage and docked.

(5) Cut off all vehicle lights and do not relight same until the vessel has completed its voyage and docked.

(6) Remain with the vehicle.

(7) Make no repairs or adjustments to the vehicle while on board the vessel.

(8) Observe any instructions given by the vessel's representative during the voyage, or during "drive on" or "drive off" operations.

(b) Smoking by any person within the vehicle is prohibited.

146.08–9 Private passenger type motor vehicles (automobiles).—Such vehicles shall not be offered or accepted for transportation on board passenger-carrying ferries while

having within the automobile any permitted explosives (except permitted fireworks or small arms ammunitions) unless complying with all the provisions of the regulations in this part regarding such substances. Such automobiles shall not have within the vehicle any other dangerous articles or substances or combustible liquid as defined in the regulations in this part when being transported for hire except in compliance with the regulations prescribed herein. *Provided, however*, That such vehicles are exempt from the provisions of the regulations in this part with respect to descriptions, descriptive name, packing, marking, labeling, certification and the requirements of §§ 146.08–4 and 146.08–8 when having in the vehicle any permitted fireworks or small arms ammunition or any other dangerous articles or substances or any combustible liquid in tightly closed containers, provided such substances are not being carried by the automobile for hire. Such vehicles, their owners or operators shall, when entering upon and while being transported and when leaving a vessel, conform with all of the provisions of the regulations shown in the table, § 146.27–100 applying to the transportation of such vehicles.

146.08–10 Cylinders laden in highway vehicles.—Cylinders of compressed gas of the type required by these regulations to have valve protection cap fitted in place on the cylinder may be transported on board ferry vessels without having the valve protection cap in place when said cylinders are laden in highway vehicles and are not removed from the vehicle while on board the vessel.

146.08–11 Motor vehicles having refrigerating equipment.—(a) Motor vehicles, fitted with refrigerating equipment having an internal combustion engine as a source of motive power and using an inflammable liquid or gas as fuel, may be accepted for transportation and such refrigerating equipment may be operated while the vehicle is on board a vessel, provided the installation conforms with the following requirements:

(1) The installation is rigidly mounted and free of any movement other than normal vibration of operation.

(2) A "cut-off" switch, easily accessible to the operator of the vehicle, is fitted to the ignition supply source of the motor operating the compressor.

(3) The fuel storage tank, the fuel lines and the carburetor shall be tight and show no signs of leakage.

(b) Refrigerating equipment not fitted with automatic starting and stopping devices shall, if the vehicle operator desires the equipment to operate while on board the vessel, be started before the vehicle is taken on board. It may continue in operation while the vehicle is on the vessel, but if for any cause the motor ceases to operate it shall not be restarted until after the vehicle leaves the vessel.

(c) Vessels on voyages exceeding thirty (30) minutes' duration shall provide a stowage for vehicles having refrigerating equipment operated by internal combustion engines as will permit ready diffusion of exhaust gases to the open air. Passenger vehicles shall not be stowed in a position adjacent to vehicles operating internal combustion motors as would expose the occupants thereof to excessive concentrations of exhaust fumes from such motors.

(d) The Master or person in charge of a vessel may, when he deems it necessary for any cause, require the vehicle operator to stop the operation of refrigerating equipment attached to a vehicle while on board the vessel.

CARGO HANDLING AND STOWAGE DEVICES UNITED STATES COAST GUARD CONTAINER SPECIFICATIONS

146.09–1 Magazines, location of.—(a) Magazines shall be located in a hold, preferably an upper tween deck hold. They shall be so located as not to be in horizontal proximity to crew or passenger accommodations, nor below such living spaces. The term "tween deck"

means all closed-in spaces below an uppermost deck in which a cargo hatch is fitted, which spaces are bounded by permanent bulkheads, and through which there can be no traffic while at sea, and such spaces being included in the gross tonnage of a ship.

(b) Magazines may, upon approval by the Commandant of the Coast Guard, be built in a poop or shelter deck when it is included in the gross tonnage, and when not so included in the gross tonnage provided the openings are effectively closed and such poop contains no kind of crew accommodations or stores and is so closed off it is not liable to excessive temperature rises due to proximity of stack or uptakes. Magazines shall not be built on or under the principal bridge, whether included in the tonnage or not. Magazines may be built in the square of the hatchway in conformity with the provisions of § 146.09–1 (d). The stowage of smoke, incendiary and chemical shells without detonating ignition elements or explosive charges in the shelter deck is permitted under the conditions as set forth under Chemical Ammunition.

(c) Magazines shall not be constructed in bearing with the collision bulkhead, nor with a bulkhead forming a boiler room, engine room, coal bunker, or galley boundary. If it is necessary to construct a magazine in proximity to these bulkheads, a cofferdam space of at least four feet shall be provided between the bulkhead and the magazine side. This cofferdam space shall remain open to the free circulation of air, and no cargo shall be stowed as to hinder or obstruct such circulation of air. The height of magazines shall not exceed the normal tween deck height of contiguous decks, except by special permission of the Bureau. Magazines shall be so located that their doors are easily accessible from the hatchway. Proposed construction of magazines in locations other than in holds of ships, shall require an approval by the Commandant of the Coast Guard. Magazines may, upon approval of the Commandant of the Coast Guard, be built out to the sides of the vessel, but under such construction, the vessel's side plating and frames shall be sheathed with wood to provide a smooth bearing surface for the stowed cargo of explosives.

(*d*) When a magazine is to be constructed over a tween deck hatch, the hatch girders or strongbacks and the hatch covers forming the tween deck hatch shall be of such design and size as to insure their carrying the imposed load with safety. Covers of the tween deck and over deck hatch shall completely close the hatch opening and fit securely in place. Tween deck hatch covers of wood forming the base of the magazine shall be completely covered with asbestos board at least ¼ inch thick, fitted tight at the sides of the magazine, the joints of the asbestos board being staggered midway between joints formed by the wooden hatch covers. Magazines shall be constructed in accordance with the applicable provisions of § 146.09–2 (a), (b), (c), and (d), except floor shall be formed by dunnaging over the asbestos board. In the construction of a magazine care should be taken that no metal structural parts protrude within the magazine. If it is proposed to carry the stowage of explosives up into the over deck hatch coaming, this coaming shall be sheathed with wood. A magazine located in the hatchway may be so constructed as to occupy only a part of the area of the hatchway. Portable magazines may be stowed in the square of the hatchway and either lashed or tommed to prevent movement.

146.09–2 Magazines, construction of.—(a) Magazines may be constructed of steel, iron, or wood, provided that if of steel or iron, the whole of the interior shall be thoroughly protected by wood sheathing of a minimum thickness of ⅞″ so fitted as to form a smooth surface, free of projections, and true of line. When steel or iron decks are utilized to form the bottom of the magazines, a wooden floor shall be fitted; such floor may be portable and may be built in sections so as to be readily removable to allow access for cleaning.

(3d Amend.—146.09–1 (b) altered; 146.09–1 (d) added—May 1941)

(b) Magazines of wood; magazines constructed of wood shall comply with the following specifications:

(c) The bulkheads forming the sides and ends shall be constructed of commercial 1″ quality lumber, dressed one side and both edges, secured to uprights of at least a 3″ x 4″ size, spaced not more than 18″ apart, and similarly secured, top, bottom and center, with horizontal bracing. Copper- or cement-coated nails with heads carefully set below the surface of the boards shall be used for fastening. When a magazine is constructed as a permanent compartment in the ship, increased size and finish of lumber and other methods of fastening may be used, provided they are recessed below the surface to avoid projections within the interior of the magazines. All boarding shall be so fitted and finished as to form a smooth surface within the interior of the magazine. Construction shall be such as to separate all containers of explosives from contact with metal surfaces. When a metal stanchion post or other obstruction is located within the interior area of the magazine, such obstruction must be completely covered with wood of a thickness of at least ¾″, secured in place with copper- or cement-coated nails or brass screws, with heads set below the surface of the wood.

(d) Uprights shall not be stepped directly onto a metal deck. A 3″ x 4″ bearer to carry the uprights shall be laid upon the metal deck. A 3″ x 4″ header shall be fitted against the underside of an overhead deck to receive the tops of uprights. Tops of uprights fitted against channel beams may be wedged direct to the beam with 3″ x 4″ spacers fitted between . Care shall be taken in securing upright framing that no nails penetrate to the interior of the magazine.

(e) Flooring of magazines shall be of not less than 1¼″ stock, constructed on bearers and fitted portable (but tight to prevent movement).

(f) The door of the magazine shall be of substantial construction, fitted reasonably tight into its jamb, and be provided with locking means of a tamperproof type.

146.09–3 Entire hold forming magazine.—When an entire compartment of hold is utilized for the stowage of explosives that are required by the regulations in this part to be given magazine stowage, the entire compartment may be considered as a magazine. The frames and bulkhead stiffeners protruding into the compartment shall be effectively boarded over to provide a smooth surface for the stowage of the explosives. This boarding need not be applied to the over deck beams when the explosives are not stowed closer than 12 inches of such beams. If explosives are stowed up to the over deck beams and into the square of the hatch formed by the coaming such over deck beams including the hatch coaming shall be effectively boarded over. The installation of such boarding shall be in accordance with the specifications for the construction of a magazine; except, when cargo battens are fitted to the vessel's shell or bulkheads forming part of the hold, such boarding may be secured vertically using the battens as an anchorage for the necessary securing means.

146.09–4 Ventilation of magazines.—Every magazine shall be efficiently ventilated. Cowl deck ventilators, when fitted into or immediately adjacent to the magazine, shall be covered with a fine wire screen of not less than a 30 x 30 mesh at the weather end of the

ventilator. Magazines which occupy only a portion of a hold and are not fitted with a ventilator entering into the magazine shall be so constructed on one side as to leave an open space of not more than one inch below the over deck frame.

146.09–5 Metal lockers for stowage fireworks.—Metal lockers required to be provided for the stowage of fireworks (class B—less dangerous explosives), permitted by the regulations in this part to be accepted and transported on board passenger vessels, shall conform to the following specifications:

(a) Size: The cubic capacity of a locker shall not exceed 150 cubic feet.

(b) Division: Lockers exceeding 5 feet in height shall be fitted with a division shelf at about one-half height so constructed as to carry the imposed load without deflection.

(c) Gauge: The thickness of metal used in the construction of lockers shall not be less than No. 16 U.S.S. Gauge.

(d) Type of Construction: Design and construction of lockers shall be such as to provide smooth interior surfaces. Stiffener elements, when fitted, shall not project beyond interior surfaces. Lockers shall be fitted with top and bottom closures except when "built in" to the structure of the vessels with the over and under deck forming the top and bottom of the locker. "Built in" construction shall not be accepted when the over or under deck is of wood.

(e) Closures: Closing means may be removable plates or the hinged-door type, provided that in either case the locker shall, when closed in, be flame tight. Lockers having portable plate closing means shall have an opening provided in an accessible side of the locker to permit insertion of a fire hose nozzle for purpose of flooding. Such opening shall be of at least 3″ in diameter, not more than 12″ below the top of the locker, and be fitted with a metal flap cover to substantially preserve the flame-tight requirement.

(f) Location: Lockers shall be so located as to be readily accessible to companionways or cargo hatches. When fitted in vessels constructed of wood the lockers shall be so located as to be easily observed by a watchman on his rounds. Lockers shall be secured in place to prevent shifting in a seaway.

146.09–6 Portable magazine chest.—Portable magazines shall be of a size not greater than 60 cubic feet capacity. They may be constructed of wood or of metal lined with wood. When constructed of wood, the frame, bottom and siding shall be in accordance with scantling requirements as given for magazines. A strong, close-fitting, hinged cover, reinforced with wooden battens (at least 1¼″ thick x 5″ wide) shall be fitted. Effective locking means shall be provided for the cover. At least four (4) pad eyes with lashing rings, not less than 3″ I. D. x ⅜″ wire, shall be permanently attached to the magazine. When constructed of metal, the minimum thickness shall not be less than 10# plating. The interior shall be lined with wood sheathing of a minimum thickness of ¾″. Securing means shall be countersunk below the surface of the sheathing. Locking means for the cover and lashing rings shall be provided as detailed above. All inside surfaces of magazines shall be smooth and free of nails, screws, or other projections. Magazine chests used for the stowage of flares, rockets, and powder for Lyle guns shall be marked, in letters at least 3″ high, with the following legend: "INFLAMMABLE—KEEP LIGHTS AND FIRE AWAY".

146.09-7 Specifications of moisture proofed paper bags.

SPECIFICATION MIN-W10

MOISTURE PROOFED MULTIWALL PAPER BAGS FOR TRANSPORTATION OF QUICKLIME BY WATER

General

1. *Compliance.*—Containers must comply with, or may exceed details of the specifications.
2. *Capacity.*—Not over 100 pounds net.

Material

3. *Paper.*—Kraft (100% sulfate) paper.
4. *Moisture proofing.*—Asphalt or other material equal or superior to asphalt.

Construction

5. (a) *Description.*—A multiwall paper bag constructed of not less than four plies, one or more of which will be moisture proofed.

(b) *Assembly of moisture proofed ply.*—The assembly of the moisture proofed ply will be accomplished by combining two sheets of Kraft (100% sulfate) paper having a basis weight of not less than 20 pounds each with not less than 25 pounds of asphalt applied evenly to the paper surface.

(c) *Alternate moisture proofed ply.*—Any other moisture proofed Kraft paper of a total basis weight of not less than 40 pounds before treatment, whose moisture proofed qualities are equal or superior to the above asphalt treated paper as determined by the Thwing Vapometer test for moisture-vapor transmission.

(d) *Additional plies.*—Remaining plies of the bag will be constructed of Kraft (100%) sulfate paper, each sheet having a basis weight of not less than 40 pounds, and a Kady or Mullen test of 40 pounds per square inch. The combined weight of said remaining plies to be not less than the weights given in the following table:

Approximate weight of contents:	*Combined weight of remaining plies in addition to moisture proofed ply described in (5) (b)*
To and including 50 pounds	130 pounds
51 pounds to and including 80 pounds	150 pounds
81 pounds to and including 100 pounds	170 pounds

All weights given are on the basis of 480 (24 x 36 inch) sheets.

(e) *Longitudinal seams.*—Longitudinal seams made by lapping not less than one inch and pasting.

(f) *Bottom closure.*—Bottom closure made by folding and interlapping and pasting; or taped, sewed, and dipped in a waterproofing compound; *or sewed and taped over stitching.*

(g) *Top closure.*—By wire ties consisting of not less than two No. 16 Birmingham wire gauge or heavier wires; or by valve mouth with top of bag folded and interlapped and pasted; or by valve mouth with top of bag taped, sewed and dipped in waterproofing compound; *or sewed and taped over stitching.*

6. *Test.*—The finished container, filled and closed, must be capable of withstanding a drop test of 4 feet on the butt without sifting or rupture of any ply.

Marking

7. *On each container.*—By marks at least one inch high as follows:

(a) *MIN-W10.*—This marking shall be understood to certify that the container complies with all specification requirements.

(b) Name and address of maker located above or below the mark specified in (7) (a).

146.09-8 Specifications of moisture proofed paper lined burlap bags.

SPECIFICATION MIN-W11

MOISTURE PROOFED PAPER LINED BURLAP BAGS FOR TRANSPORTATION OF QUICKLIME BY WATER

General

1. *Compliance.*—Containers must comply with, or may exceed, details of the specifications.
2. *Capacity.*—Not over 100 pounds net.

Material

3. *Burlap.*—At least equal in quality and strength to 7½ ounce 40 inch (7½/40) Calcutta common burlap. Thread count at least 9 per inch warp and 9 per inch filler.
4. *Paper.*—No. 1 Kraft creped. Finished weight of 40 pounds per ream (480 sheets 24 x 36 inch) after creping.

Construction

5. (a) *Description.*—Burlap bag lined with a water proofed paper lining.

(b) *Assembly of moisture proofed lining.*—The assembly of the moisture proofed lining will be accomplished by combining two plies of creped paper having a finished weight of not less than 40 pounds each, evenly coated between the two plies with asphalt of any desirable type, of minimum 150° F. melting point, over the entire area of paper, with minimum coverage of 110 pounds per ream.

(c) *Assembly of moisture proofed ply and burlap.*—The burlap will be lined with the moisture proofed creped paper by cementing together with a suitable latex compounded adhesive to securely attach paper lining to the burlap.

(d) *Stretch of paper lining.*—After they are cemented to the burlap the stretch of the paper lining must equal the stretch of the burlap in the direction of the warp and filling and equal to 10% in a diagonal direction.

(e) *Seams.*—Bags must be made with cemented center seams and taped bottoms to make them sift proof and airtight and to provide strength at least equal to the bag material.

(f) *Closure.*—Bags to be wire tied with two No. 16 Birmingham wire gauge or heavier wire ties.

6. *Test.*—The finished container, filled and closed, must be capable of withstanding a drop test of 4 feet on the butt without sifting or rupture of any ply.

Marking

7. *On each container.*—By marks at least one inch high as follows:

(a) *MIN-W11.*—This marking shall be understood to certify that the container complies with all specification requirements.

(b) Name and address of maker located above or below the mark specified in (7) (a).

146.09–10 Specifications of wooden box for export shipments.

SPECIFICATION MIN–W30

WOODEN BOXES FOR TWO FIVE-GALLON CANS

Effective March 31, 1941, the Interstate Commerce Commission adopted a new wooden box for two 5-gallon cans, described as

Specification 15X
Wooden Boxes for Two 5-Gallon Cans

and authorized its use for export shipments of inflammable liquids.

To simplify the regulations affecting shippers and carriers of explosives or other dangerous articles on board vessels, specification MIN–W30, Wooden boxes for two 5-gallon cans, is deleted from the regulations in this part. Wooden boxes constructed prior to the effective date of this amendment and marked in compliance with the then existing specification (MIN–W30) may be accepted on board vessels for the same substances and under the same conditions as the wooden box ICC–15X is permittted to be accepted on board vessels by the provisions shown in the tables in section 146.21–100—Inflammable liquids, and section 146.26–100—Combustible liquids.

146.09–11 Chutes for explosives.—Chutes for loading and unloading explosives shall be constructed as follows: Of smooth planed boards not less than 1″ thick. Side guards of the same material 4″ high. Assembly shall be with brass screws only. "D"-shaped wooden strips or runners not more than 6″ apart and running lengthwise of the chute shall be fastened to the upper surface of the slide by means of glue and wooden dowels extended through the bottom of the chute. No metallic means of construction shall protrude beyond the inner face of the chute. Four lashing rings shall be provided, one at each outside corner of the chute for purposes of securing during use. No specification marking required.

(5th Amend.—spec. deleted—July 19

146.09–12 Mattresses for explosives.—Landing mattress for loading or unloading explosives. A stuffed mattress at least 4′ wide by 6′ long and not less than 4″ thick, or a heavy jute or hemp mat of like dimensions, are acceptable landing mattresses.

BARGES

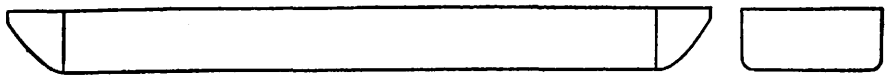
146.10–1 Barge defined.—See § 146.03–36.

146.10–2 Application of regulations.—In the transportation of explosives or other dangerous articles or substances on board barges the provisions of the regulations in this part applying to cargo vessels are applicable to barges unless specifically exempted and except as to stowage. Stowage shall be in accordance with the provisions shown in the table 146.10–50.

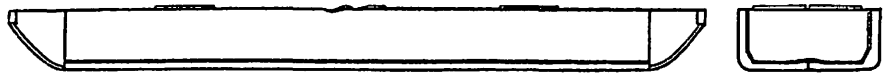
146.10–3 Barges classified.—Various types of "barges" are for the purpose of the regulations in this part classified as follows:

CLASS "A" BARGES

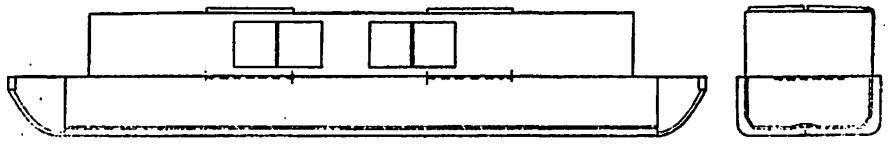
AA Hull constructed of steel or wood, completely decked over and stowing cargo "On deck in open" only.



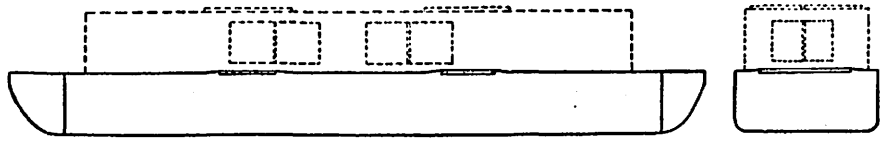
AB Hull constructed of steel or wood, completely decked over, fitted with cargo hatches, ceiled holds, and capable of stowing cargo "Under deck" or "On deck in open."



AC Hull constructed of steel or wood, completely decked over with superstructure house covering the deck and fitted with cargo hatches or cargo doors, and capable of stowing cargo "On deck in open," "Under deck" in ceiled holds or "On deck within the house."

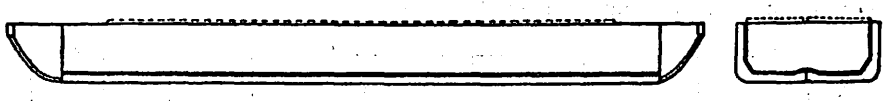


AD Hull constructed of steel or wood, completely decked over, fitted with cargo hatches, with or without superstructure house covering the deck, and capable of stowing cargo "On deck" or "On deck within the house" or "Under deck," having holds that are not ceiled.

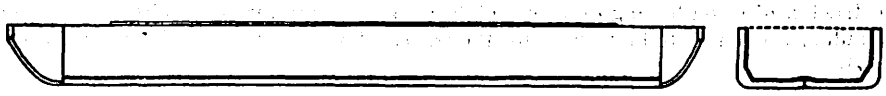


Class "B" Barges

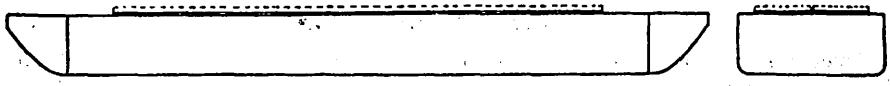
BA Hull constructed of steel or wood with partial deck at ends and/or sides, fitted with hatches with or without coaming and having ceiled holds and loading cargo "Under deck" only.



BB Hull constructed of steel or wood with partial deck at ends and/or sides, with open ceiled hold or holds.

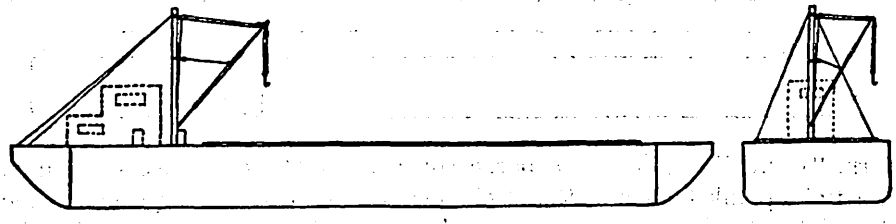


BC Hull constructed of steel or wood with partial deck at ends and/or sides, with or without hatches and having hold or holds without ceiling.

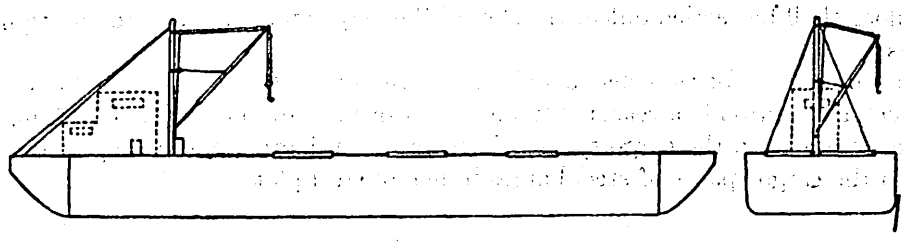


Class "C" Barges

CA Hull constructed of steel or wood, completely decked over and stowing cargo "On deck in open" only, fitted with cargo mast and boom, and machinery for cargo handling, with or without house or houses on deck.

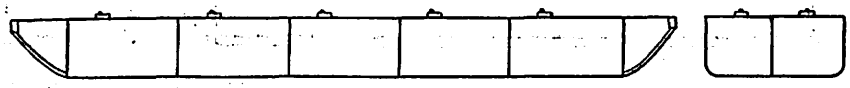


CB Hull constructed of steel or wood, completely decked over, having cargo hatches in deck, and stowing cargo "On deck in open" or "Under deck", fitted with cargo mast and boom and machinery for cargo handling, with or without house or houses on deck.

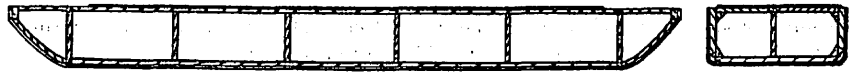


Class "D" Barges

DA Hull constructed of steel having division bulkheads forming tight compartments (tanks) integral with the hull of the barge, to be utilized for the transportation, in bulk, of dangerous substances in liquid form, other than inflammable and combustible liquids.



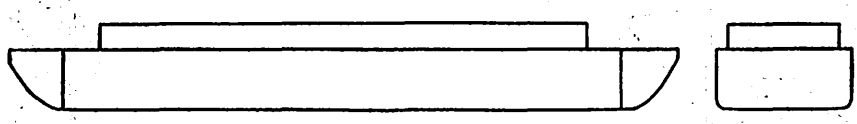
DB Hull constructed of wood having division bulkheads and ceiling forming tight compartments integral with the hull of the barge, to be utilized for the transportation, in bulk, of dangerous substances other than liquids.



Class "E" Barges

EA Hull constructed of steel or wood, having cargo-carrying compartments of hopper type and fitted with bottom dump or side dump (known as dump scows, mud scows, garbage scows, etc.).

EB Barge constructed of wood completely decked and having box-like structure on deck not roofed over.



The term "Ceiled" applied to a barge constructed of wood means the hold space is fitted with a tight plank floor and that tight planking or wooden cargo battens are carried up the sides of the hold to provide a smooth floor and reasonably smooth sides without unnecessary projections. Floor or siding fitted "tight" shall have removable sections for purposes of clean-out and access for inspection of hull. When cargo battens are fitted at sides the floor shall be carried out to the skin of the barge and fitted reasonably tight around the frames.

When applied to a barge constructed of steel, the term "Ceiled" means the construction shall be such as to provide a reasonably flush floor or tank top and sides, free from unnecessary projections within the cargo space. Tight wooden flooring and ceiling or battens may be fitted in the cargo spaces of steel barges in lieu of steel platings.

146.10–4 Carfloats.—(a) Explosives or other dangerous articles or substances laden in railway vehicles in compliance with the provisions of the ICC regulations governing such transporation may be transported, carried or conveyed on board carfloats having railroad tracks secured in place on deck: *Provided, however,* Such carfloats shall not be utilized to transport, carry, convey, or store any explosives expressly prohibited by subsection 3 of R. S. 4472, as amended, or any other explosive or other dangerous article or substance unless in compliance with the provisions of the regulations in this part with respect to "Barges."

(b) Substances laden in railroad vehicles being transported on board railroad carfloats are not subject to any other provisions of the regulations in this part unless the packages, or the substances if in bulk, are removed from the railroad vehicles for any reason other than to transfer the article or substances from the railroad vehicle to a vessel.

146.10–5 On deck protection.—Wooden barrels, wooden or fiberboard boxes, fiber drums, plywood drums containing explosives, inflammable liquids, inflammable solids or oxidizing materials or poisons that are stowed "On deck in Open" on barges shall be protected by tarpaulins. The following hazardous articles, burlap bags, camphene, calcium carbide, bleaching powder, cork, cotton, cotton and textile waste, excelsior, fibers, hay, naphthalene, oakum, and wood shavings shall when stowed "On deck in Open" on barges be protected by tarpaulins.

146.10–6 Stowage of explosives.—(a) Barges having cargoes of permitted explosives and other dangerous articles are required to observe the provisions of the stowage and storage chart of explosives and other dangerous articles, § 146.10–50.

(b) Explosives required by the regulations in this part to be stowed in magazines shall when on board barges as cargo be stowed either in a house or "Under deck" as permitted for the particular type of barge by the provisions of table shown in § 146.10–50.

146.10-50 Stowage of explosives or other dangerous articles or substances on board barges

There is indicated in this table the explosives or other dangerous articles or substances, separated according to their classification, that are permitted or restricted in their transportation and stowage on board the various class barges. Unless otherwise stated in the table, a permitted stowage applies to substances when in containers only. When such substances are permitted "in bulk" a notation to that effect appears in the table. ("In Bulk" means substances which are loaded and carried without benefit of containers or wrappers, and received and delivered by the vessel without mark or count.)

Substances	Label	Class "A" barge				Class "B" barge			Class "C" barge		Class "D" barge		Class "E" barge	
		AA	AB	AC	AD	BA	BB	BC	CA	CB	DA	DB	EA	EB
Explosives	See table in 146.20.	Yes	Yes	Yes	On deck only	Yes	Yes	No	No	No	No	No	No	No.
Inflammable liquids	Red	Yes [1]	Yes [1]	Yes	On deck only [1]	Yes	Yes [1]	No	Yes [1]	Yes [3]	No [6]	No	No	No.
Inflammable solids and oxidizing materials.	Yellow	Yes [1] (4)	Yes [1] [5]	Yes	No	Yes	No	No	Yes [1]	Yes [3]	Yes	Yes	No	No.
Corrosive liquids	White	Yes, also bulk in tanks.[1]	Yes, also bulk in tanks.[1]	Yes, also bulk in tanks.	No, except bulk in tanks.	Yes, also bulk in tanks.	Yes, also bulk in tanks.[1]	No; except bulk in tanks.	Yes [1]	Yes [3]	Yes	No	No	No.
Inflammable compressed gases.	Red gas	Yes	On deck only.	Yes [7]	On deck only	No	No	No	Yes	On deck only.	No	No	No	No.
Non-inflammable compressed gases.	Green gas	Yes	Yes	Yes	On deck only	Yes	Yes	No	Yes	Yes	No	No	No	No.
Poisonous articles: Class "A", Class "B", Class "C"	"Poison gas" or "Poison" or "Tear gas."	Yes [1]	Yes [3]	Yes	On deck only [1]	Yes	Yes [1]	No	Yes [1] [4]	Yes [3] [4]	No	No	No	No.
Hazardous articles	No label required.	Yes [1] [4]	Yes [3]	Yes	On deck only [1] [4]	Yes	Yes [1] [4]	No; except bulk in tanks.	Yes [1] [4]	Yes [3] [4]	Yes	Yes, except liquids.	No	Yes.

Containers of dangerous articles vulnerable to damage by water or dangerous substances affected by water when loaded in weatherproof railroad vehicles in accordance with requirements of the Interstate Commerce Commission regulations are exempt from the provisions of stowage restrictions shown in this table and numbered (1) to (7) inclusive.

[1] Outside containers vulnerable to damage by water shall not be given this stowage.
[2] Outside containers vulnerable to damage by water shall be stowed under deck only.
[3] Outside containers vulnerable to damage by water shall be stowed under cover only.
[4] Substances affected by water shall not be given this stowage.
[5] Substances affected by water shall be stowed under deck only.
[6] Substances affected by water shall be stowed under cover only.
[7] Stowage shall be "on deck in house" only.
[8] Transportation of inflammable or combustible liquids, in bulk, is governed by Rules and Regulations for tank vessels.

DETAILED REGULATIONS GOVERNING EXPLOSIVES

146.20-1 Definition of explosives.—Acceptable explosives are divided by the ICC regulations into three classes according to degree of hazard in transportation. These are:

Class A—Dangerous Explosives; detonating or otherwise of maximum hazard.
Class B—Less Dangerous Explosives; inflammable hazard.
Class C—Relatively Safe Explosives; minimum hazard.

and are defined by the ICC regulations as set forth in §§ 146.20-2, 146.20-3, 146.20-4 herein, and such definitions are binding upon all shippers making shipments of any explosives by common carrier vessels engaged in interstate or foreign commerce by water. Such definitions are accepted and adopted and form part of the regulations in this subchapter applying to all shippers making shipments of explosives by any vessel and shall apply to the owners, charterers, agents, masters or persons in charge of vessels and to other persons transporting, carrying, conveying, storing, stowing or using explosives on board any vessel.

146.20-2 Class A—Dangerous explosives defined.—Class A Dangerous Explosives are defined as:

(a) *Ammunition for cannon.*—All fixed or separate loading ammunition of 37 mm. (1½ inches) caliber and larger which is fired from a cannon, gun, or mortar, as distinguished from ammunition fired from a device such as a pistol, revolver, rifle, shotgun or similar firearm.

(b) *Ammunition for cannon with explosive projectiles, gas projectiles, smoke projectiles, or incendiary projectiles.*—Fixed ammunition assembled in a unit consisting of the cartridge case containing the propelling charge and primer, and the projectiles, fuzed or unfuzed.

(c) *Ammunition—Nonexplosive.*—Material relating to ammunition for cannon, but containing no explosive or other dangerous article, such as cartridge cases, "dummy" or "drill" cartridges, etc., sand-loaded projectiles, sand-loaded bombs, empty projectiles, empty mines, empty bombs, solid projectiles, or empty torpedoes is exempt from the regulations in this part.

(d) *Ammunition—Projectiles, grenades, bombs, mines and torpedoes.*—(1) Explosive projectiles are shells or projectiles loaded with explosives, or bursting charges, with or without other materials, for use in cannon, guns, or mortars.

(2) Grenades, hand or rifle, are small metal or other containers designed to be thrown by hand or projected from a rifle. They are filled with an explosive or a liquid, gas or solid material such as a toxic or tear gas or an incendiary or smoke-producing material and a bursting charge.

(3) Explosive bombs are metal or other containers filled with explosives. They are used in warfare and include aeroplane bombs and depth bombs.

(4) Explosive mines are metal containers filled with a high explosive.

(5) Explosive torpedoes, such as are used in warfare, are metal devices containing a means of propulsion and a quantity of high explosives.

(e) *Ammunition for small arms with explosive bullets.*—Fixed ammunition to be used in machine guns or similar firearms and consists of a metallic cartridge case, the primer and the propelling charge, with explosive bullet with or without detonating fuze, the component parts necessary for one firing being all in one assembly.

(f) *Ammunition, chemical, explosive.*—Chemical ammunition used in warfare is all kinds of explosive chemical projectiles, shells, bombs, grenades, etc., loaded with toxic, tear, or other gas, smoke, or incendiary agents; also such miscellaneous apparatus as cloud-gas cylinders; smoke generators, etc., that may be utilized to project chemicals. When these articles are shipped assembled with their ignition elements, bursting charges, detonating fuzes, or explosive components, they must be shipped as in conformity with the regulations prescribed for explosive articles, Class A.

(g) *Black powder and low explosives.*—Black powder and low explosives are general names used to describe all explosives similar in composition or characteristics to ordinary black powder and which cannot be detonated by a commercial blasting cap. Examples are rifle, sporting, cannon, and blasting powders. Flash powder sheets in bulk, flash powders packed in inner units exceeding 2 ounces each, and flash powder or spreader cartridges exceeding 72 grains each are classed as low explosives.

(h) *High explosives.*—For the purpose of these regulations high explosives (except smokeless powders, initiating or priming explosives) are all explosives more powerful than low explosives or ordinary black powder. Their distinguishing characteristic is their susceptibility to detonation by a blasting cap. Examples of high explosives are dynamite, picric acid, picrates, chlorate powders, nitrate of ammonia powders, trinitrotoluene, dry nitrocellulose (guncotton and negative cotton), dry nitrostarch, trinitrorescorcinol, and fireworks that can be exploded en masse.

(j) *Initiating or priming explosives.*—Explosive compositions used as a component of blasting caps, detonators and primers. These explosives are commonly more sensitive to flame, impact or friction than are high explosives.

146.20–3 Class B—Less dangerous explosives defined.—Class B Less Dangerous Explosives are defined as:

(a) *Ammunition for cannon with empty projectiles, sand-loaded projectiles, solid projectiles, or without projectiles.*—Fixed ammunition of caliber 37 mm. (1½ inches) and larger, assembled in a unit consisting of the cartridge case containing the propelling charge and primer and with empty, sand-loaded, or solid projectiles, or without projectiles.

(b) *Fireworks.*—All manufactured articles designed primarily for the purpose of producing visible or audible pyrotechnic effects by combustion or explosion. Examples are firecrackers, firecracker salutes, Roman candles, pin wheels, colored fires, rockets, serpents, railway fusees, railway torpedoes, aeroplane flares, sparklers, smoke pots, smoke candles, illuminating projectiles not fuzed and without bursting charges, Very signal cartridges, fireworks bombs and salutes (not high explosives), toy torpedoes, ammunition pellets fired in a special holder, flash powders in inner units not exceeding 2 ounces each, flash sheets in in-

terior packages, and flash powder or spreader cartridges containing not over 72 grains of flash powder each and flash cartridges, consisting of a paper cartridge shell, small-arms primer, and flash composition, not exceeding 180 grains, all assembled in one piece. Fireworks must be in a finished state, exclusive of mere ornamentation, as supplied to the retail trade.

(c) *Smokeless powder.*—Smokeless powders are propellant explosives from which there is little or no smoke when fired. They include smokeless powder for cannon and smokeless powder for small arms. Smokeless powder for cannon used in the United States at the present time consists of a nitrocellulose colloid and is comparatively safe to handle and transport. Smokeless powder for small arms may consist of nitrocellulose or nitrocellulose combined with nitroglycerin. So-called smokeless powders which are composed of picrate or chlorate mixtures are classed as high explosives. Fire-extinguisher charges containing not to exceed 50 grains of smokeless powder per unit are exempt from the regulations in this part.

146.20–4 Class C—Relatively safe explosives defined.—Class C Relatively Safe. Explosives are defined as:

(a) *Ammunition for small arms.*—Small-arms ammunition includes all fixed ammunition, Class C, such as is used in pistols, revolvers, rifles, shot guns, and similar firearms, or in machine guns, with non-explosive bullets, and consists usually of a paper or metallic cartridge case, the primer, and the propelling powder charge, with or without shot, bullet (except explosive bullets); tear gas material, or pyrotechnics, the component parts necessary for one firing being all in one assembly.

(b) *Cordeau detonant.*—Drawn-lead tube fuse containing trinitrotoluene or a core of pentaerythrite tetranitrate overspun with yarns, tapes and waterproofing compounds.

(c) *Fuzes—Percussion, combination, time, tracer, etc.*—Percussion fuzes, combination fuzes, and time fuzes are devices used to ignite the powder charges of ammunition or the black powder bursting charges of projectiles. Tracer fuzes are devices which are attached to projectiles and contain a slow-burning composition to show the flight of projectiles at night.

(d) *Igniters.*—(1) Cartridge bags, empty, with black powder igniters consist of empty bags having attached thereto an igniter composed of black powder.

(2) Delay electric igniters consist of small metal tubes containing a wire bridge in contact with a small quantity of ignition compound. The ignition compound is in contact with or in close proximity to a short piece of safety fuse.

(3) Electric squibs consist of small tubes or blocks containing a small quantity of ignition compound in contact with a wire bridge.

(4) Fuse lighters and fuse igniters are small cylindrical hollow pasteboard or metal tubes containing an igniting composition in one end, the other end being open to permit it to be placed on safety fuse.

(5) Safety squibs are small paper tubes containing a small quantity of black powder. One end of each tube is usually twisted and tipped with sulfur.

(e) *Instantaneous fuse.*—Instantaneous fuse is cotton yarn impregnated with meal powder.

(f) *Primers.*—Primers are devices used to ignite the powder charges of ammunition or the black powder bursting charges of projectiles. For small-arms ammunition, the primers are "small-arm primers" or "percussion caps."

(g) *Safety fuse.*—Safety fuse consisting of a core of black powder overspun with yarns, tapes, and/or waterproofing compounds must be packed in outside fiberboard boxes, wooden boxes, wooden barrels, or metal containers, and must be described for shipping purposes as safety fuse.

(h) *Toy caps.*—Toy paper caps, consisting of paper cap ammunition for toy pistols, in sheets, strips, rolls, or individual caps, must not contain more than an average of twenty-five hundredths of a grain of explosive composition per cap.

146.20–5 Samples of explosives and explosive articles for laboratory and examination purposes.—(a) New explosives, including fireworks and explosive devices, must be examined and approved as safe for transportation before being offered for shipment, provided that a sample of such explosives, fireworks and explosive devices not to exceed 5 pounds net weight may be offered for transportation on board cargo vessels subject to these regulations for the purposes of this examination. Samples of explosives, except liquid nitroglycerin, other than new explosives not exceeding 5 pounds net weight may for purposes of laboratory examination be offered for transportation by cargo vessels subject to these regulations. For the purposes of the regulations in this part a new explosive, including fireworks and explosive devices, is the product of a new manufacturing plant or an explosive or explosive device of an essentially new composition or character made by any manufacturing plant.

(b) Before being offered for shipment, explosive articles in the experimental state must be made safe by removal of ignition elements or otherwise.

(c) Shipments of samples of explosives, fireworks and explosive devices must be packed, marked and described as required by the Interstate Commerce Commission regulations in effect at the time of shipment for the explosive contained therein.

(d) *Label.*—Each outside package containing samples of explosives for laboratory examination will have securely and conspicuously attached to it a square red certificate label as shown in § 146.05–17 (q).

146.20–6 Samples of permitted explosives for sales purposes in restricted quantity.—Such samples may be permitted for transportation on board passenger vessels when upon application to the Commandant of the Coast Guard he finds that such transportation may be effected with safety. When such transportation is permitted the Commandant of the Coast Guard shall set forth the conditions governing the packing, marking, labeling and stowage of such samples.

146.20–7 Stowage of explosives.—(a) All articles of cargo classified as explosives by these regulations shall be stowed on board a vessel in conformity with the conditions specified for the individual articles as set forth in the table shown in this section. Mixed stowage of explosives with other explosives or other dangerous articles or substances or combustible

liquids shall be in conformity with the loading and stowage chart, § 146.20-50. Specifications governing the construction and location of magazines and lockers used in stowage of explosives are detailed in §§ 146.09-1 to 146.09-6.

(b) Vessels engaged in transfer of explosives between receiving points and delivery points within the harbors, bays, sounds, lakes and rivers including the explosive anchorages on the navigable waters may, when transporting explosives, stow such cargo "On deck in open," "On deck under cover," or "Under deck." Explosives stowed "On deck in open" shall after loading and during transportation be covered by tarpaulins securely lashed in place.

146.20-8 Stowage of explosives in holds containing coal.—Unless especially authorized by the Bureau, explosives shall not be stowed in a hold containing coal, nor shall explosives be stored in a hold above or adjacent to a hold containing coal.

146.20-9 On deck stowage of explosives.—(a) Articles classified as explosives, the stowage of which is permitted "On Deck" by these regulations shall be properly secured. Such security may be obtained by using existing vessel's structures such as bulwarks, hatch coamings, shelter deck and poop bulkheads as part boundaries and effectively closing in the cargo by fitting angle bar closing means secured by bolting to clips or other parts of the ship's structure. Lashing of deck stowage permitted, provided eye pads are fitted to carry such lashings. Guards rails shall not be used to secure such lashings.

(b) Bulky articles may be secured by lashing with individual wire rope lashings.

(c) Shoring of such bulky articles of cargo shall be in addition to the foregoing means of securing.

(d) Explosives stowed "On Deck" shall be so stowed as to provide safe access to the crew's quarters and to all parts of the deck required to be used in the navigation and necessary working of the vessel.

(e) Airing spaces for the crew shall be maintained free and clear of the stowed cargo.

(f) When runways for use of crew are built over stowed cargo, they shall be so constructed and fitted with rails and lifelines as to afford complete protection to the crew when in use.

(g) Explosives permitted by these regulations to be stowed "On Deck" shall not be stowed on or under a bridge deck or within a distance, in a horizontal plane, of 25 feet of an operating or embarkation point of any lifeboat.

(h) "On Deck" cargoes of explosives shall not be stowed nearer than 25 feet in a horizontal plane to the access means provided for crew quarters.

(j) Fire plugs, sounding pipes, and access to same shall be maintained free and clear of explosive cargo stowed on deck.

(5th Amend.—146.20-9(h) altered—July 1941)

(k) Of the open deck space available after allowing for above restrictions for the stowage of explosives "On Deck," not more than 50% of such available deck space shall be occupied by the stowage of these articles of explosives.

146.20–10 Stowage of fireworks.—(a) Fireworks that can be "exploded en masse" shall not be offered or accepted for transportation except as high explosives and shall be stowed in magazines. Magazines may be of a portable type as detailed in § 146.09–6.

(b) Fireworks (other than the type that can be "exploded en masse") shall, when permitted to be transported on passenger vessels, be stowed in metal lockers, such metal lockers to be located either "On Deck under cover" or "Tween decks readily accessible". See § 146.09–5 for Specifications of Locker.

(c) Fireworks shall not be stowed in the same hold in which magazines containing explosives are located.

(d) All containers packed with permissible fireworks acceptable for transportation on board vessels in accordance with these regulations shall have attached the (red) fireworks label as shown in § 146.05–17 (p).

146.20–11 Stowage of explosives in magazines adjacent to other dangerous articles.—(a) Magazines containing explosives that are required to be stowed in such magazines by the tables contained in § 146.20–100 shall not be located in the same holds or holds adjacent to those in which inflammable liquids, inflammable solids or oxidizing materials are stowed, nor shall such magazines be located in holds below such substances stowed "On Deck."

(b) On vessels transporting explosives and inflammable (red label) compressed gases, the requirements as to separation of stowage of these two substances shall be as set forth in § 146.24–10.

(c) Magazines containing explosives shall not be located in the same hold or a hold below one in which corrosive (white label) liquids are stowed.

(d) Magazines containing explosives shall not be located in the same hold with poisonous articles, combustible liquids, or hazardous articles.

146.20–12 Stowage of explosives and non-dangerous cargo.—Magazines in which explosives are stowed shall be protected from damage by heavy non-dangerous cargo stowed in the same hold. Shafting, steel bar, steel shapes, pipe, heavy machinery and similar types of cargo shall, if stowed within the same hold, be so isolated or dunnaged or secured as to prevent damage to magazine under any conditions likely to be encountered during the voyage.

146.20–13 Stowage and dunnaging of containers of explosives.—(a) Containers of explosives shall be so stowed and dunnaged as to prevent movement in any direction.

(b) Boxes of explosives marked "This Side Up" shall be so stowed.

(c) Kegs of black powder shall be stowed in an upright position, the bungs up, and each tier shall be completely dunnaged.

(d) The top tier of boxes and kegs shall be so braced and blocked that no displacement of any package can occur, either upwardly or laterally.

(e) Containers of explosives shall be so braced that they shall not be liable to be pierced by the dunnaging or crushed by superimposed weight.

146.20–14 Preparation of magazines, decks, hatches and holds before handling explosives.—(a) The floors of all magazines and holds shall be cleared of all rubbish, discarded dunnage and be swept broom clean before commencing to load any explosive items of cargo. Bilges shall be examined and any residue of previous cargo removed therefrom.

(b) All decks, gangways and hatches over or through which explosives must be passed or handled in loading or unloading, shall be freed of all loose material and shall be swept broom clean both before and after loading or unloading.

(c) The hatches and cargo ports opening into a compartment in which explosives are stowed shall be kept closed at all times, except during loading or unloading of the compartment. When closed the hatches shall be covered with tarpaulins securely battened.

146.20–15 Loading and unloading explosives.—No Class A dangerous explosives or Class B less dangerous explosives except fireworks shall be loaded on board any vessel until all other cargo has been placed on board the vessel. This applies to vessels moving from ports where cargo of explosives originate. At intermediate ports or at port of destination explosives shall not be loaded or unloaded at the same time that other cargo is being loaded or unloaded.

146.20–16 Constructing of magazines.—All work in connection with the constructing of a magazine, or other conditioning of holds, decks, or hatches, shall be completed before the actual loading of explosives is undertaken.

146.20–17 Handling explosives.—(a) All explosives must be handled carefully. Packages of explosives must not be thrown, dropped, rolled, dragged or slid over each other or over the decks.

(b) In transferring explosives from a pier or another vessel the packages must be handled by hand or by using a regulation chute and mattress. If the difference in elevation between the vessels or a vessel and the loading dock, or conditions of weather render it difficult to safely load or unload by hand or chute, mechanical hoists, crates, rope-net slings or basket may be used. The maximum load handled in crates, rope-net slings or baskets per draft shall not exceed 2,400 pounds. No containers of explosives shall be loaded above the side of any crate or basket nor shall rope-net slings be so loaded as to prevent the sling from encompassing the entire load on its top side. Explosives shall not be handled roughly. They must be hoisted and lowered carefully and only deposited or lowered onto a mattress.

(c) Blasting caps, detonating fuzes, fulminate of mercury and other initiating or priming explosives as defined in these regulations shall be considered as constituting a distinct class of dangerous explosives and because of the hazard involved they shall be handled with extreme care.

(d) "Can" hooks shall not be used for raising or lowering a barrel, drum, or other container of explosives. Metal bale hooks shall not be used in handling packages of explosives.

(e) Transfer trucks equipped with "electric motor" means of propulsion shall not be used in handling any high explosive, low explosive, black powder or smokeless powder on board vessels.

146.20–18 Cargo working equipment.—(a) Before explosives are loaded or unloaded on or from a vessel the master or other person in charge of the vessel shall be required to ascertain by examination the condition and working order of all slings, crates, baskets, boxes, chutes, mattresses, tackle and other equipment to be used in the transfer operation.

(b) Any and all equipment which in the judgment of the master or other person in charge of the vessel is not in safe working condition shall be rejected and he shall prohibit its use and take such precautions as he may deem necessary to be certain such rejected equipment is not used for the purpose of loading or unloading explosives. The master or other person in charge of the vessel shall keep watch of all equipment used during the transfer of explosives and if any part of the equipment shows any defect or is damaged in use, work shall be stopped and the damaged or defective equipment repaired or replaced before permitting the loading or unloading to continue.

(c) This inspection of cargo working equipment shall apply to the vessel's equipment and to stevedores or other contractor's equipment.

146.20–19 Installation of loading chute.—The incline of the chute to be used in loading explosives shall be such that the velocity of the packages sliding will not be great enough to cause violent shock when coming in contact with other packages, on the chute or when reaching the bottom of the chute. If otherwise, men shall be stationed alongside the chute to retard and control the velocity of the packages. Chutes shall be carefully wiped down with waste moistened with machine oil when packages of explosives are being used.

146.20–20 Lights, tools and equipment.—(a) No artificial light except electric lights or electric lamps or flood lights shall be used while loading or unloading explosives.

(b) Flash lights of a non-spark type shall be provided by the vessel owner or operator for persons required to enter holds in which explosives are stowed.

(c) Members of the crew of the vessel and other persons permitted on board the vessel to aid and assist in loading or unloading explosives, shall not be permitted to have or carry on their persons, firearms, matches, bale hooks or metallic tools.

(d) No person engaged in loading Class A dangerous explosives or Class B less dangerous explosives (except fireworks) shall wear boots or shoes shod or strengthened with iron nails or other metal, unless such boots or shoes are covered with rubber, leather, felt or some such non-sparking material.

146.20–21 Fires.—(a) No unnecessary fire shall be permitted on docks, lighters or vessels, while loading or unloading explosives.

(b) Fires deemed necessary must be properly safeguarded and left in constant charge of some competent person assigned for that purpose by the master for the entire period of cargo transfer.

(c) A line of fire hose of sufficient length to cover the area of loading operations and connected with an adequate water supply shall be laid ready for use.

146.20–22 Smoking.—Smoking is prohibited on or near any vessel loading or unloading explosives. "NO SMOKING" warning signs shall be posted during operations of load

ing and unloading such cargo. One such "NO SMOKING" sign shall be located on the pier at a safe distance from the vessel when such loading or unloading is taking place at a pier.

146.20–23 Liquor or drugs. No person who, in the judgment of the master or other person in charge of the vessel, may be considered as being under the influence of liquor or of drugs, shall be permitted on board a vessel while loading, unloading or transporting explosives.

146.20–24 Damaged or leaking containers or explosives.—(a) Any container of explosives showing evidence of damage or leakage of a liquid ingredient shall not be accepted for transportation or storage on board any vessel.

(b) Any container of an explosive when offered for transportation, or storage, showing excessive dampness or which is moldy or shows outward signs of any oil stain or other indications that absorption of the liquid part of the explosive is not perfect, or that the amount of the liquid part of the explosive is greater than the absorbent can carry, shall not be accepted for transportation. The shipper must substantiate any claim that a stain is due to accidental contact with grease, oil, or similar substance. In case of doubt the container shall be refused.

146.20–25 Containers found damaged or leaking on board vessels.—(a) Any container of explosives found damaged or leaking while on board a vessel shall either be repacked or removed from the vessel, whichever course appears advisable within the judgment of the master. If the master elects to jettison the container such jettisoning shall not be accomplished within any area adjacent to the coast line nor in shallow water.

(b) If upon arrival at a foreign port it is found that a container has been damaged or is leaking, the master should consult the local port authorities and request instructions as to disposition of the insecure package.

(c) The owner, charterer, agent, master, or person in charge of a vessel shall report in writing the occurrence of damaged or leaking containers of explosives to the Officer in Charge, Marine Inspection, for the district in which the substance was taken on board the vessel setting forth a description of the container; the damage sustained; when possible, a reason for the damage; the name and address of the consignor and consignee (or shipping mark); and a statement of the disposition of the container.

(d) When the failure of a container of explosives results in a casualty involving loss of life, personal injury or damage to the vessel, no report other than those required by the provisions of 46 CFR, Part 136, and § 35.2–9, 62.16, 78.16, 96.16, or 115.16 shall be made.

146.20–26 Magazine vessels storing explosives.—(a) For the purposes of these regulations, a magazine vessel storing explosives is defined as follows: A magazine vessel is any type of water borne craft used for the receiving, storing or dispensing of explosives, but not transporting same.

(b) Permitted type of magazine vessels: Single deck vessels with or without house on deck shall be the only acceptable type for use in the storage of explosives.

(c) Stowage on board magazine vessels: Class A (Dangerous Explosives) and Class B (Less Dangerous Explosives) in excess of 5,000 pounds stored in any magazine vessel shall be stowed below deck. No amounts of such explosives shall be stowed above deck unless the vessel is fitted with a deck house the stowage area of which conforms with the requirements of these regulations for the stowage of explosives. Blasting caps and electric blasting caps in excess of 1,000 shall not be stored on the same magazine vessel with Class A (Dangerous Explosives) or Class B (Less Dangerous Explosives).

(d) The compartment on board a magazine vessel used for stowage of explosives shall be ceiled with wood throughout in such manner as will provide a smooth interior surface. Any metal stanchions within such compartment shall be boxed in the same manner as the compartment is ceiled. Overhead ceiling need not be fitted when the over deck is weather tight. All nail and bolt heads shall be countersunk and all exposed metal shall be covered with wood.

(e) Initiating and priming explosives of the Class A (Dangerous Explosives) group when stowed on board magazine vessels at the same time as high explosives are being stowed shall be stowed in a compartment separate from other explosives. Blasting caps and electric blasting caps shall be stowed in a location on board the magazine vessel that shall be separated from the other explosives on board the vessel by a horizontal distance of at least 25′ from any bulkhead or partition forming a boundary of a compartment in which other explosives are stowed.

(f) Magazine storage vessels having a dry storage space capable of being used for any purpose whatsoever shall have a cofferdam of the minimum width of 24″ fitted between such dry storage space and the adjacent explosive stowage compartment. This cofferdam may be of wood or steel and be formed by two tight thwartship bulkheads extending from the skin of the vessel to the overdeck. A water tight hatch shall be fitted in the weather deck if such compartment extends thereto for access to such cofferdam.

146.20–27 Lighting in stowage compartments—Magazine vessels.—No artificial means of lighting shall be fitted within a compartment used for the storage of explosives. The use of oil or chemical burning lamps or lanterns is prohibited on board a magazine vessel except for required navigation, anchorage, warning lights and living quarters. Battery supplied, self-contained unit electric lanterns or hand flash lights are the only means of artificial light permitted in such storage compartments.

146.20–28 Handling explosives—Magazine vessels.—In receiving and dispensing explosives on or from magazine vessels such explosives shall be handled in accordance with the regulations as set forth in §§ 146.20–1—146.20–100.

146.20–29 Living quarters on magazine vessels.—Living quarters of magazine vessels shall be fitted on the inside with asbestos board or other fire resistant material. Only bracketed ship's lamps shall be allowed in the living quarters. Stoves for heating or cooking shall be mounted not closer than 6″ to the deck or sides of the house and shall be well and securely fastened. Smoke pipe for such stoves where passed through top of the house shall be kept

clear from any woodwork a distance of not less than 3″ all around and protected by a layer of asbestos, an air space of at least 1″, a metal collar constructed of not less than No. 16 gauge sheet metal and so formed as to be secured only on the weather side at the top of house. No openings shall be permitted from any living quarters into the stowage compartments of the magazine vessel.

146.20–30 Lamp box on magazine vessels.—A metal lamp box constructed of sheet metal of not less than No. 16 U.S.S. gauge shall be provided and secured in place in an isolated location on the deck. All permitted portable oil lights and the oil supply for same shall, when not in use, be stowed therein.

146.20–31 Storage of other dangerous articles.—Magazine vessels having explosives stowed therein shall not be used for the stowage of other dangerous articles of cargo.

146.20–32 Magazine vessels' stores.—Articles for use as stores on board magazine vessels shall conform to the conditions as set forth in Part 147.

146.20–33 Matches.—Safety matches requiring a prepared surface for ignition shall be the only type matches permitted on board a magazine vessel. They shall be kept in a metal box or can with a metal cover and stowed in the custodian's living quarters.

146.20–34 Firearms.—No firearms or ammunition for same (except as cargo) shall be permitted on board magazine vessels.

146.20–35 Fire extinguishing equipment.—No explosive shall be received or stored on or dispensed from any magazine vessel, unless four (4) 2½ gallon extinguishers of the soda-acid type and four (4) 2 gallon pails filled with dry sand shall be distributed in stragetic locations about the vessel. In locations where extinguishers are continuously exposed to a temperture lower than 40° F. such extinguishers shall be of the antifreeze type.

146.20–36 Supervision of magazine vessels.—Magazine vessels in which explosives are stored shall at all times be in charge of a custodian employed for that purpose by the owner or owners of the magazine vessel.

146.20–37 Unauthorized persons on magazine vessels.—Custodian of a magazine vessel shall not permit unauthorized persons to come on board a magazine vessel except in an emergency tending to preservation of life.

146.20–38 Repacking of explosives on board magazine vessels.—No explosives shall be repacked on board a magazine vessel. Broken or damaged packages shall be placed in an open box and conveyed to a safe location for repacking or other disposition.

146.20–39 Work boat.—For purposes of safety, a work boat shall be part of the equipment of each magazine vessel.

146.20–40 Life preservers. One approved type life preserver shall be provided for each person employed upon a magazine vessel.

146.20–41 Fenders. Magazine vessels shall be fitted with fenders in such number and size as will prevent any vessel tying up alongside from actually coming in contact hull to hull.

146.20–42 Authorization to load or discharge explosives.—Shipments of Class A explosives in amounts exceeding five hundred (500) pounds shall not be laden on or discharged from any vessel at any point or place in the United States, its territories or possessions (not including the Panama Canal Zone) until authorization for such loading or discharging has been obtained by the owner, agent, charterer, master, or person in charge of the vessel from the District Commander or other officer of the Coast Guard designated by the Secretary of the Treasury for such purposes.

146.20–50 Stowage and storage chart of Explosives and Other Dangerous Articles.—The following table shows the explosives and other dangerous articles which shall not be loaded or stowed together. The letter X at an intersection of horizontal and vertical columns shows that these packages must not be loaded or stowed together, for example: blasting caps (4) horizontal column must not be loaded or stowed with high explosive (2) vertical column. The provisions of this chart are not applicable to barges. Stowage on board barges shall be in accordance with the provisions of §§ 146.10–1 to 146.10–50 inclusive.

146.20–50 Stowage and storage chart of explosives and other dangerous articles

		1 Low explosives or black powder	2 High explosives and over 50 pounds smokeless powder for small arms	3 Initiating or priming explosives, wet—Diazodinitrophenol, fulminate of mercury, guanyl nitrosamino guanylidene hydrazine, lead azide, lead styphnate, nitro mannite, nitrosoguanidine, pentaerythrite tetranitrate, tetrazene.	4 Blasting caps, with or without safety fuse (including electric blasting caps)[1]	5 Ammunition for cannon with explosive projectiles, gas projectiles, smoke projectiles, or incendiary projectiles, ammunition for small arms with explosive bullets.[4]	6 Explosive projectiles, bombs, torpedoes or mines, rifle or hand grenades (explosive)[4]	7 Detonating fuzes, boosters (explosive)	8 Ammunition for cannon with empty sand loaded or solid projectiles, or without projectiles	9 Smokeless powder for cannon or not exceeding 50 pounds smokeless powder for small arms	10 Fireworks	11 Small arms ammunition	12 Primers for cannon or small arms, empty cartridge bags—Black powder igniters, empty cartridge cases, primed, empty grenades, primed, combination primers or percussion caps, toy caps	13 Percussion fuzes or tracer fuzes	14 Time or combination fuzes	15 Cordeau detonant, safety squibs, fuse lighters, fuze igniters, delay electric igniters, electric squibs or instantaneous fuze	16 Inflammable liquids or compressed inflammable gases, red label	17 Inflammable solids or oxidizing materials, yellow label	18 Acids or corrosive liquids, white label	19 Compressed noninflammable gases, green label	20 Poisonous gases or liquids, in cylinders, poison gas label	21 Combustible liquids	22 Hazardous articles
	Dangerous explosives:																						
1	Low explosives or black powder			X							X						X	X	X	X	X	X	X
2	High explosives and over 50 pounds smokeless powder for small arms			X	X			X			X						X	X	X	X	X	X	X
3	Initiating or priming explosives, wet. Diazodinitrophenol fulminate of mercury, guanyl nitrosamino guanylidene hydrazine, lead azide, lead styphnate nitro mannite nitrosoguanidine, pentaerythrite tetranitrate, tetrazene	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	Blasting caps with or without safety fuse (including electric blasting caps)[1]		X	X		X	X				X						X	X	X	X	X	X	X
5	Ammunition for cannon with explosive projectiles, gas projectiles, smoke projectiles or incendiary projectiles, ammunition for small arms with explosive bullets[4]			X	X			X			X						X	X	X	X	X	X	X
6	Explosive projectiles, bombs, torpedoes, or mines, rifle or hand grenades (explosive)[4]			X	X			X			X						X	X	X	X	X	X	X
7	Detonating fuzes, boosters (explosive)		X	X		X	X				X						X	X	X	X	X	X	X
	Less dangerous explosives:																						
8	Ammunition for cannon with empty sand loaded or solid projectiles, or without projectiles			X															[2]X				
9	Smokeless powder for cannon or not exceeding 50 pounds smokeless powder for small arms			X															[2]X		X	X	X
10	Fireworks	X	X	X	X	X	X	X													X		
	Relatively safe explosives:																						
11	Small arms ammunition			X																			
12	Primers for cannon or small arms, empty cartridge bags, black powder igniters, empty cartridge cases, primed, empty grenades, primed, combination primers or percussion caps, toy caps			X																			
13	Percussion fuzes or tracer fuzes			X																			
14	Time or combination fuzes			X																			
15	Cordeau detonant, safety squibs, fuse lighters, fuse igniters, delay electric igniters, electric squibs or instantaneous fuse			X																			
	Other dangerous articles:																						
16	Inflammable liquids or compressed inflammable gases, red label	X	X	X	X	X	X	X		X	X												
17	Inflammable solids or oxidizing materials, yellow label	X	X	X	X	X	X	X		X	X								[2]X				
18	Acids or corrosive liquids, white label	X	X	X	X	X	X	X	[3]X	[3]X	X							[2]X			[3]X		
19	Compressed noninflammable gases, green label	X	X	X	X	X	X	X		X	X												
20	Poisonous gases or liquids in cylinders, poison gas label	X	X	X	X	X	X	X		X	X								[2]X				
21	Combustible liquids	X	X	X	X	X	X	X		X													
22	Hazardous articles	X	X	X	X	X	X	X		X													

[1] Blasting caps or electric blasting caps in a quantity not exceeding 1,000 caps may be stowed or stored with all articles above named except those in columns (2), (3), (5), (6), (10), (16), (17), (18), (19), and (21).

[2] Corrosive liquids (white label) shall not be stowed with inflammable solids and oxidizing materials (yellow label), or with any explosives.

[3] Cyanides or cyanide mixtures shall not be stowed or stored with corrosive liquids.

[4] Projectiles, bombs, grenades, or other forms of ammunition containing incendiary charges, either with or without bursting charges, must not be stowed with any dangerous explosives, Class A, or less dangerous explosives, Class B.

NOTE: Charged electric storage batteries shall not be stowed or stored with explosives Class A or Class B.

Consult detailed regulations of other dangerous articles for provisions regarding "on deck stowage" of such articles on board vessels transporting explosives.

(5th Amend.—Item 4; Note 1 altered—July 1941)
(10th Amend.—Items 5 and 6 footnote reference and footnote added—Feb. 1942)
(11th Amend.—Items 2 and 9 revised—Apr. 1943)

146.20-100 Table A.—Classification—Class A: Dangerous explosives

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ammunition for cannon with explosive projectiles. Ammunition for cannon with explosive gas projectiles. Ammunition for cannon with explosive smoke projectiles. Ammunition for cannon with explosive incendiary projectiles.	Ammunition for cannon is all fixed or separate loading ammunition of 37 mm. (1½ in.) caliber and larger which is fired from a cannon, gun, or mortar, as distinguished from ammunition fired from a device such as a pistol, revolver, rifle, shotgun or similar firearm. Fixed ammunition assembled in a unit consisting of the cartridge case containing the propelling charge and primer, and the projectile, or shell, fuzed or unfuzed. I. C. C. packing regulations require that detonating fuzes, tracer fuzes, explosive or ignition devices, or fuze parts with explosives contained therein, must not be assembled in ammunition or included in the same outside package unless shipped by, for, or to the War or Navy Department of the United States Government or unless of a type approved by the Bureau of Explosives. Each outside package will be plainly marked with the appropriate descriptive name of the contents as: "Ammunition for cannon with explosive projectiles," "Ammunition for cannon with gas projectiles," "Ammunition for cannon with smoke projectiles," or "Ammunition for cannon with incendiary projectiles."	No label required except "Ammunition for cannon with explosive gas projectiles" loaded with a poisonous gas or liquid, class A, and an explosive charge must bear the white "Poison gas" label.	Stowage: Magazine. Outside containers: Strong wooden or metal containers.	Not permitted.	Not permitted.	Not permitted.
Ammunition for cannon, nonexplosive.	Material relating to ammunition for cannon, but containing no explosive, or other dangerous article, such as cartridge cases, "dummy" or "drill" cartridges, etc., sand-loaded projectiles, sand-loaded bombs, empty projectiles, empty mines, empty bombs, solid projectiles, or empty torpedoes.	----------	Not subject to these regulations.			

Ammunition—Projectiles, grenades, bombs, mines and torpedoes:						
Explosive projectiles	Shell or projectiles loaded with explosives or bursting charges for use in cannon, guns or mortars.	No label required.	Stowage: Magazine or in a compartment entirely allotted for stowage of these articles, which compartment may be located— "On deck under cover," "Tween decks" or "Under deck." Outside containers: Strong wooden or metal boxes. Gross weight of a box containing more than one projectile, grenade, bomb or mine must not exceed 250 lbs. Explosive projectiles, explosive torpedoes, explosive mines or explosive bombs, exceeding 90 lbs. in weight may be accepted without being boxed only when shipped by, for, or to the War or Navy Department of the United States Government.	Not permitted	Not permitted	Not permitted.
Explosive hand grenades. Explosive rifle grenades.	Small metal or other containers designed to be thrown by hand or projected from a rifle. They are filled with an explosive or a liquid, gas or solid marerial, such as a toxic or tear gas or an incendiary or smoke producing material and a bursting charge.					
Explosive bombs	Metal or other containers filled with explosives.					
Explosive mines	Metal containers filled with a high explosive.					
Explosive torpedoes	Metal devices containing a means of propulsion and a quantity of high explosives.					
(For shipments of these articles loaded with a class A poisonous substance but not containing an explosive or a bursting charge, see Chemical Ammunition.)	I. C. C. packing regulations require that detonating fuzes, tracer fuzes, explosive or ignition devices, bouchons, or fuze parts with explosives contained therein, must not be assembled in explosive projectiles, explosive grenades, explosive bombs, explosive mines, explosive torpedoes, or included in the same outside package with them unless shipped by, for, or to the War or Navy Department of the United States Government or unless of a type approved by the Bureau of Explosives. Each outside package or each projectile, bomb, mine or torpedo that is shipped unboxed, will be plainly marked with the appropriate descriptive name of the contents as: "Explosive projectile," "Explosive torpedo," "Explosive mine," "Explosive bomb," "Hand grenades," or "Rifle grenades."					

146.20-100 Table A.—Classification—Class A: Dangerous explosives—Continued

Descriptive name of Article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ammunition, chemical explosive: Includes such explosive projectiles as: "Gas projectiles," "Smoke projectiles," "Incendiary projectiles," such explosive hand or rifle grenades as: "Gas grenades," "Smoke grenades," "Incendiary grenades," and such explosive bombs, as: "Airplane bombs," "Gas bombs," "Smoke bombs," "Incendiary bombs"; also such miscellaneous apparatus as: "Cloud-gas cylinders," "Smoke generators," etc., that may be used to project chemicals.	Chemical ammunition used in warfare is all kinds of explosive chemical projectiles, shells, bombs, grenades, etc., loaded with toxic, tear or other gas, smoke or incendiary agents, also such miscellaneous apparatus as cloud-gas cylinders, smoke generators, etc., that may be utilized to project chemicals.	----------	When these articles are shipped assembled with their ignition elements, bursting charges, detonating fuzes, or explosive components they must be shipped in conformity with the regulations prescribed for "Explosive projectiles," "Explosive hand grenades," "Explosive rifle grenades," "Explosive bombs," "Explosive mines," or "Explosive torpedoes." For shipment of these articles not containing ignition elements, bursting charges, detonating fuzes, or other explosive components, see "*Chemical ammunition.*"			
Ammunition for small arms with explosive bullets.	Fixed ammunition to be used in machine guns or similar firearms and consists of a metallic cartridge case, the primer and the propelling charge, with explosive bullet with or without detonating fuze, the component parts necessary for one firing being all in one assembly. 1. C. C. packing regulationsr equire that detonating fuzes, tracer fuzes, explosive or ignition devices or fuze parts with explosives contained therein must not be assembled in ammunition or included in the same outside package unless shipped by, for, or to the War or Navy Department of the United States Government or unless of a type approved by the Bureau of Explosives. Each outside package will be plainly marked: "Ammunition for small arms with explosive bullets."	No label required	Stowage: Magazine..... Outside containers: Strong wooden or metal containers. The gross weight of the outside package must not exceed 150 lbs.	Not permitted.....	Not permitted.....	Not permitted.

Black powder..... Low explosives. May include: *Black Rifle Powder.* *Rifle Powder.* *Sporting Powder.* *Cannon Powder.* *Blasting Powder.* *Flash Powder Sheets in Bulk.* *Flash Powder in inner units exceeding 2 ounces each.* *Flash Powder Cartridges exceeding 72 grains each.* *Spreader cartridges exceeding 72 grains each.*	Black powder and low explosives are general names used to describe all explosives similar in composition or characteristics to ordinary black powder and which cannot be detonated by a commercial blasting cap. Examples are rifle, sporting, cannon, and blasting powders. Flash powder sheets in bulk, flash powders packed in inner units exceeding 2 ounces each, and flash-powder or spreader cartridges exceeding 72 grains each are classed as low explosives. Observe "This side up" stowage of boxes bearing such legend. Each outside package will be plainly marked with the appropriate descriptive name of the contents as "Black powder," or "Low explosives," and may also show "Blasting," "Rifle," etc. as "Black blasting powder," "Black rifle powder," "Low blasting explosive" or "Black pellet powder." Boxes with inside containers packed filling holes up must be marked "This Side Up."	No label required.	Stowage: Magazines..... Outside containers: Wooden barrels or kegs (ICC-10B) not over 200 lbs. gr. wt. Metal kegs (ICC-13) not over 150 lbs., net wt. Bundles of metal kegs wrapped in burlap, canvas or similar material, securely sewed and roped. Not over 100 lbs. net wt. Wooden boxes: (ICC-14) not over 140 lbs. gr. wt. (ICC-15A, 16A) WIC not over 200 lbs. gr. wt. Fiberboard boxes. (ICC-23F) not over 65 lbs. gr. wt.	Not permitted.....	Not permitted.....	Not permitted
High explosives.....	For the purpose of these regulations, high explosives (except smokeless powders, initiating or priming explosives) are all explosives more powerful than low explosives or ordinary black powder. Their distinguishing characteristic is their susceptibility to detonation by a blasting cap. Examples of high explosives are dynamite, picric acid, picrates, chlorate powders, nitrate of ammonia powders, trinitrotoluene, dry nitrocellulose (guncotton and negative cotton), dry nitrostarch, trinitroresorcinol, and fireworks that can be exploded en masse.					
High explosives (*when containing more than 75% liquid explosive ingredient* (except blasting gelatin & gelatin dynamite).	.....	.....	Not permitted.....	Not permitted.....	Not permitted.....	Not permitted.
High explosives (*when containing not more than 75% liquid explosive ingredient*). High explosives: (*Blasting gelatin*). (*Gelatin Dynamite*).	Each outside box will be plainly marked on top and on one side or end: "High explosives—dangerous." The tops of boxes will be marked "This side up." Observe "This side up" stowage.	No label required	Stowage; Magazine..... Outside containers: Wooden boxes. (ICC-14, 15A, 16A) not exceeding 75 lbs. gr. wt. Fiberboard boxes (ICC-23F) not exceeding 65 lbs. gr. wt.	Not permitted.....	Not permitted.....	Not permitted.

146.20-100 Table A.—Classification—Class A: Dangerous explosives—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
High explosives (*when containing 10% or less of a liquid explosive ingredient*).	Each outside box will be plainly marked on top and on one side or end: "High explosives—Dangerous." The tops of boxes will be marked "This side up." Observe "This side up" stowage.	No label required.	Stowage: Magazine. Outside containers: Wooden boxes (ICC-14, 15A, 16A) not exceeding 140 lbs. gr. wt. Fiberboard boxes (ICC 23F) not exceeding 65 lbs. gr. wt.	Not permitted.	Not permitted.	Not permitted.
High explosives (*containing no liquid explosive ingredient*).	Each outside box will be plainly marked on top and on one side or end: "High explosives—Dangerous."	No label required.	Stowage: Magazine. Outside containers: Wooden barrels or kegs (ICC 10B) not over 200 lbs. gr. wt.	Not permitted.	Not permitted.	Not permitted.
High explosives (*containing no liquid explosive ingredient nor any chlorate*).	do.	No label required.	Wooden boxes, WIC (ICC-14, 15A, 16A) not over 140 lbs. gr. wt. Fiberboard boxes (ICC-23F) not over 65 lbs. gr. wt.	Not permitted.	Not permitted.	Not permitted.
High explosives (*in dry condition*). *Including:* *Ammonium picrate,* *Nitroguanidine,* *Nitrourea,* *Pentolite,* *Picric acid,* *Tetryl,* *Trinitroresorcinol,* *Trinitrotoluene.* NOTE.—The above substances in securely closed glass bottles of quantity not exceeding 4 oz. in one outside package may be shipped as "Drugs, chemicals, medicines or cosmetics."	Each outside box will be plainly marked on top and on one side or end: "High explosives—Dangerous." The tops of boxes will be marked "This side up." Observe "This side up" stowage.	No label required.	Stowage: Magazine. Outside containers: Wooden barrels or kegs (ICC-10B) not over 200 lbs. gr. wt. Wooden boxes (ICC-14, 15A, 16A) not over 140 lbs. gr. wt. Fiberboard boxes (ICC-23F) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 200 lbs. gr. wt.	Not permitted.	Not permitted.	Not permitted.
High explosives (*wet with not less than 10 pounds of water to each 90 pounds of dry material.*) *Including:* *Ammonium picrate,* *Picric acid* *Trinitrobenzene,* *Trinitroresorcinol,* *Trinitrotoluene.*	do.	No label required.	Stowage: Magazine. Outside containers: Wooden barrels or kegs (ICC-10B) not over 50 gallons cap.	Not permitted.	Not permitted.	Not permitted.

High explosives (*Nitrocellulose—Guncotton and negative cotton—When shipped in dry condition*).	do	No label required.	Stowage: Magazine. Outside containers: Wooden boxes (ICC-14, 15A, 16A) not over 75 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
High explosives (*Nitrostarch when shipped in dry condition*).						
High explosives (*Fireworks that can be exploded en masse*).	do	No label required.	Stowage: Magazine. Outside containers: Wooden boxes (ICC-14, 15A, 16A) not over 140 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Initiating or priming explosives.	Initiating or priming explosives are explosive compositions used as a component of blasting caps, detonators, and primers. They are usually more sensitive to flame, impact, or friction than are high explosives.					
Blasting caps—more than 1,000. Blasting caps with safety fuse—more than 1,000. Electric blasting caps—more than 1,000.	Blasting caps contain from 5 to 150 grains of dry fulminate of mercury or other suitable substance packed in a thin copper shell and fired by a slow burning safety fuse. When a small "bridge" or fine wire is placed in a suitable priming material and arranged to fire the fulminate by means of an electric current the cap is called an "Electric blasting cap." Do not stow blasting caps with any high explosive. Do not handle blasting caps at the same time as high explosives are being loaded. Each outside box will be plainly marked with the appropriate descriptive name of the contents as: "(number) Blasting caps—Handle carefully." "(number) Electric blasting caps—Handle carefully." "(number) Blasting caps with safety fuse—Handle carefully." In addition each box will bear the marking "Do not store or load with any high explosive."	No label required.	Stowage: Magazine. Outside containers: Wooden boxes. WIC (ICC-14, 15A, 16A) not over 150 lbs. gr. wt. NOTE.—For additional containers authorized during the war emergency see section 146.28-10.	Not permitted	Not permitted	Not permitted.

146.20-100 Table A.—Classification—Class A: Dangerous explosives—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Initiating or priming explosives—Continued.						
Boosters (explosive)..... Detonating fuzes.	Boosters consist of a casing containing a high explosive and are used to increase the intensity of explosion of the detonator of a detonating fuze. Detonating fuzes are used in the military service to detonate the high explosive bursting charges of projectiles, mines, bombs, torpedoes and grenades. Do not stow boosters or detonating fuzes with any high explosive. Do not load at the same time as high explosives are being loaded. Each outside box will be plainly marked with the appropriate descriptive name of the contents as: "Detonating fuzes—Handle carefully." "Boosters (explosive)—Handle carefully." In addition each box will bear the marking "Do not store or load with any high explosive."	No label required.	Stowage: Magazine..... Outside containers: Strong tight wooden boxes, not over 190 lbs. gr. wt. for detonating fuzes. Not over 300 lbs. gr. wt. for boosters.	Not permitted.....	Not permitted.....	Not permitted.
Initiating explosives (*in bulk in dry condition*) *Fulminate of mercury. Dry.*	.....	.....	Transportation prohibited.....	Transportation prohibited.	Transportation prohibited.	Transportation prohibited.
Initiating explosives (*diazodinitrophenol wet with not less than 40% by weight of water*).	For safety in transportation these substances are packed wet with water. Therefore observe outside containers for signs of leakage. Reject leaking containers or ones showing signs of having leaked. Do not handle these substances at the same time as high explosives are being loaded. In handling and in stowage, avoid exposure to shock, friction, heat, and open flame.	No label required.	Stowage: Magazine..... Outside containers: Metal barrels or drums. WIC (ICC-5, 5B). Wooden barrels or kegs. WIC (ICC-10B).	Not permitted.....	Not permitted.....	Not permitted.

Initiating explosives (*fulminate of mercury wet with not less than 25% by weight of water*).	Each outside barrel or drum or keg will be plainly marked: "Initiating explosive—Dangerous—Do not store or load with any high explosive."	No label required.	Stowage: Magazine. Outside containers: Metal barrels or drums (ICC-5, 5B) not over 150 lbs. dry wt. (ICC-17E) STC, not over 150 lbs. dry wt. Wooden barrels or kegs. WIC (ICC-10B) not over 150 lbs. dry wt.	Not permitted.	Not permitted.	Not permitted.
Initiating explosives (*Guanyl Nitrosamino Guanylidene Hydrazine wet with not less than 30% by weight of water.*)	do.	No label required.	Stowage: Magazine. Outside containers: Metal barrels or drums: (ICC-5, 5B) not over 75 lbs. dry wt. (ICC-17E) STC, not over 75 lbs. dry wt. Wooden barrels or kegs, WIC (ICC-10B) not over 75 lbs. dry wt.	Not permitted.	Not permitted.	Not permitted.
Initiating explosives (*lead azide wet with not less than 20% by weight of water*).	do.	No label required.	Stowage: Magazine. Outside containers: Steel barrels or drumx, WIC (ICC-5, 5B) (ICC-17E) STC. Wooden barrels or kegs, WIC (ICC-10B).	Not permitted.	Not permitted.	Not permitted.
Initiating explosives (*lead styphnate—lead trinitroresorcinate — wet with not less than 20% by weight of water*).	do.	No label required.	Stowage: Magazine. Outside containers: Steel barrels or drums, WIC (ICC-5,5B)(ICC-17E)STC. Not over 150 lbs. dry wt. Wooden barrels or kegs, WIC (ICC-10B) not over 150 lbs. dry wt.	Not permitted.	Not permitted.	Not permitted.
Initiating explosives (*nitro mannite wet with not less than 40% by weight of water*).	do.	No label required.	Stowage: Magazine. Outside containers: Steel barrels or drums, WIC (ICC-5, 5B). Wooden barrels or kegs, WIC (ICC-10B).	Not permitted.	Not permitted.	Not permitted.
Initiating explosives (*nitrosoguanidine wet with not less than 10% by weight of water*).	do.	No label required.	Stowage: Magazine. Outside containers: Steel barrels or drums, WIC (ICC-5, 5B) (ICC-17E) STC, not over 75 lbs. dry wt. Wooden barrels or kegs (ICC-10B) not over 75 lbs. dry wt.	Not permitted.	Not permitted.	Not permitted.
Initiating explosives (*pentaerythrite tetranitrate wet with not less than 40% by weight of water*).	do.	No label required	Stowage: Magazine. Outside containers: Steel barrels or drums, WIC (ICC-5, 5B). Wooden barrels or kegs, WIC (ICC-10B).	Not permitted.	Not permitted.	Not permitted.

146.20–100 Table A.—Classification—Class A: Dangerous explosives—Continued

Descriptive name of Article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Initiating or priming explosives—Continued.						
Initiating explosives (*tetrazene guanyl nitrosamino guanyl tetrazene—wet with not less than 30% by weight of water*).	Each outside barrel or drum or keg will be plainly marked. "Initiating explosives—Dangerous—Do not store or load with any high explosive."	No label required.	Stowage: Magazine. Outside containers: Steel barrels or drums, WIC (ICC-5, 5B). (ICC-17E) STC, not over 75 lbs. dry wt. Wooden barrels or kegs, WIC (ICC-10B), not over 75 lbs. dry wt.	Not permitted.	Not permitted.	Not permitted.
Nitroglycerin, liquid.	A heavy, oily, liquid of yellowish color resembling glycerin in appearance, is obtained by nitration of glycerin with a mixture of nitric and sulfuric acid.		Transportation not permitted except by specific authorization of the Commandant of the Coast Guard.	Transportation prohibited.	Transportation prohibited.	Transportation prohibited.
Unstable explosives: *Explosive compositions that ignite spontaneously.* *Explosive compositions that undergo marked decomposition when subjected for 48 consecutive hours to a temperature of 167° F.* *Explosive compositions containing an ammonium salt and a chlorate.*			Transportation prohibited.	Transportation prohibited.	Transportation prohibited.	Transportation prohibited.

146.20–100 Table B.—Class B: Less dangerous explosives

Descriptive name of Article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ammunition for cannon with nonexplosive projectile. Ammunition for cannon with empty projectile. Ammunition for cannon with sand-loaded projectile. Ammunition for cannon with solid projectile. Ammunition for cannon without projectile.	Ammunition for cannon with empty projectile, sand-loaded projectile, solid projectile, or without projectile, or shell, is fixed ammunition of 37 mm. (1½ in.) caliber and larger assembled in a unit consisting of the cartridge case containing the propelling charge and primer and with empty, sand-loaded, or solid projectile or without projectile. Each outside box will be plainly marked with the appropriate descriptive name of the contents as: "Ammunition for cannon with empty projectile". "Ammunition for cannon with sand-loaded projectile". "Ammunition for cannon with solid projectile". "Ammunition for cannon without projectile".	No label required.	Stowage: "On deck under cover". "Tween decks". "Under deck". Outside containers: Strong wooden or metal containers.	Not permitted	Not permitted	Not permitted.

146.20–100 Table B.—Class B: Less dangerous explosives—Continued

Descriptive name of Article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Fireworks, forbidden. The following fireworks or compositions shall not be offered for transportation:						
Firecrackers, flash crackers or salutes, exceeding 12 grains of explosive content.	Fireworks or fireworks compositions described here are, for the purposes of safety in transportation, forbidden to be offered or transported because of instability or risk of premature ignition or detonation.	.....	Transportation not permitted.	Transportation not permitted.	Transportation not permitted.	Transportation not permitted.
Fireworks combining an explosive with detonator or blasting cap.						
Fireworks containing an ammonium salt and a chlorate.						
Fireworks containing yellow or white phosphorus.						
Fireworks or composition that ignite spontaneously or decompose at a temperature less than 167° F.						
Fireworks properly condemned by the Bureau of Explosives.						
Toy torpedoes exceeding ⅛ in. diameter or containing a mixture of potassium chlorate, black antimony and sulfur exceeding 4 grains average wt. of such explosive composition.						
Toy torpedoes containing a cap composed of red phosphorus and potassium chlorate exceeding ½ grain per cap.						

Fireworks	Fireworks are all manufactures articles designed primarily for the purpose of producing visible or audible pyrotechnic effects by combustion or explosion. Examples are firecrackers, firecracker salutes, Roman candles, pinwheels, colored fires, rockets, railway fusees, railway torpedoes, distress signals, emergency signals, airplane flares, sparklers, smoke pots, smoke candles, signal cartridges, toy torpedoes, flash powder cartridges, spreader cartridges, etc. Each outside container will be plainly marked: "Fireworks—Handle carefully—Keep fire away."		NOTE.—For additional containers authorized during the war emergency see Section 146.28-10.			
Fireworks. (Except those otherwise described herein for which special packing requirements are given.)	do	Fireworks label	Stowage: "On deck under cover" "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden barrels or kegs (ICC-11B) not over 500 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 500 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt.	Stowage: In metal lockers located: "On deck under cover." "Tween decks readily accessible." Note: Stow in an accessible location where shipment may be readily observed and with fire extinguishing equipment easily available. Outside containers: Wooden barrels or kegs (ICC-11B) not over 500 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 500 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Wooden barrels or kegs. (ICC-11B) not over 500 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 500 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden barrels or kegs. (ICC-11B) not over 500 lbs. gr. wt. Wooden boxes ICC-15A, 15B, 16A, 19A) not over 500 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt.
Fireworks (*firecrackers, Chinese*).	do	Fireworks label	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden barrels or kegs (ICC-11B) not over 500 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 500 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden barrels or kegs (ICC-11B) not over 500 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 500 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Wooden barrels or kegs (ICC-11B) not over 500 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 500 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden barrels or kegs (ICC-11B) not over 500 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 500 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt.

146.20-100 Table B.—Class B: Less dangerous explosives—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Fireworks (*fire-crackers, Chinese*)—Continued.			Wooden boxes or fiberboard boxes in good condition and completely covered with strong matting not over 100 lbs. gr. wt. may also be accepted.	Wooden boxes or fiberboard boxes in good condition and completely covered with strong matting not over 100 lbs. gr. wt. may also be accepted.	Wooden boxes or fiberboard boxes in good condition and completely covered with strong matting not over 100 lbs. gr. wt. may also be accepted.	Wooden boxes or fiberboard boxes in good condition and completely covered with strong matting not over 100 lbs. gr. wt. may also be accepted.
Fireworks (*Flash or spreader cartridges not exceeding 78 grains of flash powder each*).	do	Fireworks label	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes. WIC (ICC-15A, 15B, 16A, 19A). Not over 900 cartridges to an outside box. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes. WIC (ICC-15A, 15B, 16A, 19A). Not over 900 cartridges to an outside box. Fiberboard boxes. WIC (ICC-12B). Not over 65 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Wooden boxes. WIC (ICC-15A, 15B, 16A, 19A). Not over 900 cartridges to an outside box. Fiberboard boxes. WIC (ICC-12B). Not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes. WIC (ICC-15A, 15B, 16A. 19A). Not over 900 cartridges to an outside box. Fiberboard boxes. WIC (ICC-12B). Not over 65 lbs. gr. wt.
Fireworks. (*Flash cartridges consisting of a paper cartridge shell, small arms primer and flash composition not exceeding 180 grains each, all assembled in one piece ready for firing*).	do	Fireworks label	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes. WIC (ICC-15A, 15B, 16A, 19A) not over 144 cartridges in one outside box. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 16A, 19A) not over 144 cartridges in one outside box. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt	Ferry stowage (AA). Outside containers: Wooden boxes. WIC (ICC-15A, 15B, 16A, 19A) not over 144 cartridges in one outside box. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Outside containers: Wooden boxes. WI (ICC-15A, 15B, 16A-19A) not over 144 car, tridges in one outside box. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.
Fireworks (*Flash Sheets*).	do	Fireworks label	Stowage: "On deck under cover," "Tween decks readily accessible." "Under deck away from heat."	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat."	Ferry stowage (AA).	Ferry stowage (BB).

Fireworks (*Photographic flash powder*).	do	Fireworks lable	Outside containers: Wooden boxes. WIC (ICC-15A, 15B, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt.	Outside containers: Wooden boxes, WIC ICC-15A, 15B, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt.	Outside containers: Wooden boxes. WIC (ICC-15A, 15B, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt.	Outside containers: Wooden boxes. WIC (ICC-15A, 15B, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt.
Fireworks (*Railway fusees, flares or highway signals—with spike*).	do	Fireworks label	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat."	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat."	Ferry stowage (AA)	Ferry stowage (BB).
Fireworks (*Fusees, flares, pyrotechnic, of highway signals without spikes or torches, pyrotechnic*).	do	Fireworks label	Outside containers: Wooden boxes. (ICC-15A, 15B, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Mailing tubes. (ICC-29) not over 5 lbs. gr. wt.	Outside containers: Wooden boxes. (ICC-15A, 15B, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Mailing tubes. (ICC-29) not over 5 lbs. gr. wt.	Outside containers: Wooden boxes. (ICC-15A, 15B, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Mailing tubes. (ICC-29) not over 5 lbs. gr. wt.	Outside containers: Wooden boxes. (ICC-15A, 15B, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Mailing tubes. (ICC-29) not over 5 lbs. gr. wt.
Fireworks (*Railway torpedoes—track torpedoes*).	do	Fireworks label	Stowage: "On deck under cover." "Tween decks readily accessible." Under deck away from heat." Outside containers: Wooden boxes. (ICC-15A, 15B, 16A, 19A) not over 125 lbs. net wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes. (ICC-15A, 15B, 16A, 19A) not over 125 lbs. net wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Wooden boxes. (ICC-15A, 15B, 16A, 19A) not over 125 lbs. net wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes. (ICC-15A, 15B, 16A, 19A) not over 125 lbs. net wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.
Fireworks (*toy torpedoes*).	Each outside package will be marked "Toy torpedoes," this being in addition to the regular marking of "Fireworks—Handle carefully—Keep fire away." Do not stow in same compartment with any inflammable liquid or solid, inflammable compressed gas or combustible organic material.	Fireworks label	Stowage: "On deck under cover." NOTE: Stow in an accessible location where shipment may be readily observed and with fire extinguishing equipment easily available. Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 16A, 19A), not over 65 lbs. gr. wt.	Stowage: In metal lockers located: "On deck under cover." NOTE: Stow in an accessible location where shipment may be readily observed and with fire extinguishing equipment easily available. Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 16A, 19A), not over 65 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 16A, 19A), not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 16A, 19A), not over 65 lbs. gr. wt.

146.20-100 Table B.—Class B: Less dangerous explosives—Continued

Descriptive name of Article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Smokeless powder	Smokeless powders are propellent explosives from which there is little or no smoke when fired. Included are smokeless powder for cannon and smokeless powder for small arms. Smokeless powder for cannon used in the United States at the present time consists of a nitrocellulose colloid. Smokeless powder for small arms may consist of nitrocellulose or nitrocellulose combined with nitroglycerin. So-called smokeless powders which are composed of picrate or chlorate mixtures are classed as high explosives.					
Smokeless powder for cannon.	For smokeless powder shipped wet with water observe containers carefully for signs of leakage. Reject containers that are leaking or that show signs of having leaked. Each outside package will be plainly marked with the appropriate descriptive name of the contents as: "Smokeless powder for cannon." "Smokeless powder for cannon in water." "Smokeless powder for small arms." "Smokeless powder for small arms in water."	No label required.	Stowage: Magazine or—"On deck under cover." "'Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden barrels or kegs (ICC-10B) not over 200 lbs. gr. wt. Metal kegs (ICC-13) not over 150 lbs. gr. wt. Tight wooden boxes W1C; tight metal cases (non-specification) not over 200 lbs. gr. wt. Wooden boxes (ICC-15A) Lined (ICC-2L).	Not permitted	Not permitted	Not permitted.

Smokeless powder for cannon in water. Smokeless powder for small arms in water.	do	No label required.	Stowage: Magazine or— "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums (ICC-5, 5A, 5B, 6A, 6B, 6C) not over 55 gal. cap. Wooden barrels or kegs (ICC-10A, 10B) not over 50 gal. cap. Wooden boxes. Metal lined (ICC-15A) not over 200 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Deteriorated smokeless powder for cannon. (Shall be packed submerged in water.) Deteriorated smokeless powder for small arms. (Shall be packed submerged in water.)	do	No label required.	Stowage: "Magazine" or— "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums (ICC-5, 5A, 5B, 6A, 6B, 6C, not over 55 gal. cap.) Wooden barrels or kegs (ICC-10A, 10B) not over 50 gal. cap. Wooden boxes. Metal lined (ICC-15A) not over 200 lbs. gr. wt. Tank cars (ICC-103.)	Not permitted	Not permitted	Not permitted.
Smokeless powder for small arms.	do	No label required.	Stowage: "Magazine" or— "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden barrels or kegs (ICC-10B) not over 200 lbs. gr. wt. Metal kegs (ICC-13) not over 150 lbs. gr. wt. Bundles of metal kegs wrapped in burlap, canvas or similar material, securely sewed and roped, not over 100 lbs. net wt. Wooden boxes Metal lined (ICC-14, 15A). Not over 200 lbs. gr. wt. (ICC-14, 15A, 15B, 15C, 16A, 19A) with inside containers, not over 200 lbs. gr. wt. Fiberboard boxes, WIC (ICC-23F) not over 50 lbs. net wt.	Not permitted except that upon application made to the Commandant of the Coast Guard, smokeless powder for small arms may be permitted to be transported on board passenger vessels upon a finding by the Commandant that there is apparently no other practicable mode of transportation available.	Not permitted	Not permitted.

146.20–100 Table C.—Class C: Relatively safe explosives

Descriptive name of Article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ammunition for small arms.	Small-arms ammunition includes all fixed ammunition, Class C, such as is used in pistols, revolvers, rifles, shotguns, and similar firearms, or in machine guns with nonexplosive bullets, and consists usually of a paper or metallic cartridge case, the primer, and the propelling powder charge, with or without shot, bullet (except explosive bullet), tear gas material, or pyrotechnic, the component parts necessary for one firing being all in one assembly. Do not stow small-arms ammunition in any compartment in which are stowed inflammab e liquids, inflammable solids or oxidizing materials or inflammable compressed gases. Each outside package will be plainly marked: "Small-arms ammunition." In addition to the above, packages containing cartridges with tear gas material will be marked "Tear gas cartridges" and and will be labeled with "Tear Gas" label.	No label required.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes WIC. Fiberboard boxes WIC. Metal containers.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." "Cargo hatch trunkway." Outside containers: Wooden boxes WIC. Fiberboard boxes WIC. Metal containers.	Ferry stowage (AA) Outside containers: Wooden boxes WIC. Fiberboard boxes WIC. Metal containers.	Ferry stowage (BB). Outside containers: Wooden boxes WIC. Fiberboard boxes WIC. Metal containers.
			Packed with nonexplosive or noninflammable articles, or with small arms primers or percussion caps in quantity not to exceed 5 pounds, the following weight limitations apply:			
			Wooden boxes, not over 75 lbs. net wt. Fiberboard boxes, not over 65 lbs. gr. wt. Metal containers, not over 75 lbs. net wt.	Wooden boxes, not over 75 lbs. net wt. Fiberboard boxes, not over 65 lbs. gr. wt. Metal containers, not over 75 lbs. net wt.	Wooden boxes, not over 75 lbs. net wt. Fiberboard boxes, not over 65 lbs. gr. wt. Metal containers, not over 75 lbs. net wt.	Wooden boxes, not over 75 lbs. net wt. Fiberboard boxes, not over 65 lbs. gr. wt. Metal containers, not over 75 lbs. net wt.

Blasting caps—1,000 or less. Blasting caps with safety fuse—1,000 or less caps. Electric blasting caps—1,000 or less.	Blasting caps contain from 5 to 150 grains of dry fulminate of mercury or other suitable substance packed in a thin copper shell and fired by a slow burning safety fuse. When a small "bridge" of fine wire is placed in a suitable priming material and arranged to fire the fulminate by means of an electric current the cap is called an "Electric blasting cap." Do not stow blasting caps with any high explosive. Do not handle blasting caps at the same time as high explosives are being loaded. Each outside box will be plainly marked with the appropriate descriptive name of the contents as: "(number) Blasting caps—Handle carefully." "(number) Electric blasting caps—Handle carefully. "(number) Blasting caps with safety fuse—Handle carefully." In addition each box will bear the marking "Do not store or load with any high explosive."	No label required	Stowage: Portable magazines or metal lockers. Note: Blasting caps in any quantity shall not be stowed in the same magazine with any other explosive or in any locker in which fireworks are stowed. They may be stowed in portable magazines of metal lockers provided such are located in cargo carrying compartments away from all sources of heat and in which no inflammable liquids, inflammable solids or oxidizing materials, corrosive liquids or inflammable compressed gases are stowed. Outside containers: Wooden boxes (ICC-14, 15A, 16A) not over 150 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Cordeau detonant	Cordeau detonant is a drawn-lead tube fuse containing trinitrotoluene or a core of pentaerythrite tetranitrate overspun with yarns, tapes and waterproofing compounds. Each outside container will be plainly marked: "Cordeau detonant—Handle carefully."	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." NOTE: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Strong wooden boxes or barrels, not over 150 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." NOTE: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Strong wooden boxes or barrels, not over 150 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Strong wooden boxes or barrels, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Strong wooden boxes or barrels, not over 150 lbs. gr. wt.

146.20–100 Table C.—Class C: Relatively safe explosives—Continued

Descriptive name of Article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Fuzes: Percussion fuzes. Combination fuzes. Time fuzes. Tracer fuzes.	Percussion fuzes combination fuzes and time fuzes are the devices used to ignite powder charges of ammunition or the black powder bursting charges of projectiles. Tracer fuzes are devices which are attached to projectiles to show the flight of the projectile at night. Each outside box will be plainly marked with the appropriate descriptive name of the contents as: "Percussion fuzes—Handle carefully." "Combination fuzes—Handle carefully." "Time fuzes—Handle carefully." "Tracer fuzes—Handle carefully."	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compresss Outside containers: Strong wooden boxes, not over 150 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Strong wooden boxes, not over 150 lbs. gr. wt.	Ferry stowage (AA)..... Outside containers: Strong wooden boxes, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Strong wooden boxes, not over 150 lbs. gr. wt.
Igniters: Cartridge bags, empty, with black powder igniters.	Cartridge bags empty with black powder igniters consist of empty bags having attached thereto an igniter composed of black powder.	No label required	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat."	Stowage: "On deck under cover." "Tween decks readily accessible."	Ferry stowage (AA).....	Ferry stowage (BB).
Delay electric igniters.	Delay electric igniters consist of small metal tubes containing a wire bridge in contact with a small quantity of ignition compound.		Outside containers: Strong wooden barrels, strong wooden boxes, not over 150 lbs. gr. wt.	Outside containers: Strong wooden barrels, strong wooden boxes, not over 150 lbs. gr. wt.	Outside containers: Strong wooden barrels, strong wooden boxes, not over 150 lbs. gr. wt.	Outside containers: Strong wooden barrels, strong wooden boxes, not over 150 lbs. gr. wt.
Electric squibs ...	Electric squibs consist of small tubes or blocks containing a small quantity of ignition compound in contact with a wire bridge.		Strong fiberboard boxes, not over 65 lbs. gr. wt. Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, cor-	Strong fiberboard boxes, not over 65 lbs. gr. wt. Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing ma-	Strong fiberboard boxes, not over 65 lbs. gr. wt.	Strong fiberboard boxes, not over 65 lbs. gr. wt.

Fuse lighters and fuse igniters.	Fuse lighters and fuse igniters are small, cylindrical pasteboard or metal tubes containing an igniting composition in one end, the other end being open to permit insertion of safety fuse.		rosive liquids or inflammable compressed gases.	terials, corrosive liquids or inflammable compressed gases.		
Safety squibs	Safety squibs are small paper tubes containing a small quantity of black powder. One end of each tube is usually twisted and tipped with sulfur. Each outside box will be plainly marked with the appropriate descriptive name of the contents as: "Cartridge bags, empty, with black powder igniters." "Delay electric igniters." "Electric squibs." "Fuse lighters and fuse igniters." "Safety squibs."					
Instantaneous fuse.	Instantaneous fuse is cotton yarn impregnated with meal powder. Each outside box will be marked: "Instantaneous fuse."	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Strong wooden barrels, strong wooden boxes, not over 150 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids, or inflammable compressed gases. Outside containers: Strong wooden barrels, strong wooden boxes, not over 150 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Strong wooden barrels, strong wooden boxes, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Strong wooden barrels, strong wooden boxes, not over 150 lbs. gr. wt.

146.20-100 Table C.—Class C: Relatively safe explosives—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Primers	Primers are devices used to ignite the powder charges of ammunition or the black powder bursting charge of projectiles. For small arms ammunition the primers are "small arms primers" or "percussion caps." Each outside box will be plainly marked with the appropriate descriptive name of the contents as: "Cannon primers," "Combination primers," "Empty cartridge cases, primed," "Grenades, empty, primed," "Percussion caps," "Small arms primers."	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids, and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Strong tight wooden boxes, not over 150 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Strong tight wooden boxes, not over 150 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Strong tight wooden boxes, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Strong tight wooden boxes, not over 150 lbs. gr. wt.
Empty cartridge cases, primed			Empty cartridge cases, primed, may also be shipped in strong, tight, outside fiber-board boxes.	Empty cartridge cases, primed, may also be shipped in strong, tight, outside fiber-board boxes.	Empty cartridge cases, primed, may also be shipped in strong, tight, outside fiber-board boxes.	Empty cartridge cases, primed, may also be shipped in strong, tight, outside fiber-board boxes.
			NOTE.—For additional containers authorized during the war emergency see Section 146.28-12.			
Safety fuse	Safety fuse consists of a core of black powder overspun with yarns, tapes, and/or waterproofing compounds.	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Strong wooden barrels, strong metal containers, strong wooden boxes, not over 150 lbs. net wt. Strong fiberboard boxes, not over 65 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Strong wooden barrels, strong metal containers, strong wooden boxes, not over 150 lbs. net wt. Strong fiberboard boxes, not over 65 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Strong wooden barrels, strong metal containers, strong wooden boxes, not over 150 lbs. net wt. Strong fiberboard boxes, not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Strong wooden barrels, strong metal containers, strong wooden boxes, not over 150 lbs. net wt. Strong fiberboard boxes, not over 65 lbs. gr. wt.

(11th Amend.—Empty Cart. cases, primed added, container added, note added—Apr. 1, 1943)

Top caps	Toy paper caps consist of paper cap ammunition for toy pistols, in sheets, strips, rolls, or individual caps. Observe caution in accepting shipments of toy paper caps. Shipper should be required to assure carrier the paper caps are packed in compliance with Interstate Commerce Commission regulations. Each outside package will be plainly marked: "Toy caps—Handle carefully."	No label required	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Note: Shall not be stowed in the same compartment with inflammable liquids, inflammable solids and oxidizing materials, corrosive liquids or inflammable compressed gases. Outside containers: Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes (ICC-12B). Not over 65 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes (ICC-12B). Not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes (ICC-15A, 15B, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes (ICC-12B). Not over 65 lbs. gr. wt.

DETAILED REGULATIONS GOVERNING INFLAMMABLE LIQUIDS

146.21–1 Definition of inflammable liquid.—An inflammable liquid is defined by the ICC regulations as set forth in § 146.21–2 herein, and such definition is binding upon all shippers making shipments of inflammable liquids by common carrier vessels engaged in interstate or foreign commerce by water. This definition is accepted and adopted and forms part of the regulations in this subchapter applying to all shippers making shipments of inflammable liquids on any vessel and shall apply to the owners, charterers, agents, master, or other person in charge of a vessel and to other persons transporting, carrying, conveying, storing, stowing or using inflammable liquids, on board any vessel subject to R.S. 4472, as amended, and the provisions of the regulations in this subchapter.

146.21–2 Inflammable liquid defined.—An inflammable liquid is any liquid which gives off inflammable vapors (as determined by flashpoint from Tagliabue's open-cup tester, as used for test of burning oils) at or below a temperature of 80° F.

146.21–3 Export shipments of inflammable liquids.—Certain inflammable liquids are permitted by these regulations to be exported under shipping names differing from shipping names as required in domestic transportation. Such substances together with these "synonym" shipping names are indicated in the tables in § 146.21–100 and the "synonym" shipping names that are permitted are shown thereon. Substances shipped under these "synonym" shipping names may be accepted on board vessels that are permitted to transport such substances in export; provided the shipment otherwise conforms to the provisions of the regulations in this part. Stowage on board vessels shall be in accordance with the stowages indicated in the tables for the particular character of vessel involved.

146.21–4 Stowage on board vessels.—All inflammable liquids permitted for transportation on board vessels shall, when taken on board a vessel, be stowed in accordance with the provisions applying to the particular character of vessel as shown in the tables, § 146.21–100, and with the detailed regulations of stowage shown herein.

146.21–5 "On deck" stowage.—(a) Inflammable liquids, stowage of which is permitted "On deck" by the provisions of the tables § 146.21–100 shall be properly secured, when so stowed, in a manner satisfactory to the master or other person in charge of the vessel consistent with the following conditions:

(1) Such inflammable liquid shall be so stowed as to provide safe access to the crew's quarters and to all parts of the deck required to be used in the navigation and necessary working of the vessel.

(2) Such inflammable liquids shall not be stowed within a distance in a horizontal plane of 25 feet of an operating or embarkation point of a lifeboat when such point is at the same deck level as that upon which an inflammable liquid cargo is stowed, except on a vessel which by reason of its breadth, it is impossible to provide such horizontal distance; deck stowage is permitted when the cargo is confined to only one side of the center line of the vessel.

(3) Fire plugs, sounding pipes and access to same shall be maintained free and clear of inflammable liquid cargo stowed "on deck."

(b) On passenger-carrying vessels, when limited stowage of inflammable liquid is permitted "On deck", such liquids shall be stowed well away from any deck or spaces provided for use of passengers.

(c) At least one section of fire hose shall be connected with an adequate water supply and shall be in readiness for use adjacent to inflammable liquids when stowed "On deck". No cargo shall be stowed "On deck" unless two portable fire extinguishers of at least 2½ gallon foam type each or equivalent shall be located in a position easily accessible to such cargo.

146.21–6 "Under deck" stowage.—(a) Stowage of inflammable liquids "Under deck" shall be either in ventilated holds or in holds that are gastight.

(b) Inflammable liquids that are permitted by these regulations to be stowed in a cargo hold or a compartment on board a passenger vessel shall not be so stowed unless the compartment or hold authorized for such stowage is fitted with either an overhead water sprinkler system, inert gas or steam smothering system.

(c) Inflammable liquids permitted on passenger vessels may be stowed in a hold or compartment the overdeck of which forms a boundary of a passenger space, provided such overdeck is of an AI type of construction or in lieu thereof is fitted on its underside in way of the passenger area with three inches of incombustible insulation.

(d) Compartments or holds in which inflammable liquid cargo is to be stowed and which are fitted with electrical circuits having outlets within the compartment or hold shall have such circuits disconnected from all sources of power supply unless the fixtures within the hold are of a vapor proof type, and such circuits shall not be again connected for power until the compartment or hold has been freed of any accumulation of inflammable vapors.

(e) After the stowage of inflammable liquid cargo has commenced in a compartment or hold that is not fitted with vapor proof type of electrical outlets no portable means of artificial lighting shall be used within such a compartment or hold unless such portable equipment is of the vapor proof type. Electrical connections for permitted portable lighting shall be made to outlets located outside of the compartment or hold and above the weather deck. Hand flashlights shall be of the non-sparking type.

146.21–7 Prohibited storage.—(a) Inflammable liquids in any quantity shall not be stowed in a magazine in which is stowed any explosive, nor in a compartment or hold in which a magazine containing explosives is located.

(b) Inflammable liquids in a quantity in excess of 1 ton shall not be stowed "On deck" in vessels carrying Class "A" Dangerous Explosives or Class "B" Less Dangerous Explosives, unless the engine and boiler room spaces intervene between holds containing explosives and the space over which these liquids are stowed.

(c) Inflammable liquids in quantities in excess of 1 ton shall not be stowed in the same compartment, or in a compartment adjacent, or over, or under one in which inflammable compressed gases (except liquefied petroleum gases), as shown in the tables appearing in the compressed gas section (§ 146.24–100) are stowed. Small cargo vessels, having only

two holds adjacent to each other, may stow inflammable liquids and compressed gases in adjacent holds provided such are separated from each other by the maximum horizontal distance available.

(d) Inflammable liquids may be stowed in a compartment having a boundary bulkhead or deck which also forms a boundary to a boiler room, engine room or a coal bunker or galley provided no containers of such inflammable liquid are stowed within twenty (20) feet of such bulkhead or deck. When the amount of such inflammable liquid to be stowed in the hold exceeds the space available the twenty (20) feet separation need not be complied with provided one or more of the following protections are provided:

(1) The bulkhead or deck is insulated with at least three (3) inches of insulation throughout its entire area subject to heat.

(2) A temporary wooden bulkhead of at least two inches thickness is constructed in the hold at least three inches off the engine room and six inches off the boiler room bulkhead and covering the entire area of the bulkhead that is subject to heat. The space between the permanent bulkhead and the temporary wooden bulkhead shall be filled full with bulk asbestos or mineral wool.

(3) A temporary wooden bulkhead constructed of one inch T and G sheathing located three feet off the boiler room or engine room bulkhead and filled with sand to a height of six feet above the tank top.

(e) Cargo compartment located "Tween decks" and having a boundary bulkhead which also forms a boundary to a boiler room, engine room, coal bunker, galley or a boiler room uptake casing may be utilized for the stowage of inflammable liquids under the conditions as outlined in paragraph (d) except that the provision in subparagraph (3) requiring filling with sand to a height of 6 feet shall be modified to provide for only 3 feet of sand.

(f) Inflammable liquids in drums or in export wooden cases having inside containers in excess of one quart capacity shall not be stowed as beam fillers. Wooden barrels, wooden boxes, and fiberboard boxes with inside containers of inflammable liquids of less than one quart capacity shall not be stowed as beam fillers unless it is possible to stow and observe "This Side Up" markings.

146.21–8 Boundary bulkheads.—Holds, with bulkheads in which cargo openings to adjacents holds are fitted, shall not be used for the stowage of inflammable liquids unless such openings are provided with means to securely close off and make the hold gas tight or unless the adjacent hold is also used for the stowage of inflammable or combustible liquid cargo.

146.21–9 Hatch closing means.—All unit compartments or holds used for the stowage of inflammable liquids shall be provided with full and efficient hatch covers. Tarpaulins if fitted or required to be fitted shall be protected by dunnaging before overstowing with cargo. Such tarpaulins shall be in one piece and free of rents, tears, or holds.

146.21–10 Ventilation.—All cargo holds in which inflammable liquids are to be stowed and which are provided with means for ventilating shall, before any inflammable liquid cargo in a quantity in excess of 1 ton be stowed in such hold, have fire screens fitted at the weather

end of the vent ducts. This fire screen shall consist of two layers of fine brass wire screen of at least a 20 x 20 mesh spaced not less than ½ inch or more than 1½ inches apart. This screen may be removable, and if so fitted, means for effectively securing the same in place when in service shall be provided. Mushroom type heads shall have similar fire screens so fitted as to completely and efficiently cover the open area. For holds that are gas tight and fitted with vent trunks such vent trunks may be efficiently blanked off at both termini in lieu of fitting flame screens. Stowage of inflammable liquids in a quantity in excess of 1 ton shall not be permitted in holds or compartments that are fitted with gooseneck type of vent trunk heads.

146.21–11 Electrical equipment in holds.—Inflammable liquids shall not be stowed in holds or compartments in which electrical apparatus of any type except vapor proof are fitted unless positive means for disconnecting all such electrical apparatus are provided and such control means are located outside the boundaries of said space. Electrical power lines passing through a hold that is to be used for the stowage of inflammable liquids shall have such run of cable protected by metal covering to prevent damage and possible short circuit. Such metal protection shall be substantial enough to prevent crushing by reason of cargo which might be stowed against same.

146.21–12 Smoking prohibited, warning signs.—(a) Smoking prohibited in the vicinity of inflammable liquid cargo stowed "On deck" and in holds in which such cargo is stowed or in the vicinity of ventilators from such holds.

(b) Signs carrying the legend

Inflammable Vapors Keep Lights and Fire Away No Smoking

shall be posted at each avenue of approach to inflammable liquid cargo when stowed "On deck" and in the vicinity of cargo hold ventilators when inflammable cargo is stowed in the hold. Such sign shall be painted on a white background using a bright red color for lettering. The letters shall not be less than 3 inches high.

146.21–13 Potable spirits.—Potable spirits packed in strong, tight barrels, drums, casks, wooden or fiberboard boxes may, when stowed in a compartment not subject to artificial heat, be transported on board any vessel without further restriction.

146.21–14 Limited quantity shipments.—(a) Inflammable liquids, except carbon bisulfide (disulfide), ethyl chloride, ethylene oxide, nickel carbonyl, spirits of nitroglycerin in excess of one per cent. by weight, and zinc ethyl, when packed in inside glass or earthenware containers not over 1 pint or 16 ounces by weight each, or inside metal containers not over 1 quart capacity each, packed in strong outside containers, except as otherwise provided, are exempt from specification packaging, marking other than name of contents, and labeling requirements.

(10th Amend.—§146.21-14 Text changed—Feb. 1942)

(b) Such shipments may be accepted on board all vessels subject to these regulations, provided the bill of lading or other shipping paper correctly describes the article in accordance with the true name as shown in the commodity list. Stowage shall be "On deck under cover" or "Tween decks" in a compartment not subject to artificial heat.

146.21-15 Limited quantity shipments of paint products.—(a) Paint, enamel, lacquer, stain, shellac, varnish, aluminum, bronze, gold, wood filler, liquid, and lacquer base liquid and thinning, reducing and removing compounds therefor, and driers, liquid, therefor, when packed in inside glass or earthenware containers of not over 1 quart capacity each, or metal containers not over 5 gallons capacity each, and packed in strong outside containers are exempt from specification packaging, marking other than name of contents, and labeling requirements. When fiberboard box is used for such shipments by water gross weight must not exceed 65 pounds.

(b) Such shipments may be accepted on board all vessels subject to these regulations, provided the bill of lading or other shipping paper correctly describes the article in accordance with the true name as shown in the commodity list. Stowage shall be "On deck under cover" or "Tween decks" in a compartment not subject to artificial heat.

146.21-16 Limited quantity shipments of polishes.—(a) Polishes, metal, stove, furniture and wood, liquid, when packed in inside glass or earthenware containers of not over 1 quart capacity each, or metal containers not over 5 gallons capacity each, and packed in strong outside containers are exempt from specification packaging, marking other than name of contents, and labeling requirements.

(b) Such shipments may be accepted on board all vessels subject to these regulations, provided the bill of lading or other shipping paper correctly describes the article in accordance with the true name as shown in the commodity list. Stowage shall be "On deck under cover" or "Tween decks" in a compartment not subject to artificial heat.

(10th Amend.—§ 146.21-15 Text changed;
§ 146.21-16 added—Feb. 1943)
(14th Amend.—146.21-15 Text changed—Apr. 1943)

146.21-100 Table D.—Classification: Inflammable liquids

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Acetaldehyde Ethyl aldehyde.	*A clear, volatile liquid with a pungent fruity odor. Will evaporate rapidly.* *Vapors when mixed with air are explosive over a very wide range of about 4 to 57%.* *Flashpoint about −17° F.* *Boiling point 70° F.* Keep cool. *Miscible with water.*	Red	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5C, 5G) not over 110 gal. cap. (ICC-17C) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders as prescribed for any compressed gas except acetylene. Tank cars. (ICC-104, 104A, ARA-IV, ARA-IV-A).	Not permitted	Not permitted	Not permitted.
Acetone Acrylonitrile	*A clear, colorless, liquid having a pleasing odor somewhat similar to wood alcohol.* *Vapors are 2 times heavier than air and when mixed with air are explosive over a range of 2 to 13% in air.* *Sustained inhalation of vapors in unventilated compartments is dangerous.* *Flashpoint about 4° F.* *Boiling point 133° F.* *Miscible with water.* *Flashpoint about 32° F.* *Boiling point 178° F.*	Red Red.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. Aluminum barrels or drums. (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap.	Not permitted	Not permitted	Not permitted.

Alcohol, butyl, secondary. Alcohol, butyl, tertiary.	*Vapors of butyl alcohol, secondary and tertiary, are about 2½ times heavier than air.* *Flashpoint of secondary butyl alcohol is 77° F.* *Flashpoint of tertiary butyl alcohol is 55° F.*	Red.	Fiber drums. WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Fiber drums. WIC (ICC-21A) not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Fiber drums. WIC (ICC-21A) not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X), STC, not over 55 gal. cap.	Fiber drums. WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.
Alcohol, propyl (*Propanol*).	*Vapors of propyl and isopropyl alcohol are about 2 times heavier than air.*	Red.				
Alcohol, isopropyl..... Isopropanol.	*Flashpoint of propyl alcohol is 75° F.* *Flashpoint of isopropyl alcohol is 54° F.*	Red.				
Alcohol, wood..... Methanol. Methyl alcohol.	*Vapors of wood alcohol are only slightly heavier than air.* *Flashpoint at or above 38° F.* *Poisonous if taken internally.* *Sustained inhalation of vapors of wood alcohol in unventilated compartments is dangerous.*	Red.....	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers. Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E), STC not over 55 gal. cap.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap.	Ferry stowage (AA).....	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap.
Alcohol, N. O. S. (when possessing a flashpoint at or below 80° F.).	.....	Red.	Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B), not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B), not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Aluminum barrels or drums (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B), not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B), not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Aluminum barrels or drums (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B), not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 16 gal. cap. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiberboard boxes, WIC: (ICC-12B), not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.
Aluminum liquid (when possessing a flashpoint at or below 80° F.).	*Liquid vehicles to be mixed with aluminum powder or paste to form an aluminum paint.* *Flashpoint variable.*	Red.....	Outside containers and stowages as for "Bronzing liquid," which see.	Outside containers and stowages as for "Bronzing liquid," which see.	Outside containers and stowages as for "Bronzing liquid," which see.	Outside containers and stowages as for "Bronzing liquid," which see.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Amyl acetate (when possessing a flashpoint at or below 80° F.).	*Colorless liquid, pear or bananalike odor. Flashpoint from 70 to 90° F. Immiscible with water.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A ARA-II, ARA-III, ARA-IV, ARA-IVA).	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC. not over 55 gal. cap. Aluminum barrels or drums, (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums, (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC. not over 55 gal. cap. Aluminum barrels or drums, (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA.)
Amyl chloride	*A liquid having a straw to deep purple color. Flashpoint 34° F. Immiscible with water. Vapors are 3.67 times heavier than air and form an explosive mixture with a lower range of 1.4% in air.*	Red				

Amyl nitrite	*Yellowish, transparent volatile unstable liquid having fragrant fruity odor.* *Decomposes on exposure to air, light or water.* *Vapors are orange color.* *Boiling point 206° F.* *Immiscible with water.* *Keep cool. Stow well away from all sources of heat.*	Red	Stowage: "On deck protected" "On deck under cover" Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 55 gal. cap. (ICC-17E) STC, not over 5 gal. cap. (ICC-17C) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene.	Not permitted	Not permitted	Not permitted.
Anti - freeze compounds, liquid. (When possessing a flashpoint at or below 80° F.)	*Products added to the cooling systems (radiators) of automobiles, tractors, and to other mechanical systems to lower the freezing point of water.* *Among the common anti-freezes are alcohol, glycerin, mixtures of both, and ethylene glycol.* *Flashpoint variable.* *Hazard similar to alcohol* *Miscible with water.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC. (ICC-15X), not over 10 gal. cap.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC not over 55 gal. cap.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Asphalt, cut-back when possessing a flashpoint at or below 80° F.).		Red	Outside containers and stowages as for "Road asphalt or tar, liquid," which see.	Outside containers and stowages as for "Road asphalt or tar, liquid," which see.	Outside containers and stowages as for "Road asphalt or tar, liquid," which see.	Outside containers and stowages as for "Road asphalt or tar, liquid," which see.
Benzene Benzol. Coal tar light oil.	*A clear, colorless liquid of aromatic odor, distilled from coal tar.* *Flash point about —17° F. Boiling point 174° F.* *Will freeze solid slightly above the freezing point of water. Therefore, will flash below its own freezing point.* *Immiscible with water.* *Vapors are 2.77 times heavier than air and form an explosive mixture within a range of 1.5 to 7% in air.* *Vapors are poisonous and suffocating.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5Q) not over 110 gal. cap. (ICC-17C) STC, not over 55 gal. cap. (ICC-17E) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Benzine Petroleum ether. Petroleum naphtha.	*A mixture of several of the lighter constituents of petroleum.* *Flashpoint about —5° F. Boiling point 104 to 158° F.* *Immiscible with water.* *Vapors are 4 to 5 times heavier than air and form an explosive mixture within a range of 2 to 5% in air.*	Red.				

			Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A. ARA-II, ARA-III, ARA IV). Authorized only for export shipments: Steel barrels or drums. (ICC-17E, 17X) STC, not over 55 gal. cap. Wooden boxes, WIMC (ICC-15X) not over 10 gal. cap.			
Box toe gum (when possessing a flashpoint at or below 80° F.).	*A liquid, cement-like solution of variable formulae used in the manufacture of shoes. It may consist of nitrocellulose, shellac, or rosin dissolved in a volatile solvent. Flashpoint variable, depending upon the solvent used. Immiscible with water.*	Red.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (880# gr.) (ICC-6B, 6C) not over 110 gal. cap. (1760# gr.) (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums, (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 5 gal. cap. (ICC-6A) not over 5 gal. cap. (ICC-6B, 6C) not over 5 gal. cap. (ICC-17C, 17E) STC, not over 5 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Wooden barrels or kegs, (ICC-11A, 11B) WIC. not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5. 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (880# gr.) (ICC-6B, 6C) not over 110 gal. cap. (1760# gr.) (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aumimum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (880# gr.) (ICC-6B, 6C) not over 110 gal. cap. (1760# gr.) (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums, (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.

(5th Amend.—Containers deleted and [illegible] added; "Note" deleted—July 1947)

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Bronzing liquid Aluminum liquid. (When possessing a flashpoint at or below 80° F.)	*Liquid vehicles, either orthodox or synthetic, used for mixing with bronze, aluminum, or gold powder or paste and which provide the necessary medium for spreading and leafing of metallic pigment. These liquids are of various types including pyroxylin base, oil base, and synthetic resin base. Volatile inflammable solvents such as benzine or amyl acetate are used in these solutions, hence these liquids may possess flashpoints as low as 24° F. Immiscible with water.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: ICC-5, 5A, 5B, 5C, 6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes. WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums. WIC (ICC-21A) not over 1 gal. cap.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 6A, 6B, 6C) not over 5 gal. cap. (ICC-17C, 17E) STC, not over 5 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Wooden barrels or kegs. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes. WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums. WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA)	Ferry stowage (BB).
Butyraldehyde	*Colorless liquid. Flash point 20° F. Vapors about 2½ times heavier than air. Immiscible with water. Boiling point 169° F.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C) STC not over 55 gal. cap. (ICC-17E) not over 5 gal. cap. Aluminum barrels or drums; (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kege: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap.	Not permitted	Not permitted	Not permitted.

			Wooden boxes; WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC, 12B), not over 65 lbs. gr. wt. Fiber drums, (ICC-21A) with single inside container not over 1 gal. cap. Cylinders as prescribed for any compressed gas, except acetylene.			
Carbon bisulfide..... Carbon disulfide.	*A heavy, clear, colorless to yellow liquid having a very offensive odor.* *Highly inflammable. Protect from all sources of heat. Vapor is capable of igniting without presence of naked light, as from the temperature of a warm steam pipe.* *Mixtures of vapor and air are highly explosive over a range of 1 to 50% in air.* *Self-ignition occurs at about 816° F. in air.* *Boiling point about 115° F.* *Vapor is poisonous.* *Immiscible with water.* Keep cool. Stow well away from oxygen, and oxidizing materials (yellow label).	Red.....	Stowage: "On deck protected." Outside containers: Steel barrels or drums: (ICC-5, 5A) not over 55 gal. cap. (ICC-17E) STC not over 5 gal. cap. (ICC-17C) STC not over 55 gal. cap. Wooden barrels or kegs. WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 8 gal. cap. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Tank cars. (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Not permitted.....	Not permitted.....	Not permitted.
Carbon remover, liquid. (When possessing a flash-point at or below 80° F.)	*Products usually added to motor fuels to dissolve out deposited carbon in cylinders of gasoline-fired engines.*	Red.....	Outside containers and stowages as for "Compounds, cleaning, liquid," which see.	Outside containers and stowages as for "Compounds, cleaning, liquid," which see.	Outside containers and stowages as for "Compounds, cleaning, liquid," which see.	Outside containers and stowages, as for "Compounds, cleaning, liquid," which see.
Cass oil.....	.....	.....	See under proper shipping name as: "Benzene," "Benzine," "Gasoline," etc.	See under proper shipping name as: "Benzene," "Benzine," "Gasoline," etc.	See under proper shipping name as: "Benzene," "Benzine," "Gasoline," etc.	See under proper shipping name as: "Benzene," "Benzine," "Gasoline," etc.
Casinghead gasoline.....	.....	.....	See: "Natural gasoline."	See: "Natural gasoline".....	See: "Natural gasoline".....	See: "Natural gasoline."

(N-133)

(5th Amend.—Containers added—July 1941)
(14th Amend.—Butyraldehyde added Apr. 1942)

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings require	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Cement, leather. Cement, liquid, N.O.S. Cement, roofing, liquid. Cement, rubber. (When possessing a flash point at or below 80° F.)	*These cements are chemical compounds of various ingredients such as. Asphalt with petroleum distillate; cellulose nitrate in acetone; asphalt, bituminous and mineral oil, raw rubber solution and gasoline, etc., all possessing similar characteristics and hazards.* *Vapors highly inflammable and explosive when mixed in correct proportions with air.* *Sustained inhalation of vapors in unventilated compartments is dangerous.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6B, 6C) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. (ICC-37D) STC not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC not over 55 gal. cap. Wooden boxes WIMC (ICC-15X) not over 10 gal. cap.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E) STC not over 30 gal. cap. (ICC-37D) STC not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 30 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA).	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6B, 6C) not over 110 gal. cap. (ICC-16A) not over 55 gal. cap. ICC-17C, 17E) STC not over 55 gal. cap. (ICC-37D) STC not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC not over 55 gal. cap.
Cleaning fluid or liquid (when possessing a flash point at or below 80° F.).	*May consist of volatile inflammable solvents having low flash points.*	Red	Outside containers and stowages as for "Compounds, cleaning liquid", which see.	Outside containers and stowages as for "Compounds, cleaning, liquid", which see.	Outside containers and stowages as for "Compounds, cleaning, liquid", which see.	Outside containers and stowages as for "Compounds, cleaning, liquid", which see.

Coal tar distillate..... Coal tar oil. (When possessing a flashpoint at or below 80° F. but not less than 20° F.)	*Distillates of coal tar. The lighter distillates are highly inflammable and will consist of benzene, toluene and xylene.* *Immiscible with water.* *Properties and hazards similar to "Coal tar naphtha," which see below.*	Red.....	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Stowage: "On deck in open." "On deck under cover." Outside containers: Wooden barrels or kegs (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC, (ICC-15A, 15B, 15C, 16A 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA).....	Ferry stowage (BB).
Coal tar naphtha..... Solvent naphtha.	*Mixtures of small amounts of benzene and toluene with xylene. The crude is a dark straw colored liquid and the refined is a water white liquid.* *Flashpoint ranges between 60° F. and 77° F.* *Mixtures of vapor in air are explosive over a range of 1.3 to 8%.* *Vapors are heavier than air.* *Immiscible with water.* *Vapors are poisonous and suffocating.*		Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC not over 55 gal. cap. Wooden boxes, WIMC (ICC-15X) not over 10 gal. cap.		Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Collodion	*Solution of tetranitrocellulose in ether, alcohol or other solvent. Pale yellow liquid. Flash point approximately 0° F. Immiscible with water.* Keep cool.	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C) STC not over 55 gal. cap. (ICC-17E) STC not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap. Tank cars (ICC-103, 104, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Not permitted	Not permitted	Not permitted.
Collodion cotton, wet with an inflammable liquid.	*A proper descriptive name which may be used to describe export shipments of "Nitrocellulose, wet with an inflammable liquid."*	Red	Outside containers and stowages as for "Nitrocellulose wet with an inflammable liquid", which see.	Outside containers and stowages as for "Nitrocellulose wet with an inflammable liquid", which see.	Outside containers and stowages as for "Nitrocellulose wet with an inflammable liquid", which see.	Outside containers and stowages as for "Nitrocellulose wet with an inflammable liquid", which see.

Cologne spirits (alcohol).			See: "Alcohol, ethyl."			
Columbian spirits (wood alcohol).			See: "Alcohol, wood."			
(When possessing a flashpoint at or below 80° F.)						
Compounds, cleaning, liquid. (When possessing a flashpoint at or below 80° F.)	*May consist of volatile inflammable solvents having low flashpoints.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 15, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Ferry storage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.
Compounds, lacquer, paint or varnish reducing, liquid. (When possessing a flashpoint at or below 80° F.)	*Exceptionally slow-drying thinners used with pyroxylin base lacquer or enamels to retard speed of drying.*	Red	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.
Compounds, lacquer, paint or varnish removing liquid (when possessing a flashpoint at or below 80° F.).	*Compounds which through solvent or detergent action remove old paint from surfaces.*	Red	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Compounds, lacquer, paint or varnish thinning, liquid (when possessing a flashpoint at or below 80° F.).	*Clear liquid solvents and diluents for the reduction of primers, surfacers, and enamels to proper working consistencies.*	Red	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.
Compounds, polishing, liquid (when possessing a flashpoint at or below 80° F.).			See: "Polishing compounds, liquid."	See: "Polishing compounds, liquid."	See "Polishing compounds, liquid."	See: "Polishing compounds, liquid."
Compounds, type-cleaning, liquid (when possessing a flashpoint at or below 80° F.).	*Volatile liquids used for cleaning type. Flashpoint variable.*	Red	Outside containers and stowages as for "Compounds, cleaning, liquid," which see.	Outside containers and stowages as for "Compounds, cleaning, liquid," which see.	Outside containers and stowages as for "Compounds, cleaning, liquid," which see.	Outside containers and stowages as for "Compounds, cleaning, liquid," which see.
Compounds, vulcanizing, liquid (when possessing a flashpoint at or below 80° F.).			See: "Cement, rubber."	See: "Cement, rubber."	See: "Cement, rubber."	See: "Cement, rubber."
Crotonaldehyde	*This material is in the form of a clear and almost colorless liquid, having a vapor extremely irritating to the eyes, nose and throat. Easily detected odor. Flashpoint about 55° F. Immiscible with water. Vapors about 2½ times heavier than air.*	Red	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B), not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Not permitted	Not permitted	Not permitted.

Crude oil petroleum (when possessing a flashpoint at or below 80° F.).	*Crude petroleum in its natural state or which has been subject only to natural weathering or settling and not blended with any other product.* *A heavy, oily liquid, having color varying from green to almost black. It usually has a disagreeable odor, and varies in inflammability according to percentage of more volatile ingredients.* *Immiscible with water.*	Red	Stowage: "On deck in open." "On deck under cover." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Not permitted	Not permitted	Ferry stowage (BB). Outside containers: Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17E, 17X) STC, not over 55 gal. cap.
Dichlorethylene			See: "Ethylene dichloride."			
Diethylamine	*Clear, colorless liquid.* *Flash point below 0° F.* *Miscible with water.*	Red	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 5 gal. cap. Aluminum barrels or drum (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes. WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fibreboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums. WIC (ICC-21A not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17E, 17X) STC, not over 55 gal. cap.	Not permitted	Not permitted	Not permitted.
Dimethyl sulfide	*A clear, volatile liquid having an offensive disagreeable odor.* *Will evolve sulfur dioxide gas in a fire.* *Boils at approximately 97° F.* *Immiscible with water.*	Red				

(5th Amend.—Diethylamine; containers added—July 1941.)

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Dimethylamine, anhydrous.	*Gas at ordinary temperature and pressure. Is shipped in compressed liquid form. Flashpoint about 30° F., boiling point about 45° F.* *Miscible with water.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Cylinder (ICC-3, 3A, 4, 4A).	Not permitted	Not permitted	Ferry stowage (BB). Outside containers: Cylinder (ICC-3, 3A, 4, 4A).
Dimethylamine solution.	*Aqueous solution. Flashpoint of 25% solution 32° F. Boiling point 45° F.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C) STC, not over 55 gal. cap. Cylinders (ICC-3, 3A, 4, 4A).	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17-C) STC, not over 55 gal. cap. Cylinders (ICC-3, 3A, 4, 4A).	Ferry stowage (AA) Outside containers Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C) STC—not over 55 gal. cap. Cylinders (ICC-3, 3A, 4, 4A).	Ferry stowage (BB). Outside containers: Steel barrels or drums. (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C) STC, not over 55 gal. cap. Cylinders (ICC-3, 3A, 4, 4A).
Dressing, leather (When possessing a flashpoint at or below 80° F.).	*Preparations used to treat leather to retard the natural drying up of the oils and greases, to revive color, restore softness and pliability and to keep it from becoming hard and brittle.*	Red	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.
Driers, paint or varnish. When possessing a flashpoint at or below 80° F.)	*Materials which hasten the drying period in painting, varnishing, enameling and lacquering operations. Usually compounds from resinates of manganese, cobalt, lead and zinc in solution with linseed, turpentine or other oxygen-absorbing oils.*	Red	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid" which see.

Drugs, chemicals, medicines, or cosmetics. A unit substance or a compound classified as an inflammable liquid in accordance with the definition contained herein, when prepared, packed and offered to the trade as drugs, chemicals, medicines, or cosmetics. In quantity not exceeding 1 pint or 16 ounces by weight, in glass or earthenware containers, or 1 quart or 32 ounces by weight in inside metal containers. The following substances shall not be shipped under this designation: Carbon bisulfide (disulfide), Gasoline, Ethyl chloride, Ethylene oxide, Spirits of nitroglycerin in excess of one per cent by weight, Zinc ethyl, Nickel carbonyl.	----------	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Strong wooden barrels. WIC not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC not over 65 lbs. gr. wt. NOTE: Observe instructions regarding "This side up" stowage when packages are so marked. It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Strong wooden barrels. WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt. NOTE: Observe instructions regarding "This side up" stowage when packages are so marked. It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.	Ferry stowage (AA)--------- Outside containers: Strong wooden barrels. WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt.	Ferry stowage (BB Outside containers: Strong wooden barrels. WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Drugs, chemicals, medicines, or cosmetics, N. O. S. A unit substance or a compound classified as an inflammable liquid in accordance with the definition contained herein, when prepared, packed and offered to the trade as drugs, chemicals, medicines, or cosmetics. In quantity exceeding 1 pint or 16 ounces by weight, in glass or earthenware containers, or 1 quart or 32 ounces by weight in inside metal containers.	----------	Red-----	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums. (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums. (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC, (ICC-15A, 15B, 15C, 16A, 19A), not over 16 gal. cap. Fiberboard boxes, WIC, (ICC-12B), not over 65 lbs. gr. wt. Fiber drums, WIC, (ICC-21A), not over 1 gal. cap Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums. (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums. (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B), not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 16 gal. cap. Fiberboard boxes, WIC, (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC, (ICC-21A), not over 1 gal. cap.	Ferry stowage (AA)--------- Outside containers: Steel barrels or drums. (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums. (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC, (ICC-15A, 15B, 15C, 16A, 19A), not over 16 gal. cap. Fiberboard boxes, WIC, (ICC-12B), not over 65 bs. gr. wt. Fiber drums, WIC, (ICC-21A), not over 1 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums. (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums. (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WC, (ICC-15A, 15B, 15C, 16A, 19A), not over 16 gal. cap. Fiberboard boxes, WIC, (ICC-12B), not over 65 lbs. gr. wt. Fiber drums, WIC, (ICC-21A), not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).
Eradicators, paint or grease, liquid (when possessing a flashpoint at or below 80° F.).	*Compounds which through solvent or detergent action remove paint, oil or grease from various surfaces. Similar to paint remover.*	Red-----	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.

Ether, anesthetic	*Anesthetic ether only.* *Colorless, volatile liquid, pleasant aromatic odor.* *Suffocating and poisonous.* *The vapor of ether mixed with air is explosive over a very wide range of 1.8 to 48%.* *Vapor is 2.5 times heavier than air and will ignite at a considerable distance from the source of leakage.* *Flashpoint—45° F.* *Boiling point about 95° F.* *Immiscible with water.* Keep cool.	Red	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5C, 5G), not over 55 gal. cap. (ICC-17C) STC, not over 55 gal. cap. (ICC-17E) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs (ICC-11A, 11B), WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal cap. Cylinders as prescribed for any compressed gas except acetylene.	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5B), not over 30 lbs. net wt. (ICC-17C, 17E) STC, not over 30 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 55 lbs. gr. wt. *Note:* Total number of one or both type packages shall not exceed ten (10) on any voyage.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5B), not over 30 lbs. net wt. (ICC-17C, 17E) STC, not over 30 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 55 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5B), not over 30 lbs. net wt. (ICC-17C, 17E) STC, not over 30 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 55 lbs. gr. wt.
Ether, diethyl Ether, ethyl. Ether, sulfuric. Ether, technical or commercial grade.	*Characteristic properties and cautions as for "ether, anesthetic," which see above.*	Red	Outside containers and stowages on board cargo vessels as for "Ether, anesthetic" which see.	Not permitted	Not permitted	Not permitted.

(5th Amend.—Containers deleted and added—July 1941)

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ethyl acetate	*Colorless, volatile liquid having a characteristic fruity odor. Vapors are 3 times heavier than air and form an explosive mixture within a range of 2½ to 11% in air. Flashpoint at or above 24° F. Boiling point 170° F. Immiscible with water.* Keep cool.	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. Aluminum barrels or drums: (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas, except acetylene. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Not permitted	Not permitted	Not permitted.
Ethyl aldehyde			See: "Acetaldehyde."			
Ethyl bromide	*Colorless, inflammable, volatile liquid. Vapors are 3¾ times heavier than air and form an explosive mixture within a range of 6 to 11% in air. Boiling point 100° F. Immiscible with water.*	Red	Outside containers and stowages as for "Ethyl acetate," which see.	Outside containers and stowages as for "Ethyl acetate," which see.	Outside containers and stowages as for "Ethyl acetate," which see.	Outside containers and stowages as for "Ethyl acetate," which see.

Ethyl chloride	*Colorless, volatile liquid. Gas at temperatures above 54° F. Anesthesia. Vapors in low concentrations will be suffocating. Flashpoint about −37° F. Boiling point about 54° F. Vapors when mixed with air are explosive over a range of 3.5 to 15%. Immiscible with water.*	Red	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums, (ICC-5A) not over 33 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders as prescribed for any compressed gas except acetylene. Tank cars. (ICC-104A, ARA-IV-A).	Not permitted	Not permitted	Not permitted.
Ethyl formate	*Colorless inflammable liquid, soluble in water. Flash point about 10° F. Vapors when mixed with air are explosive over a range of 3.5 to 16.5%. Vapors are about 2½ times heavier than air. Boiling point 130° F.* Keep cool.	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C) STC, not over 55 gal. cap. (ICC-17E) not over 5 gal. cap. Aluminum barrels or drums: (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes; WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC, 12B), not over 65 lbs. gr. wt. Fiber drums, (ICC-21A) with single inside container not over 1 gal. cap. Cylinders as prescribed for any compressed gas, except acetylene.	Not permitted	Not permitted	Not permitted.
Ethyl methyl ketone	*Colorless liquid, acetone-like odor. Sustained inhalation of vapors in unventilated compartments is dangerous. Vapors are about 2½ times heavier than air and form an explosive mixture within a range of 2 to 18% in air. Flashpoint approximately 30° F. Miscible with water.*	Red	Outside containers and stowages as for "Acetone," which see.	Outside containers and stowages as for "Acetone," which see.	Outside containers and stowages as for "Acetone," which see.	Outside containers and stowages as for "Acetone," which see.

(10th Amend.—Ethyl formate added—Feb. 1942)
(2d Rev.—Ethyl nitrate relocated—Feb. 1962)

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ethyl nitrate	*Colorless, inflammable liquid, pleasant odor and sweet taste.* *Vapors are more than 3 times heavier than air and will form an explosive mixture with a lower limit of 3.8% in air.* *Sustained inhalation of vapors in unventilated compartments is dangerous.* *Flashpoint approximately 50° F.* *Immiscible with water.*	Red	Outside containers and stowages as for "Acetone," which see.	Outside containers and stowages as for "Acetone," which see.	Outside containers and stowages as for "Acetone," which see.	Outside containers and stowages as for "Acetone," which see.
Ethyl nitrite	*Yellowish liquid, aromatic odor. Exceedingly volatile.* *Vapors are about 3 times heavier than air and form an explosive mixture within a range of 3 to 50% in air.* *Flashpoint about —31° F. Boiling point 61.5° F. Spontaneously decomposes at 194° F.* *Immiscible with water.* Keep cool. Stow well away from all sources of heat.	Red	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5, 5A, 5B, 5C, 5G) not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene.	Not permitted	Not permitted	Not permitted.

Ethylene dichloride.... Dichlorethylene.	*Colorless, oily liquid, pleasant chloroform-like odor.* *Anesthesia; vapors in low concentrations will be suffocating.* *Vapors are 3½ times heavier than air and form an explosive mixture within a range of 6 to 16% in air.* *Flashpoint, 70° F.* *Immiscible with water.*	Red.....	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA)..... Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drum (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).
Ethylene oxide.....	*A colorless, highly volatile liquid with ether-like odor.* *Anesthesia; vapors even in low concentrations will be suffocating.* *Vapors are 1½ times heavier than air and form an explosive mixture within a range of 3 to 80% in air.* *Flash point about −20° F.* *Boiling point 51° F.* *Miscible with water.* Keep cool.	Red.....	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5A) not over 33 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders as prescribed for any compressed gas except acetylene. Tank cars (ICC-104A, ARA-IV-A).	Not permitted.....	Not permitted.....	Not permitted.
Extracts, liquid flavoring (which possessing a flashpoint at or below 50° F.).	*May consist of aqueous or alcoholic solutions.* *Flashpoint variable.*	Red.....	Outside containers and stowages as for "Alcohol, N. O. S.," which see.	Outside containers and stowages as for "Alcohol, N. O. S.," which see.	Outside containers and stowages as for "Alcohol, N. O. S.," which see.	Outside containers and stowages as for "Alcohol, N. O. S.," which see.
Furniture stain, liquid (when possessing a flashpoint at or below 80° F.).	*A liquid product consisting of basic colors in powdered form mixed with a solvent such as turpentine, benzine, solvent naphtha, alcohol, etc.*	Red.....	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation		
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Gas drips hydrocarbon.	*Liquid condensate of gas. Has odor of illuminating gas. Flashpoint variable but usually low.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween deck readily accessible." "Under deck away from heat."* Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C) STC, not over 55 gal. cap. (ICC-17E) STC not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums, (ICC-17E, 17X) STC, not over 55 gal. cap. Wooden boxes, WIMC (ICC-15X), not over 10 gal. cap. NOTE.—For additional containers authorized during the war emergency, see Sections 146.28-7 and 146.28-8.	NOTE: Shall not be accepted for transportation on board passenger vessels or passenger-carrying ferry vessels except such fuel as is contained within the fuel tanks of motor vehicles for use as a source of motive power for their own propulsive or auxiliary motors when such motor vehicles are being transported on board such vessels.		
Gasoline Permitted shipping names for export only: Essence. Gazoline. Motor fuel. Motor spirit. Petrol. Benzine. Gazolina. Nafta.	*Derivative of crude petroleum. Vapor is 3 to 4 times heavier than air and when mixed with air is explosive over a range of 1.4 to 6%. Flashpoint less than 0° F. Immiscible with water and will float on surface of same.*	Red				

(8th Amend.—"Note" deleted; containers added—July 1941)
(44th Amend.—Note added—Apr. 1943)

Gravure ink	*Inks specially formulated for use in the gravure method of printing and containing a volatile solvent. Flashpoint about 68° F.*	Red	Outside containers and stowages as for "Ink," which see.	Outside containers and stowages as for "Ink," which see.	Outside containers and stowages as for "Ink," which see.	Outside containers and stowages as for "Ink," which see.
Inflammable liquid, N. O. S.	*May be any liquid classifying as an inflammable liquid in accordance with the definitions contained in these regulations, provided such inflammable liquid is not otherwise specified by name in these regulations. Flashpoint variable, may be less than 0° F.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17E, 17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers (authorized only for liquids having a flash point above 20° F.): Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene.	Ferry stowage (AA) Outside containers: Steel barrels or drums (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene. Authorized only for export shipments: Steel barrels or drums (ICC-17E, 17X) STC, not over 55 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or drums (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17E, 17X) STC, not over 55 gal. cap.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, mar ings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ink (when possessing a flashpoint at or below 80° F.) Gravure ink	*A fluid or viscous material containing coloring matter in solution or suspension. Flashpoint variable.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 100 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden barrels or kegs, WIC (ICC-11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden barrels or kegs, WIC (ICC-11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden barrels or kegs, WIC (ICC-11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden barrels or kegs, WIC (ICC-11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).

Insecticide, liquid (*vermin exterminator*) (when possessing a flashpoint at or below 80° F.). NOTE: Insecticides having a flashpoint at or below 20° F. shall not be offered for transportation or be transported on board passenger-carrying vessels.	*Insecticides frequently contain petroleum or coal tar distillates or other inflammable liquids.* *Flashpoint variable.* *Immiscible with water.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.
Isopropanol			See: "Alcohol, isopropyl."			
Lacquer (when possessing a flashpoint at or below 80° F).	*Lacquer is a coating consisting of a nitrocellulose or synthetic base with solvents and diluents. It is a viscous liquid of varying fluidity. It may be clear, pigmented, or colored. The common solvents used are amyl acetate, butyl acetate, ethyl acetate and alcohol.* *The flashpoint varies with the base and solvent that is used.* *Immiscible with water.*	Red	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Lacquer base or lacquer chips, plastic (wet with an inflammable liquid). Wet with at least 20% of an inflammable liquid with a flash point not lower than 30° F.) Lacquer base, liquid	*Lacquer chips are composed of nitrocellulose incorporated with a plasticizer and pigments. They are the film-forming part of lacquer which remains after the solvents or thinners have evaporated.* *Involved in fire will give off nitrous fumes which are deep orange in color and extremely poisonous.* *Flash point is variable depending upon the solvent used to wet the chips.* *Immiscible with water.* *A viscous solution of nitrocellulose or synthetic resins with a plasticizer. May be clear, pigmented, or colored.* *Flash point variable depending upon the solvent used. May be lower than 20° F.* *Immiscible with water.*	Red Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC, (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E, 37D) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B), WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.
Leather bleach (when possessing a flashpoint at or below 80° F.).	*A compound used to decolorize leather or other fabrics.*	Red	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.
Methanol			See: "Alcohol, wood."			

Methyl acetate	*A clear, colorless, volatile liquid with fragrant odor. Sparingly miscible in water. Flashpoint 25° F., boiling point about 132° F. Vapors are 2½ times heavier than air and form an explosive mixture within a range of 4 to 14% in air.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Not permitted	Not permitted	Ferry stowage (BB).
Methyl acetone	*A water white, anhydrous liquid consisting of acetone with methanol. Flashpoint variable, may be as low as 4° F.*	Red.				Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).
Methyl alcohol			See: "Alcohol, wood."			
Methyl formate	*Colorless liquid, agreeable odor. Flashpoint −25° F., boiling point 88° F. Vapor pressure 18 lbs. at 100° F. Vapors 2 times heavier than air and form an explosive mixture within a range of 4½ to 20% in air. Sustained inhalation of vapors in an unventilated compartment is dangerous. Slightly miscible with water.*	Red	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5, 5A) not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 55 gal. cap. Cylinders as prescribed for any compressed gas except acetylene.	Not permitted	Not permitted	Not permitted.
Mortar stain, liquid (when possessing a flashpoint at or below 80° F.).	*Coatings used instead of paint or other finish, which give a "flat" or "dead" finish rather than a gloss effect.*	Red	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Motor fuel, N. O. S. (when possessing a flashpoint at or below. 80° F.)	*Any fuel for internal combustion motors not otherwise specified by name in these regulations.* *Flashpoint variable.* *May or may not be miscible with water.* *Vapors when mixed with air may be explosive over a wide range.*	Red	Stowage: "On deck protected." "On deck under cover."* "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs. WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 10 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes, WIMC (ICC-15X), not over 10 gal. cap.	Not permitted	Not permitted	Not permitted.
			NOTE: Shall not be accepted for transportation on board passenger vessels or passenger-carrying ferry vessels except such fuel as is contained within the fuel tanks of motor vehicles for use as a source of motive power for their own propulsive or auxiliary motors when such motor vehicles are being transported on board such vessels.			

Naphtha, coal tar			See: "Coal tar naphtha."			
Naphtha distillate			See: "Petroleum distillate."			
Naphtha, petroleum			See: "Benzine."			
Naphtha solvent			See: "Coal tar naphtha."			
Natural gasoline (*Casinghead Gasoline*).	*A liquid condensate from natural gas or from the casinghead gas of oil wells.* *Vapors mixed with air are highly explosive over a range of 1.5 to 6%.* *Flashpoint below 0° F.* *Immiscible with water. Will float on surface of same.* Keep cool.	Red	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene. Tank cars (ICC-103, 104, 104A ARA-II, ARA-III, ARA-IV, ARA-IVA).	Not permitted	Not permitted	Not permitted.
Nickel carbonyl	*Colorless, volatile liquid. Poisonous.* *Vapors explode in air at about 140° F.* *Vapors heavier than air.* *Boiling point approximately 110° F.* *Immiscible with water.*	Red	Stowage: "On deck protected." "On deck under cover." Outside containers: Cylinders as prescribed for any pressed gas except acetylene.	Not permitted	Not permitted	Not permitted.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Nitrocellulose, wet with an inflammable liquid. Must contain at least 30% by weight of an inflammable liquid with flashpoint not lower than 30° F. Nitrocellulose colloided, granular or flake, wet with 20% alcohol or solvent. Shipping containers shall have marked thereon the gross, tare and net weight of the package. For export shipments only: The shipping name "Collodion cotton, wet with an inflammable liquid" may be used when required by country of destination.	*Formed by the nitration of cotton by treatment with a mixture of nitric and sulfuric acids.* *Flashpoint variable, not less than 30° F.* Keep cool. *Involved in a fire will give off nitrous fumes, deep orange in color, and extremely irritating and poisonous.* Check gross weight of containers to be certain no leakage has occurred. Refuse leaking containers or ones showing signs of having leaked.	Red	Stowage "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 450 lbs. gr. wt. (ICC-6A, 6B, 6C) not over 450 lbs. gr. wt. (ICC-17C, 17E) STC, not over 450 lbs. gr. wt. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 450 lbs. gr. wt. Wooden barrels or kegs: (ICC-10A, 10B) not over 450 lbs. gr. wt. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Not permitted	Not permitted	Not permitted.
Nitrostarch, wet with an inflammable liquid. Must contain at least 30% by weight of an inflammable liquid with flashpoint not lower than 30° F. Shipping containers shall have marked thereon the gross, tare and net weight of the package.	*Formed by the nitration of starch. Characteristics and hazards similar to those of "Nitrocellulose, wet with an inflammable liquid" which see above.* Check gross weight of containers to be certain no leakage has occurred. Refuse leaking containers or ones showing signs of having leaked.	Red.				
Nitroglycerin, spirits of (when consisting of not more than 10% by weight of nitroglycerin in ethyl alcohol.)	Nitroglycerin spirits is a solution of nitrogylcerin of not more than 10% strength in grain alcohol. *It is not explosive but rupture of package may allow alcohol to evaporate and thus leave the explosive nitroglycerin.*	Red	Stowage: "On deck protected." "On deck under cover." Outside containers: Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) WIMC, not over 6 quarts cap. Inside containers must be entirely surrounded by at least two inches of fine, dry sawdust or kieselguhr.	Not permitted	Not permitted	Not permitted.

Nitroglycerin, spirits of (consisting of not more than 1% by weight of nitroglycerin in ethyl alcohol).	Solution of nitroglycerin of not more than 1% strength in grain alcohol.	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Inside containers must be entirely surrounded by at least two inches of fine, dry sawdust or kieselguhr.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Inside containers must be entirely surrounded by at least two inches of fine, dry sawdust or kieselguhr.	Ferry stowage (AA) Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Inside containers must be entirely surrounded by at least two inches of fine, dry sawdust or kieselguhr.	Ferry stowage (BB). Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Inside containers must be entirely surrounded by at least two inches of fine, dry sawdust or kieselguhr.
Oil Oil, N. O. S. Petroleum oil. Petroleum oil, N. O. S. (When possessing a flashpoint at or below 80° F. but not less than 20° F.) NOTE.—For these liquids when possessing a flashpoint at or below 20° F., see "Petroleum distillate."	*May include any oil product derived from crude petroleum, except oils properly described by name within these regulations.* *Flashpoint variable.* *Immiscible with water.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums. (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Not permitted	Not permitted	Ferry stowage (BB). Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).
Paint, aluminum bronzing, or gold (when possessing a flashpoint at or below 80° F.	*Formulated with the metallic powder or paste of aluminum bronze or gold together with pyroxylin or soluble cotton dissolved in volatile inflammable solvents.* *Flashpoint variable, but due to the use of volatile solvents such flashpoint is usually low.* *Immiscible with water.*	Red	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid," which see.

(6th Amend.—Containers added; text rearranged—July 1941)

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Paint, liquid (when possessing a flashpoint at or below 80° F.). When the flashpoint of a liquid shipped under this descriptive name is 20° F. or below, the the bill of lading or other shipping paper shall bear the following certification: *"This liquid possesses a flashpoint of 20° F. or less."* When the flashpoint is above 20° F. and not more than 80° F. the following certification shall appear thereon: *"This liquid possesses a flashpoint above 20° F. but not more than 80° F."*	*Paint is a mixture of pigment with vehicle intended to be spread in thin coats for decoration or protection, or both.* *Flashpoint variable.* *May or may not be miscible with water.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6B, 6C) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for liquids having a flashpoint above 20° F.: Wooden barrels or kegs (ICC-10C) not over 50 gal. cap. Fiberboard boxes (ICC-12E) WIMC, not over 110 lbs. gr. wt. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6B, 6C) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (ICC-17C, 17E), STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6B, 6C) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G, 6B, 6C) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).

146.21–100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Petroleum oil			See: "Oil."			
Petroleum oil, N. O. S. (When possessing a flash point at or below 80° F. but not less than 20° F.).						
Polish, furniture, liquid. Polish, metal, liquid. Polish, stove, liquid. (When possessing a flash point at or below 80° F.)	*Liquid preparations used to remove film from surfaces and restore and protect polish and finish of such surface.* *Flashpoint variable.* *May or may not be miscible with water.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 6B, 6C) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums: (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC 15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible. Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 6B, 6C) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums: (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA)	Ferry stowage (BB).
Polishing compounds, liquid. (When possessing a flashpoint at or below 80° F.)	*Liquid polishing compounds may contain an abrasive material held in suspension by gasoline or some other inflammable liquid.* *Flashpoint variable.*	Red.	Authorized only for liquids having a flashpoint above 20° F.: Wooden barrels or kegs (ICC-10C), not over 50 gal. cap. Fiberboard boxes (ICC-12E) WIMC, not over 110 lbs. gr. wt.		Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 6B, 6C) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums, (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Authorized only for liquids having a flashpoint above 20° F.: Wooden barrels or kegs (ICC-10C), not over 50 gal. cap. Fiberboard boxes (ICC-12E) WIMC, not over 110 lbs. gr. wt.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 6B, 6C) not over 110 gal. cap. (ICC-6A) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for liquids having a flashpoint above 20° F.: Wooden barrels or kegs (ICC-10C), not over 50 gal. cap. Fiberboard boxes (ICC-12E) WIMC, not over 110 lbs. gr. wt.

Propanol			See: "Alcohol, propyl."			
Pyridine	*A slightly yellow or colorless liquid having a penetrating and offensive odor.* *Flash point 68° F.* *Miscible with water.* *Vapors are 2.75 times heavier than air and form an explosive mixture within a range of 1.8 to 12.4% in air.* *Vapors are poisonous and suffocating.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars, (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).	Stowage: "On deck protected." "On deck under cover." Outside containers: Wooden barrels or kegs: (ICC-11A, 11B) WIC not over 35 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars, (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).
Pyroxylin solutions	*Pyroxylin, nitrocellulose or soluble cotton dissolved in amyl acetate or other solvent.* *Flashpoint variable depending upon the solvent used.* *Involved in a fire will give off nitrous fumes, deep orange in color, and extremely poisonous.* *Immiscible with water.*	Red	Outside containers and stowages as for "Lacquer base, liquid," which see.	Outside containers and stowages as for "Lacquer base, liquid," which see.	Outside containers and stowages as for "Lacquer base, liquid," which see.	Outside containers and stowages as for "Lacquer base, liquid," which see.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Pyroxylin solvents, N.O.S. (When possessing a flashpoint at or below 80° F.)	*Organic liquids or mixtures of liquids that act as solvents of nitrocellulose.* *Inflammable, volatile liquids used as solvents for pyroxylins.*	Red.	Outside containers and stowages as for "Solvents, N. O. S.," which see.	Outside containers and stowages as for "Solvents, N. O. S.," which see.	Outside containers and stowages as for "Solvents, N. O. S.," which see.	Outside containers and stowages as for "Solvents, N. O. S.," which see.
Refrigerating machines (*assembled for shipment and containing not over 16 pounds of an inflammable liquid for their operation*).		No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes or crates. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended.	Stowage: "On deck under cover," "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes or crates. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended.	Ferry stowage (AA). Outside containers: Wooden boxes or crates. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended.	Ferry stowage (BB). Outside containers: Wooden boxes or crates. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended.

Road asphalt or tar, liquid. Asphalt, cut-back. Tar, liquid. (When possessing a flashpoint at or below 80° F.). (See § 146.27-100 for transportation of asphalt or road tar in highway tank vehicles.)	*Substance prepared by the fluxing of asphalt with petroleum distillate.* *Pungent, penetrating odor.* *Immiscible with water.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. (ICC-37D) STC not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for liquids having a flashpoint above 20° F.: Wooden barrels or kegs (ICC-10C), not over 50 gal. cap. Fiberboard boxes (ICC-12E) WIMC, not over 110 lbs. gr. wt. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. (ICC-37D) STC not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. (ICC-37D) STC not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-6A, 6B, 6C) not over 55 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. (ICC-37D) STC not over 5 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV-ARA-IVA).
Rum, denatured	*Rum rendered unfit for beverage purposes by the addition of a denaturant.* *Flash point 77° F.*	Red	Outside containers and stowages as for "Alcohol, denatured," which see.	Outside containers and stowages as for "Alcohol, denatured," which see.	Outside containers and stowages as for "Alcohol, denatured," which see.	Outside containers and stowages as for "Alcohol, denatured," which see.
Shellac, liquid	*Solution of shellac in a solvent, usually alcohol.* *Flash point 40° F. to 70° F.*	Red	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.
Solvent naphtha	----------	----------	See: "Coal tar naphtha."			

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Solvents, N. O. S. (when possessing a flashpoint at or below 80° F.).	Inflammable, volatile liquids used for solvents, other than those solvents specified by name in these regulations. *Flashpoint variable.* *May be extremely volatile liquids and if so, vapors in air will form explosive mixtures.* *Vapors may be poisonous and suffocating.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap). (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs. WIC (ICC-11A, 11B) not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Stowage: "On deck protected." "On deck under cover." Outside containers: Authorized only for liquids having a flashpoint above 20° F. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene.	Ferry stowage (AA)	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Cylinders as prescribed for any compressed gas except acetylene. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).
Spirits of nitroglycerin			See: "Nitroglycerin, spirits of:"			
Tar, liquid (when possessing a flashpoint at or below 80° F.)			See: "Road asphalt or tar, liquid."			

Toluene Toluol.	*Colorless volatile liquid* *Benzene-like odor, distillate from coal tar.* *Flash point 45° F.* *Immiscible with water.* *Vapors are 3 times heavier than air and form an explosive mixture within a range of 1½ to 7% in air.* *Vapors are poisonous and suffocating.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A), ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Stowage: "On deck protected." "On deck under cover." Outside containers: Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.

146.21-100 Table D.—Classification: Inflammable liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Turpentine substitutes (when possessing a flashpoint at or below 80° F.).	*Special fractions of petroleum oils (usually with a boiling point of 260° to 320° F.) used in the place of turpentine as a paint thinner, etc. Flashpoint variable. Immiscible with water.*	Red	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC—11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X), not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC—11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap.	Ferry stowage (AA).	Ferry stowage (BB).
				Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC—11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A, not over 16 gal. cap. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G) not over 110 gal. cap. (ICC-17C, 17E) STC not over 55 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC—11A, 11B) WIC, not over 16 gal. cap. Wooden boxes. WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 10 gal. cap. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap. Tank cars (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA).
Varnish (when possessing a flashpoint at or below 80° F.).	*A solution of natural or artificial resins, asphalts, pyroxylins, etc. in volatile solvents, driers, and thinners, of such fluidity or viscosity that it can be readily applied to a surface.*	Red	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.	Outside containers and stowages as for "Paint, liquid," which see.
Wood filler, liquid (when possessing a flashpoint at or below 80° F.).	*Power dissolved in a volatile liquid forming a solution used for filling the cellular spaces and sealing wood surfaces to make them smooth.*	Red	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.

Wood stain, liquid (when possessing a flashpoint at or below 80° F.	*A liquid product consisting of basic colors in powdered form mixed with a solvent such as turpentine, benzine, solvent naptha, alcohol, etc.*	Red	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.	Outside containers and stowages as for "Paint, liquid", which see.
Xylol. Xylene. (When possessing a flashpoint at or below 80° F.)	*Coal tar distillate. Colorless liquid having a characteristic odor.* *Flash point 75° F. or above.* *Immiscible with water.* *Vapors are 4 times heavier than air and will form an explosive mixture in air.* *Vapors are poisonous and suffocating.*	Red	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E), STC, not over 55 gal. cap. Aluminum barrels or drums, (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B), not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars, (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap. Wooden boxes WIMC (ICC-15X), not over 10 gal. cap.	Stowage: "On deck protected." "On deck under cover." Outside containers: Wooden barrels or kegs: (ICC-11A, 11B) WIC, not over 16 gal. cap. Wooden boxes, WIC, (ICC-15A, 15B, 15C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, WIC (ICC-21A), not over 1 gal. cap.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5G), not over 110 gal. cap. (ICC-17C, 17E), STC, not over 55 gal. cap. Aluminum barrels or drums, (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B) not over 50 gal. cap. (ICC-11A, 11 B), WIC, not over 16 gal. cap. Wooden boxes, WIC ICC, 15A, 15B, 15 C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 5C, 5 G), not over 110 gal. cap. (ICC-17C, 17E), STC, not over 55 gal. cap. Aluminum barrels or drums: (ICC-42B, 42C), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B), not over 50 gal. cap. (ICC-11A, 11B), WIC, not over 16 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 1C, 16A, 19A) not over 16 gal. cap. Fiberboard boxes, WIC: (ICC-12B) not over 65 lbs. gr. wt. (ICC-12E) WIMC, not over 110 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 1 gal. cap. Tank cars, (ICC-103, 104, 104A, ARA-II, ARA-III, ARA-IV, ARA-IVA). Authorized only for export shipments: Steel barrels or drums (ICC-17X) STC, not over 55 gal. cap.
Zinc ethyl	*Colorless liquid. Takes fire on contact with air.* *Decomposes in water.*	Red	Stowage: "On deck protected." Containers: Cylinders as prescribed for any compressed gas except acetylene.	Not permitted	Not permitted	Not permitted.

DETAILED REGULATIONS GOVERNING INFLAMMABLE SOLIDS AND OXIDIZING MATERIALS

146.22-1 Definition of inflammable solids and oxidizing materials.—An inflammable solid and an oxidizing material are defined by the ICC Regulations as set forth in §§ 146.22-2 and 146.22-3 herein and such definitions are binding upon all shippers making shipments of inflammable solids and oxidizing materials by common carrier vessels engaged in interstate or foreign commerce by water. These definitions are accepted and adopted and form part of the regulations in this subchapter applying to all shippers making shipments of inflammable solids and oxidizing materials by any vessel, and shall apply to the owners, charterers, agents, master, or other person in charge of a vessel and to other persons, transporting, carrying, conveying, storing, stowing or using inflammable solids or oxidizing materials on board any vessel subject to R. S. 4472, as amended, and the provisions of the regulations in this subchapter.

146.22-2 Inflammable solids defined.—An inflammable solid is a solid substance other than one classified as an explosive, which is liable, under conditions incident to transportation, to cause fires through friction, through absorption of moisture, or through spontaneous chemical changes.

146.22-3 Oxidizing materials defined.—An oxidizing material is a substance such as a chlorate, permanganate, peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter.

146.22-4 Stowage on board vessels.—All inflammable solids and oxidizing materials offered for transportation on board vessels shall, when taken on board a vessel, be stowed in accordance with the provisions applying to the particular character of vessel as shown in the tables forming § 146.22-100, and with the detailed regulations of stowage.

146.22-5 Limitation of "On deck" stowage.—When "On deck in open" stowage is permitted for any substance by § 146.22-100 it shall apply only to the water-tight containers in which such substances are packed.

146.22-6 Mixed stowages of oxidizing materials.—The stowage of bichromates, chlorates, perchlorates, nitrates, and peroxides with explosives and other dangerous articles or substances shall conform to the following conditions:

(a) These substances shall not be stowed in the same compartment or hold in which explosives are stowed.

(b) These substances shall not be stowed in the same compartment or hold in which acids and other corrosive liquids (white label) are stowed.

(c) These substances shall not be stowed in the same compartment or hold in which inflammable liquids (red label) are stowed.

(d) These substances shall not be stowed in the same compartment in which cotton, sulfur in bulk, or charcoal are stowed, nor shall they be stowed in a hold over or under one in which sulfur in bulk is stowed.

(e) These substances shall not be stowed in proximity to readily combustible materials such as textile products or finely divided substances such as organic powder, etc.

146.22-7 Stowage of charcoal.—In the stowage of charcoal the following conditions shall be complied with:

(a) Before stowing charcoal the compartment or hold in which the charcoal is to be stowed shall be swept broom clean. Any residue of a former cargo, such as and including products of petroleum, vegetable or animals oils, nitrate, or sulfur, shall be carefully cleaned up and the charcoal protected by clean dunnage from coming in contact with any such residue.

(b) Charcoal packed in bags and offered for transportation aboard vessels in quantities of more than one ton shall be so loaded that the bags are laid horizontally and so packed that there will be space for efficient air circulation. If the bags are not compactly filled and closed so as to avoid free space within, dunnage strips shall be laid between the bags both vertically and horizontally. Space for ventilating shall be maintained in the way of bulkheads, the shell of the vessel, the under deck, and the overhead deck.

When stowage space permits, not more than 40 tons of charcoal shall be stowed in any one compartment or hold. If the arrangements of hold space require the stowage of larger tonnage, the arrangement for ventilating should be increased to assure sufficient venting effect.

(c) Broken bags shall be refused and loose material from broken bags accumulating in the hold during loading shall be removed. Bags may be repacked or have new closing means provided and then stowed.

(d) Charcoal "Screenings" packed in bags shall be so stowed as to provide spaces for air circulation between tiers regardless of the quantity being transported.

146.22-8 Limited quantity shipments.—(a) Inflammable Solids and Oxidizing Materials when packed in inside containers of not over 1 pound net weight each, and packed in outside containers not exceeding 25 pounds net weight each, are exempt from specification packaging, marking other than name of contents, and labeling requirements, unless otherwise provided by the regulations in this part.

(b) Inflammable solids and oxidizing materials total weight not over 16 ounces in any outside package, unless otherwise provided by the regulations in this part, are exempt from specification packaging, marking other than name of contents, and labeling requirements.

(c) Such limited quantity shipments may be accepted on board all vessels subject to the regulations in this part provided the bill of lading or other shipping paper correctly describes the article in accordance with the true name as shown in the commodity list. Stowage shall be "On deck under cover" or "Tween decks" in a compartment not subject to artificial heat.

(d) The provisions of (a) and (b) herein do not extend to shipments of the following Inflammable Solids and Oxidizing Materials:

Bags, nitrate of soda, empty and unwashed.
Benzoyl peroxide.
Burnt cotton.
Calcium chlorite.
Calcium phosphide.
Charcoal, wood, screenings.
Coal, ground bituminous, sea coal and coal facings.
Cobalt resinate, precipitated.
Cotton waste, oily.
Fiber, burnt.
Fibers or fabrics, oily.
Fish scrap or fish meal.
Hair, wet.
Iron sponge.
Matches, strike-anywhere.
Motion-picture film (exposed) and motion-picture film scrap (nitrocellulose base).
Motion-picture film, old and worn out (nitrocellulose base).
Paper stock, wet.
Paper waste, wet.
Phosphoric anhydride.
Phosphorus, amorphous, red.
Phosphorus pentachloride.
Phosphorus, white or yellow.
Photographic film scrap.
Picric acid, wet, exceeding 16 ounces.
Potassium metallic.
Pyroxylin plastic scrap.
Rags, oily.
Rags, wet.
Sodium chlorite.
Sodium metallic.
Sodium peroxide.
Sodium picramate.
Spent iron mass or spent iron sponge.
Spent oxide.
Tankage, garbage, tankage, fertilizers.
Tankages, rough ammoniate.
Textile waste, wet.
Wool waste, wet.
X-ray film (exposed) and X-ray film scrap (nitrocellulose base).
Zirconium metallic, dry, wet or sludge.
Zirconium picramate.

146.22–100 Table E.—Classification: Inflammable solids and oxidizing materials

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vesse	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Aluminum nitrate			See: "*Nitrates.*"			
Ammonium bichromate.	*Orange-red odorless crystals.* *Soluble in water.* *Decomposed by heat.* *Will render organic substances easily inflammable.* *Do not breathe air laden with dust of this material.* Stow separate from all acids (white label).	Yellow	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-6A), not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22B) WIC, not over 150 lbs. gr. wt.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A), not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C), not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A), not over 55 gal. cap. (ICC-6B, 6C), not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C), not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A), not over 55 gal. cap. (ICC-6B, 6C), not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C), not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22B WIC, not over 150 lbs. gr. wt.

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ammonium nitrate			See "*Nitrates.*"			
Ammonium perchlorate.			See: "*Perchlorates.*"			
Ammonium permanganates.			See: "*Permanganates.*"			
Ammonium picrate, wet (*when wet with not less than 10% of water and in a quantity not exceeding 16 ounces in one outside package*).	*In accepting shipments, observe outside containers carefully for signs of leakage. Refuse packages showing leakage or signs of having leaked.* Stow well away from all metals, metallic powders, finely divided organic materials, lime, potash, soda or any chlorates, nitrates or other oxidizing materials. Do not stow with explosives or acids (white label). Do not stow adjacent to living quarters.	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Stout wooden boxes, WIC, the net weight in any one outside package shall not exceed 16 ounces dry weight. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Stout wooden boxes, WIC, the net weight in any one outside package shall not exceed 16 ounces dry weight. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.	Ferry stowage (AA) Outside containers: Stout wooden boxes, WIC, the net weight in any one outside package shall not exceed 16 ounces dry weight.	Ferry stowage (BB). Outside containers: Stout wooden boxes, WIC, the net weight in any one outside package shall not exceed 16 ounces dry weight.
Bags, nitrate of soda, empty and unwashed.	*Burlap or other fiber bags used for shipment of nitrate of soda.* *Very inflammable due to impregnation with nitrate.* Do not stow in same compartment with explosives, inflammable liquids (red label), combustible liquids or combustible materials.	Yellow	Stowage. "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) not over 600 lbs. net wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) not over 400 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.

Bags, Nitrate of Soda, Empty and Washed.	*Burlap or other fiber bags used for shipment of nitrate of soda, when properly washed with water.*	----------	See: "Burlap bags, used and washed" in Hazardous Articles table.	See: "Burlap bags, used and washed" in Hazardous Articles table.	See: "Burlap bags, used and washed" in Hazardous Articles table.	See: "Burlap bags, used and washed" in Hazardous Articles table.
Barium chlorate	----------	----------	See: "*Chlorates.*"			
Barium chlorate, wet	----------	----------	See: "*Chlorates, wet.*"			
Barium nitrate	----------	----------	See: "*Nitrates.*"			
Barium perchlorate	----------	----------	See: "*Perchlorates.*"			
Barium permanganate	----------	----------	See: "*Permanganates.*"			
Barium peroxide Barium binoxide. Barium dioxide.	*A heavy grayish-white powder. Mixed with organic material or finely divided metals, it is dangerously inflammable and may be ignited by friction or may cause spontaneous ignition of such material.* *Insoluble in water.* *Poisonous if taken internally.* Stow away from foodstuffs. Stow separate from all combustible materials, explosives, or acids (white label).	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 880 lbs. gr. wt. (ICC-6B, 6C) not over 1,400 lbs. gr. wt. (ICC-17E, 37D) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.	Stowage: "On deck under cover." Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 880 lbs. gr. wt. (ICC-6B, 6C) not over 1,400 lbs. gr. wt. (ICC-17E, 37D) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 880 lbs. gr. wt. (ICC-6B, 6C) not over 1,400 lbs. gr. wt. (ICC-17E, 37D) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.
Benzoyl peroxide, dry (*granular form*). Note: Benzoyl peroxide shall not be considered granular if more than 25% passes through a 10-mesh sieve.	*Granular form is highly inflammable. Strong supporter of combustion.* *Insoluble in water.* Keep cool and dry. Stow separate from all combustible materials, explosives, and acids (white label).	Yellow	Stowage: "On deck under cover." Outside containers: Wooden boxes, WIC (ICC-15A. 15B) not over 50 lbs. net wt.	Stowage: "On deck under cover." Outside containers: Wooden boxes, WIC (ICC-15A, 15B) not over 50 lbs. net wt.	Ferry stowage (AA) Outside containers: Wooden boxes, WIC (ICC-15A, 15B) not over 50 lbs. net wt.	Ferry stowage (BB). Outside containers: Wooden boxes, WIC (ICC-15A, 15B) not over 50 lbs. net wt.
Benzoyl peroxide, wet (*with not less than 30% water*). Shipping containers shall have marked thereon the gross, tare and net weight of the package.	*A light finely divided white crystalline powder. In dry condition burns almost as rapidly as nitrocellulose.* When in powdered or crystalline form must be wet with at least 30% water by weight. Check gross weight of container to ascertain if leakage has occurred. Reject leaking containers or ones that show signs of having leaked.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C) not over 200 lbs. gr. wt.	Stowage: "On deck under cover." Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C) not over 200 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C) not over 200 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C) not over 200 lbs. gr. wt.

146.22–100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Burnt cotton (not repicked). The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that the bales of cotton have not shown evidence of fire for a period of ten days. NOTE: When burnt cotton is repicked and rebaled it is not subject to this regulation and may be shipped as for "Cotton."	*Cotton that has been on fire and from which the burnt portions have not been removed by repicking.* *The principal hazard is that the fire may rekindle.*	Yellow	Stowage: "On deck in open." Outside containers: Shall not be accepted unless securely baled.	Not permitted	Not permitted	Not permitted.
Burnt fibers			See: "Fibers, burnt, wet or damp."			
Calcium chlorate			See: "*Chlorates.*"			
Calcium chlorite	*A strong oxidizing material in the form of crystals or crystalline podwer. Soluble in water.* *Mixed with organic material or finely divided metals it is dangerously ignitible and may be ignited by friction or may cause spontaneous ignition of such material.* Stow separate from charcoal, sulfur, sugar, flour, and similar finely divided substances. Do not stow in same compartment with explosives, acids (white label), inflammable liquids (red label) or combustible materials. Keep cool.	Yellow	Stowage: "On deck protected." "On deck under cover." "Under deck, but not overstowed." Outside containers: Steel barrels or drums: (ICC–6A) not over 55 gal. cap. (ICC–6B, 6C) not over 110 gal. cap. (ICC–17E, 37D) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.

Calcium hypochlorite compounds, dry, containing more than 8.80% available oxygen (39% available chlorine)."	*Decomposed by moisture. If exposed to excessive heat, or to the rays of the sun it may decompose spontaneously evolving vapor, with sufficient pressure to rupture. The vapors from ruptured containers have been known to ignite spontaneously. When exposed gives off pungent vapors (chlorine) that are corrosive. Keep dry. May destroy textiles.* Do not stow in the same compartment with corrosive liquids (white label) nor with turpentine. Stow well away from foodstuffs, living quarters, and all sources of artificial heat."	Yellow.	Stowage: "On deck under cover." "Tween decks." "Under deck, but not over-stowed." Outside containers: Steel barrels or drums: (ICC-6A, 6B, 6C) not over 55 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A, 6B, or 6C) not over 55 gal. cap. (ICC-17E, 37D, 37E, 37F) STC not over 55 gal. cap.	Ferry stowage (AA): Outside containers: (ICC-6A, 6B, 6C) not over 55 gal. cap. (ICC-17E, 37D, 37E, 37F) STC not over 55 gal. cap.	Ferry stowage (BB): Outside containers: (ICC-6A, 6B, 6C) not over 55 gal. cap. (ICC-17E, 37D, 37E, 37F) STC not over 55 gal. cap.
Calcium metallic	*A highly inflammable solid in the form of gray, hard lumps with a lustrous silver-white surface when freshly cut. Decomposes water with evolution of hydrogen.* Stow separate from explosives, inflammable liquids (red label) or acids (white label) and in a well ventilated compartment. Keep dry and cool.	Yellow.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums (ICC-21A), not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Calcium nitrate			See: "*Nitrates.*"			
Calcium perchlorate			See: "*Perchlorates.*"			
Calcium permanganate.			See: "*Permanganates.*"			

146.22–100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required condition for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Calcium peroxide	*White to yellowish, odorless powder.* *Strong oxidizing agent. Decomposes on exposure to moist air; with acids forms hydrogen peroxide.* *Insoluble in water.* Keep dry. Stow separate from all combustible materials, explosives and acids (white label).	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck." Outside containers: Steel barrels or drums: (ICC–6A) not over 55 gal. cap. (ICC–6B, 6C) not over 110 gal. cap. (ICC–17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Fiber drums (ICC–21A) not over 150 lbs. gr. wt. Plywood drums (ICC–22A) (ICC–22B) WIC, not over 150 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC–6A) not over 55 gal. cap. (ICC–6B, 6C) not over 110 gal. cap. (ICC–17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Fiber drums (ICC–21A) not over 150 lbs. gr. wt. Plywood drums (ICC–22A) (ICC–22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel darrels or drums: (ICC–6A) not over 55 gal. cap. (ICC–6B, 6C) not over 110 gal. cap. (ICC–17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Fiber drums (ICC–21A) not over 150 lbs. gr. wt. Plywood drums (ICC–22A) (ICC–22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC–6A) not over 55 gal. cap. (ICC–6B, 6C) not over 110 gal. cap. (ICC–17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Fiber drums (ICC–21A) not over 150 lbs. gr. Plywood drums (ICC–22A) (ICC–22B) WIC, not over 150 lbs. gr. wt.
Calcium phosphide	*Solid gray lumps. Decomposes on contact with water or damp air, generating hydrogen phosphide a spontaneously inflammable and poisonous gas.* Keep absolutely dry. Stowage shall not be permitted over holds containing explosives or inflammable liquids. Do not stow in same compartment with compressed gases, inflammable liquids (red label) or acids (white label).	Yellow	Stowage: "On deck under cover." Outside containers: Steel barrels or drums (ICC–6A, 6B, 6C), not over 55 gal. cap. Wooden boxes (ICC–15A, 15B) lined with metal and with hermetically sealed inside containers, not over 125 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.

Charcoal— The following requirement applies to shipments of all forms of charcoal: The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that the charcoal is described by its proper shipping name as shown herein; conforms in all other respects to all of the applicable requirements as set forth in these regulations; and that the material has been prepared and packed under the conditions as set forth in the current I. C. C. regulations governing the substance.	*Charcoal is an artificial carbon obtained by incomplete combustion of substances such as wood, bone, nut shells, vegetable or animal matter. It is shipped in the form of fine, very light, black powder, or in heavy grains or lumps or sticks.* *Case hardening compounds are usually wood charcoal together with such energizers as sodium or barium carbonates, cyanides, etc.* Keep cool and dry. Do not stow in the same compartment with explosives, inflammable liquids (red label), oxidizing materials (yellow label), or acids (white label), nor with oils or greases. Do not accept charcoal that shows signs of heat. Require a certifying statement from the shipper that the charcoal has been exposed to the air for the required period of time before shipping.					
Charcoal, activated	*A more or less pure, powdered or granulated form of charcoal characterized by a high absorptive capacity.*	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, not more than 4 bu. cap. Wooden barrels or kegs (WIC), wooden boxes (WIC), not over 200 lbs. gr. wt. Fiberboard boxes (WIC), not over 65 lbs. gr. wt. Siftproof paper bags or paper-lined burlap (jute) bags, not more than 2½ bu. cap.	Not permitted	Ferry stowage (AA) Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, not more than 4 bu. cap. Wooden barrels or kegs (WIC), wooden boxes (WIC), not over 200 lbs. gr. wt. Fiberboard boxes (WIC), not over 65 lbs. gr. wt. Siftproof paper bags or paper-lined burlap (jute) bags, not more than 2½ bu. cap.	Ferry stowage (BB). Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, not more than 4 bu. cap. Wooden barrels or kegs (WIC), wooden boxes (WIC), not over 200 lbs. gr. wt. Fiberboard boxes (WIC), not over 65 lbs. gr. wt. Siftproof paper bags or paper-lined burlap (jute) bags, not more than 2½ bu. cap.
Charcoal briquettes	Briquettes made from wood charcoal with starch and water or tar for a binder. Such prepared charcoal no longer retains its fiery tendency, the pores being obstructed by the added material.	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes.	Ferry stowage (AA) Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes.	Ferry stowage (BB). Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes.

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Charcoal—Continued.			Outside containers—Con. Unlined burlap (jute) bags, strong, unlined cotton bags, not more than 4 bu. cap. Paper-lined burlap (jute) bags, paper bags, not more than 2½ bu. cap. NOTE: Charcoal briquets may also be accepted in bulk on board cargo vessels.	Unlined burlap (jute) bags, strong, unlined cotton bags, not more than 4 bu. cap. Paper-lined burlap (jute) bags, paper bags, not more than 2½ bu. cap.	Unlined burlap (jute) bags, strong, unlined cotton bags, not more than 4 bu. cap. Paper-lined burlap (jute) bags, paper bags, not more than 2½ bu. cap. NOTE: Charcoal briquets may also be accepted in bulk in highway vehicles which show no signs of sifting.	Unlined burlap (jute) bags, strong, unlined cotton bags, not more than 4 bu. cap. Paper-lined burlap (jute) bags, paper bags, not more than 2½ bu. cap. NOTE: Charcoal briquets may also be accepted in bulk in railroad freight cars or highway vehicles which show no signs of sifting.
Charcoal screenings *made from "pinon" wood.*	*Charcoal screenings consist of small pieces of charcoal varying from about ½ inch in the maximum dimension to grains of dust.*	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: * Unlined, burlap (jute) bags; strong, unlined cotton bags; not more than 4 bu. cap. *NOTE: Screenings made from pine wood charcoal must not be accepted for transportation unless the shipper certifies that the screenings have been stored in a dry place in loosely piled bags, freely exposed to the air, for not less than five (5) days after separation from the lump before shipment.	Not permitted	Ferry stowage (AA) Outside containers: * Unlined, burlap (jute) bags; strong, unlined cotton bags; not more than 4 bu. cap. *NOTE: Screenings made from pine wood charcoal must not be accepted for transportation unless the shipper certifies that the screenings have been stored in a dry place in loosely piled bags, freely exposed to the air, for not less than five (5) days after separation from the lump before shipment.	Ferry stowage (BB). Outside containers: * Unlined, burlap (jute) bags; strong, unlined cotton bags; not more than 4 bu. cap. *NOTE: Screenings made from pine wood charcoal must not be accepted for transportation unless the shipper certifies that the screenings have been stored in a dry place in loosely piled bags, freely exposed to the air, for not less than five (5) days after separation from the lump before shipment.

Charcoal, wood screenings, *other than "Pinon" wood screenings.*		No label required.	Stowage: "On deck under cover." Outside containers: * Unlined burlap (jute) bags; strong, unlined cotton bags; not more than 4 bu. cap. * NOTE: Charcoal, wood screenings other than pine wood screenings must not be accepted for transportation unless the shipper certifies that the screenings have been stored in a dry place in loosely piled bags, freely exposed to the air, for not less than twenty (20) days after separation from the lump before shipment.	Not permitted	Ferry stowage (AA) Outside containers: * Unlined burlap (jute) bags; strong, unlined cotton bags; not more than 4 bu. cap. * NOTE: Charcoal, wood screenings other than pine wood screenings must not be accepted for transportation unless the shipper certifies that the screenings have been stored in a dry place in loosely piled bags, freely exposed to the air, for not less than twenty (20) days after separation from the lump before shipment.	Ferry stowage (BB). Outside containers: * Unlined burlap (jute) bags; strong, unlined cotton bags, not more than 4 bu. cap. * NOTE: Charcoal, wood screenings other than pine wood screenings must not be accepted for transportation unless the shipper certifies that the screenings have been stored in a dry place in loosely piled bags, freely exposed to the air, for not less than twenty (20) days after separation from the lump before shipment.
Charcoal screenings, wet (wet charcoal screenings shall not be offered for transportation or storage on board any vessel).	*Charcoal screenings from wet charcoal, or wet screenings, or screenings which have been wetted since manufacture and not dried and exposed to the air for the required period of time.*		Not permitted	Not permitted	Not permitted	Not permitted.
Charcoal, shell	*Charcoal made from cocoanut shells, walnut shells, corn cobs, peach pits or similar materials.*	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes; unlined burlap (jute) bags; not more than 4 bu. cap. Paper-lined burlap (jute) bags; paper bags; not more than 2½ bu. cap.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes; unlined burlap (jute) bags; not more than 4 bu. cap. Paper-lined burlap (jute) bags; paper bags; not more than 2½ bu. cap.	Ferry stowage (AA) Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes; unlined burlap (jute) bags; not more than 4 bu. cap. Paper-lined burlap (jute) bags; paper bags; not more than 2½ bu. cap.	Ferry stowage (BB). Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes; unlined burlap (jute) bags; not more than 4 bu. cap. Paper-lined burlap (jute) bags; paper bags; not more than 2½ bu. cap. In bulk in tight railroad freight cars or highway vehicles which show no signs of sifting.
Charcoal, wet (wet charcoal shall not be offered for transportation or storage on board any vessel).	*Charcoal, in any form, that is wet or that has been wetted since manufacture and not dried and exposed to the air for the required period of time.*		Not permitted	Not permitted	Not permitted	Not permitted.

146.22–100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Charcoal—Continued. Charcoal, wood, crushed, granulated, ground or pulverized.	*Crushed, granulated, ground or pulverized charcoal is prepared from either lump charcoal or charcoal screenings.*	Yellow.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, not more than 4 bu. cap. Wooden barrels or kegs (WIC), wooden boxes (WIC), not over 200 lbs. gr. wt. Fiberboard boxes (WIC), not over 65 lbs. gr. wt. Siftproof paper bags or paper-lined burlap (jute) bags, not more than 2½ bu. cap.	Not permitted	Ferry stowage (AA). Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, not more than 4 bu. cap. Wooden barrels or kegs (WIC), wooden boxes (WIC), not over 200 lbs. gr. wt. Fiberboard boxes (WIC), not over 65 lbs. gr. wt. Siftproof paper bags or paper-lined burlap (jute) bags, not more than 2½ bu. cap.	Ferry stowage (BB). Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, not more than 4 bu. cap. Wooden barrels or kegs (WIC), wooden boxes (WIC), not over 200 lbs. gr. wt. Fiberboard boxes (WIC), not over 65 lbs. gr. wt. Siftproof paper bags or paper-lined burlap (jute) bags, not more than 2½ bu. cap.
Charcoal, wood, lump.	Lump wood charcoal shall be dry and free from screenings and brands.	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, unlined burlap (jute) bags, strong, unlined cotton bags, not more than 4 bu. cap. Paper-lined burlap (jute) bags, paper bags, not more than 2½ bu. cap.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, unlined burlap (jute) bags, strong unlined cotton bags, not more than 4 bu. cap. Paper-lined burlap (jute) bags, paper bags, not more than 2½ bu. cap.	Ferry stowage (AA). Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, unlined burlap (jute) bags, strong, unlined cotton bags, not more than 4 bu. cap. Paper-lined burlap (jute) bags, paper bags, not more than 2½ bu. cap. May also be accepted in bulk in tight highway vehicles which show no signs of sifting.	Ferry stowage (BB). Outside containers: Tight wooden barrels or kegs, tight wooden boxes, fiberboard boxes, unlined burlap (jute) bags, strong, unlined cotton bags, not more than 4 bu. cap. Paper-lined burlap (jute) bags, paper bags, not more than 2½ bu. cap. May also be accepted in bulk in tight railroad freight cars or highway vehicles which show no signs of sifting.

Chlorates: Barium chlorate. Calcium chlorate. Chlorates, N. O. S. Potassium chlorate. Chlorate of potash. Sodium chlorate. Chlorate of soda. Strontium chlorate. Zinc chlorate.	*Chlorates are in the form of colorless crystals or the powder thereof and are strong oxidizing agents.* *Chlorates mixed with organic matter form very inflammable compositions, and frequently act as high explosives when mixed with finely divided organic material or finely divided metals. Mixtures of chlorates with organic matter or finely divided materials may be ignited by friction.* *All chlorates when brought in contact with sulfuric acid are liable to cause fire or explosion.* *Chlorates mixed with ammonium salts are liable to spontaneous decomposition and ignition.* *Soluble in water.* Chlorates should not be stowed in the same compartment with explosives, acids (white label), inflammable liquids (red label) or combustible materials such as cotton, charcoal, sulfur, etc.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 400 lbs. gr. wt. Wooden boxes WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 25 lbs. net wt. Fiber drums, WIC (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A), (ICC-22B) WIC, not over 150 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Chlorates, Wet: Barium chlorate, wet. Chlorates, N. O. S., wet. Strontium chlorate, wet.	Chlorates wet with 10% or more of water, equally distributed therein.	Yellow	Tank cars (ICC-103) Tanks mounted on highway vehicles.	Not permitted	Not permitted	Not permitted.
Chromic acid	*An oxidizing material in the form of reddish-brown crystals. Vapor or dust given off by this substance is poisonous by absorption through the skin, the mucous membrane or through respiratory organs.* *Mixed with organic material it produces heat and frequently causes fire.* *Soluble in water.* Do not stow in same compartment with explosives, acids (white label), inflammable liquids (red label), or combustible materials. *Stowages with alcohol and acetic acid are dangerous as contact with these substances may cause explosion.*	Yellow	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B), not over 115 lbs. net wt.	Stowage: "On deck protected." Outside containers: Steel barrels or drums (ICC-6A) not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B) not over 115 lbs. net wt.	Ferry-stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B) not over 115 lbs. net wt.

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Coal facings. Ground bituminous coal. Sea coal.	*Coal facings (foundry facing) is a term applied to ground or pulverized coal used in foundries in preparation of the molds.* *Ground bituminous coal is the name applied to bituminous coal that has been finely ground or pulverized for use as fuel.* *Sea coal is a term of Scottish origin, originally applied to coal mined at seaboard or from under the sea and in this country today is applied to differentiate between bituminous coal (soft coal) and anthracite coal. Ground bituminous coal and foundry facings are sometimes termed "Sea Coal."* *Coal in this form is liable to spontaneous heating under favorable conditions, especially if of high sulfur content. By storing the more finely ground material for some days after grinding before shipment, spontaneous heating is greatly reduced.*	Yellow	Stowage: "On deck protected." Outside containers: Hermetically sealed metal lined wooden boxes. Airtight metal containers, not over 300 lbs. gr. wt.	Not permitted	Not permitted	Ferry stowage (BB). Outside containers: Hermetically sealed metal lined wooden boxes. Airtight metal containers, not over 300 lbs. gr. wt.

Cobalt resinate, precipitated.	*An inflammable, finely divided brown powder having an odor similar to resin. Insoluble in water. Is subject to spontaneous ignition upon exposure to air.*	Yellow	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F, 37G) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B), not over 115 lbs. net wt.	Not permitted	Not permitted.	Not permitted.
Cobalt resinate, fused.			No restrictions	No restrictions	No restrictions	No restrictions.
Collodion cotton, wet with water: Must contain at least 20 pounds of water to 80 pounds of dry material.	A proper descriptive name which may be used to describe export shipments of "Nitrocellulose, wet with water."	Yellow	Outside containers and stowages as for "Nitrocellulose, wet with water," which see.	Outside containers and stowage as for "Nitrocellulose, wet with water," which see.	Outside containers and stowage as for "Nitrocellulose, wet with water," which see.	Outside containers and stowages as for "Nitrocellulose, wet with water," which see.
Cotton, burnt (not repicked.			See: "Burnt cotton (not repicked)."			
Cotton waste, oily			See: "Fibers or fabrics, with animal or vegetable oil."			
Cotton, wet			See: "Fibers, burnt, wet or damp."			

146.22–100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Drugs, chemicals, medicines, or cosmetics. A unit substance or a compound classified as an inflammable solid or an oxidizing material in accordance with the definitions contained herein, when prepared, packed, and offered to the trade as drugs, chemicals, medicines, or cosmetics. In quantity not exceeding 16 ounces by weight, in glass or earthenware containers or 32 ounces in inside metal containers. When packed in accordance with ICC requirements for the particular substance, and separated and cushioned by incombustible absorbent material when the characteristics of the substances so require.	----------	No label required.	Stowage: "On deck protected." "In deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt. NOTE: Observe instructions regarding "This side up" stowage when packages are so marked. It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt. NOTE: Observe instructions regarding "This side up" stowage when packages are so marked. It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.	Ferry stowage (AA) Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. g.r wt.	Ferry stowage (BB). Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt.

Drugs, chemicals, medicines, or cosmetics, N. O. S. A unit substance or a compound classified as an inflammable solid or an oxidizing material in accordance with the definitions contained herein, when prepared, packed and offered to the trade as drugs, chemicals, medicines, or cosmetics. In quantity exceeding 16 ounces by weight, in glass or earthenware containers or 32 ounces in inside metal containers. When packed in accordance with ICC requirements for the particular substance, and separated and cushioned by incombustible absorbent material when the characteristics of the substances so require.	----------	Yellow..	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C), not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F), STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A). (ICC-22B) WIC not over 150 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums. (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F), STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A). (ICC-22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (AA).....	Ferry stowage (BB). Outside containers: Steel barrels or drums. (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A). (ICC-22B) WIC, not over 150 lbs. gr. wt.
Fibers, burnt, wet or damp. Cotton, wet. Felt waste, wet. Hemp, wet. Jute, wet. Rags, wet. Textile waste, wet. Wool waste, wet.	*Fibers of vegetable or animal origin that have been involved in a fire or that have been wetted by rain or other moisture.*	Yellow..	Stowage: "On deck protected." Outside containers: Hermetically sealed metal lined wooden boxes. Airtight metal containers.	Not permitted.....	Not permitted.....	Ferry stowage (BB). Outside containers: Hermetically sealed metal lined wooden boxes. Airtight metal containers.
Fibers or fabrics, with animal or vegetable oil. Cotton waste, oily. Rags, oily. (When containing more than 5% of animal or vegetable oil).	*Fibers or fabrics impregnated with more than 5% of animal or vegetable oil.* *Includes oiled or treated paper or textiles not manufactured into finished articles.*	Yellow.				
Film support (Nitrocellulose base).	----------	----------	See: "Pyroxylin plastics, rods, rolls, sheets, tubes."			

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Fish scrap or fish meal (*Containing less than 6% or more than 18% moisture*).	*Fish scrap or fish meal consists of ground and dried fish residue.*	Yellow	Stowage: "On deck protected." Outside containers: Hermetically sealed metal lined wooden boxes. Airtight metal containers.	Not permitted	Not permited	Ferry stowage (BB). Outside containers: Hermetically sealed metal lined wooden boxes. Airtight metal containers.
Garbage tankage, *Containing less than 8% moisture.*			See: "*Tankages.*"			
Hair, wet		Yellow	Stowage: "On deck in open." "On deck protected." "On deck under cover." "Tween decks." Outside containers: Tight metal barrels or drums, not over 1,760 lbs. gr. wt.	Not permitted	Ferry stowage (AA) Outside containers: Highway vehicles having metal bodies.	Ferry stowage (BB). Outside containers: Highway vehicles having metal bodies. Gondola cars.
Hemp, wet			See: "Fibers, burnt, wet or damp."			

Inflammable solids, N. O. S.	*May be any substance classifying as an inflammable solid in accordance with the definitions contained in these regulations, provided such inflammable solid is not otherwise specified by name in these regulations.* Stow separate from all combustible material, explosives, inflammable liquids (red label), or acids (white label).	Yellow	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A), not over 150 lbs. gr. wt. Plywood drums: (ICC-22A.) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums (ICC-6A) not over 55 gal. cap. Wooden barrels or kegs: (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not oer 65 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A.) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 100 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, notover 400lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A.) (ICC-22B) WIC, not over 150 lbs. gr. wt.
Jute, wet			See *"Fibers, burnt, wet or damp."*			

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Lacquer base, or lacquer chips, dry, *nitrocellulose base.*	*Lacquer chips are composed of nitrocellulose incorporated with a plasticizer and in the form of thin irregular-shaped pieces. Such chips are the film-forming part of lacquer which remains after the solvents or thinners have evaporated.* *Involved in a fire the products of decomposition, if inhaled, are irritating and poisonous even in small concentrations.* Provide cool stowage in a compartment having a temperature of not exceeding 100° F. and well away from any source of heat and in position to protect or move, even to jettisoning in event of fire. Do not stow in same compartment with explosives, inflammable liquids (red label), other inflammable solids or oxidizing materials (yellow label) or acids (white label).	Yellow	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D) STC, not over 55 gal. cap. Wooden boxes, WIMC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D) STC, not over 55 gal. cap. Wooden boxes, WIMC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D) STC, not over 55 gal. cap. Wooden boxes, WIMC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D) STC, not over 55 gal. cap. Wooden boxes, WIMC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.
Lead nitrate			See "*Nitrates.*"			

Magnesium metallic, powder.	*A white metal, in the form of powder.* *It is highly inflammable, burning with intense heat and light.* *Develops hydrogen gas (which is highly explosive over a wide range) in contact with water or acids.* Keep dry. Do not stow with any acids (white label), or inflammable liquids (red label).	Yellow	Stowage: "On deck under cover" "Tween decks readily accessible" Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (IC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A). (ICC-22B) WIC, not over 150 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Magnesium nitrate			See: "*Nitrates.*"			
Magnesium perchlorate.			See "*Perchlorates.*"			

146.22–100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Magnesium peroxide	*White, powdery substance.* *Decomposes on heating.* *Insoluble in water; gradually decomposed by it with liberation of oxygen.* Keep cool and dry. Stow separate from all combustible materials, explosives, or acids (white label).	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC–6A) not over 55 gal. cap. (ICC–6B, 6C) not over 110 gal. cap. (ICC–17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Fiber drums (ICC–21A) not over 150 lbs. gr. wt. Plywood drums (ICC–22A) (ICC–22B) WIC, not over 150 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC–6A) not over 55 gal. cap. (ICC–6B, 6C) not over 110 gal. cap. (ICC–17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Fiber drums (ICC–21A) not over 150 lbs. gr. wt. Plywood drums (ICC–22A) (ICC–22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC–6A) not over 55 gal. cap. (ICC–6B, 6C) not over 110 gal. cap. (ICC–17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Fiber drums (ICC–21A) not over 150 lbs. gr. wt. Plywood drums (ICC–22A) (ICC–22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC–6B) not over 55 gal. cap. (ICC–6B, 6C) not over 110 gal. cap. (ICC–17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Fiber drums (ICC–21A) not over 150 lbs. gr. wt. Plywood drums (ICC–22A) (ICC–22B) WIC, not over 150 lbs. gr. wt.

Matches, strike-anywhere. *Matches, block.* The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that these matches have been packed in accordance with the conditions set forth in the current ICC regulations.	*Strike-anywhere and block matches are those for the ignition of which a prepared surface is not required.* Stow well away from living quarters and foodstuffs. Do not stow in same compartment with explosives, inflammable liquids (red label., inflammable solids or oxidizing materials (yellow label).	Yellow..	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes, WIC (ICC-15A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 60 lbs. gr. wt. (special 12B for strike-anywhere matches only, not over 45 lbs. gr. wt.). NOTE: The vessel operator shall not accept shipments of Strike-anywhere matches unless the outside container shows, in English, the name of the importer, distributor, or manufacturer and the brand or trade mark under which such matches are manufactured and distributed to the trade: and in addition and separate therefrom shall have plainly marked thereon the words "Strike-anywhere matches."	Stowage: "On deck under cover." Outside containers: Wooden boxes, WIC (ICC-15A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 60 lbs. gr. wt. (special 12B for strike-anywhere matches only, not over 45 lbs. gr. wt.). NOTE: The vessel operator shall not accept shipments of Strike-anywhere matches unless the outside container shows, in English, the name of the importer, distributor, or manufacturer and the brand or trade mark under which such matches are manufactured and distributed to the trade; and in addition and separate therefrom shall have plainly marked thereon the words "Strike-anywhere matches."	Ferry stowage (AA)..... Outside containers: Wooden boxes, WIC (ICC-15A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 60 lbs. gr. wt. (special 12B for strike-anywhere matches only, not over 45 lbs. gr. wt.). NOTE: The vessel operator shall not accept shipments of Strike-anywhere matches unless the outside container shows, in English, the name of the importer, distributor, or manufacturer and the brand or trade mark under which such matches are manufactured and distributed to the trade; and in addition and separate therefrom shall have plainly marked thereon the words "Strike-anywhere matches."	Ferry stowage (BB). Outside containers: Wooden boxes, WIC (ICC-15A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 60 lbs. gr. wt. (special 12B for strike-anywhere matches only, not over 45 lbs. gr. wt.). NOTE: The vessel operator shall not accept shipments of Strike-anywhere matches unless the outside container shows, in English, the name of the importer, distributor, or manufacturer and the brand or trade mark under which such matches are manufactured and distributed to the trade; and in addition and separate therefrom shall have plainly marked thereon the words "Strike-anywhere matches."
Matches, book..... Matches, card. Matches, strike-on-box.	Matches intended to be ignited on a prepared surface only and which may stitched in or fastened to a cover or folder, or prepared match strips not so attached or covered. Each outside container will be marked "Book matches" or "Card matches" as the case may be. Strike-on-box matches are those matches intended to be ignited on a prepared surface. Each outside container will be marked "Strike-on-box Matches."	No label required. No label required.	Matches, strike-on-box, book and card, in outside fiberboard or wooden boxes, or matches strike-on-box, book and card when packed with noninflammable articles provided they are included in a tightly closed cardboard or fiberboard container, or are securely wrapped and packed so as to prevent accidental ignition, before being placed in the outside containers, are exempt from specification packaging, marking other than name of contents, and labeling requirments.	Matches, strike-on-box, book and card, in outside fiberboard or wooden boxes, or matches strike-on-box, book and card when packed with noninflammable articles provided they are included in a tightly closed cardboard or fiberboard container, or are securely wrapped and packed so as to prevent accidental ignition, before being placed in the outside containers, are exempt from specification packaging, marking other than name of contents, and labeling requirements.	Matches, strike-on-box book and card, in outside fiberboard or wooden boxes, or matches strike-on-box, book and card when packed with noninflammable articles provided they are included in a tightly closed cardboard or fiberboard container, or are securely wrapped and packed so as to prevent accidental ignition, before being placed in the outside containers, are exempt from specification packaging, marking other than name of contents, and labeling requirements.	Matches, strike-on-box, book and card, in outside fiberboard or wooden boxes, or matches strike-on-box book and card when packed with noninflammable articles provided they are included in a tightly closed cardboard or fiberboard container, or are securely wrapped and packed so as to prevent accidental ignition, before being placed in the outside containers, are exempt from specification packaging, marking other than name of contents, and labeling requirements.

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Motion-picture film (*Nitrocellulose base, positive or negative*). Includes motion-picture film in use for purposes of exhibition. Each reel shall be in a tightly closed metal can.	*Highly inflammable.* *Decomposition may start and ignition occur at relatively low temperatures. If inhaled, the products of decomposition are irritating and poisonous even in low concentrations.* Provide cool stowage in a compartment having a temperature of not exceeding 100° F. and well away from any source of heat, and in position to protect or move, even to jettisoning in event of fire. Do not stow in same compartment with explosives, inflammable liquids (red label), other inflammable solids or oxidizing materials (yellow label) or acids (white label).	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Metal cases (ICC-32A, 32B), not over 12,000 ft. of 1⅜ in. film, or 6,000 ft. of 2½ in. film. Trunks, WIMC (ICC-32C), for motion-picture film and projecting apparatus. Wooden boxes, WIMC (ICC-15A, 15B, 15C) not over 200 lbs. gr. wt. Fiberboard boxes, WIMC (ICC-12B) not over 2,000 ft. of film in each film-reel can, not over 65 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Metal cases (ICC-32A, 32B), not over 12,000 ft. of 1⅜ in. film, or 6,000 ft. of 2½ in. film. Trunks, WIMC (ICC-32C) for motion-picture film and projecting apparatus. Wooden boxes, WIMC (ICC-15A, 15B, 15C) not over 200 lbs. gr. wt. Fiberboard boxes, WIMC (ICC-12B) not over 2,000 ft. of film in each film-reel can, not over 65 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Metal cases (ICC-32A, 32B), not over 12,000 ft. of 1⅜ in. film, or 6,000 ft. of 2½ in. film. Trunks, WIMC (ICC-32C) for motion-picture film and projecting apparatus. Wooden boxes, WIMC (ICC-15A, 15B, 15C) not over 200 lbs. gr. wt. Fiberboard boxes, WIMC (ICC-12B) not over 2,000 ft. of film in each film-reel can, not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Metal cases (ICC-32A, 32B), not over 12,000 ft. of 1⅜ in. film, or 6,000 ft. of 2½ in. film. Trunks, WIMC (ICC-32C) for motion-picture film and projecting apparatus. Wooden boxes, WIMC (ICC-15A, 15B, 15C) not over 2,000 lbs. gr. wt. Fiberboard boxes, WIMC (ICC-12B) not over 2,000 ft. of film in each film-reel can, not over 65 lbs. gr. wt.
Motion-picture film, unexposed, (*nitrocellulose base*). Each reel shall be in a tightly closed metal can.	Characteristics and hazards as for "motion-picture film," which see above.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes, WIMC (ICC-15A, 15B, 15C, 16A) not over 500 lbs. gr. wt. Fiberboard boxes, WIMC (ICC-12B) not over 75 lbs. gr. wt.	Stowage: (*) "On deck under cover." "Tween decks readily accessible." "Cargo hatch trunkway." *NOTE: Refrigerated stowage (which may be under deck) may be furnished if desired by the shipper. Outside containers: Wooden boxes, WIMC (ICC-15A, 15B, 15C, 16A) not over 350 lbs. gr. wt. Fiberboard boxes, WIMC (ICC-12B) not over 75 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Wooden boxes, WIMC (ICC-15A, 15B, 15C, 16A) not over 350 lbs. gr. wt. Fiberboard boxes, WIMC (ICC-12B) not over 75 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes, WIMC (ICC-15A, 15B, 15C, 16A) not over 350 lbs. gr. wt. Fiberboard boxes, WIMC (ICC-12B) not over 75 lbs. gr. wt.

Motion-picture film (cellulose acetate base).	*Exposed or unexposed cellulose acetate base film. (Slow burning (noninflammable) motion-picture film). Material is combustible with about the same hazard as paper.* Outside containers shall be marked with descriptive name of contents.	No label required.	There are no stowage or container restrictions on packages containing only Cellulose Acetate base motion-picture film; however, when such film is packed with Nitrocellulose base motion-picture film (inflammable) all requirements must be complied with as if all film were inflammable.	There are no stowage or container restrictions on packages containing only Cellulose Acetate base motion-picture film; however, when such film is packed with Nitrocellulose base motion-picture film (inflammable) all requirements must be complied with as if all film were inflammable.	There are no stowage or container restrictions on packages containing only Cellulose Acetate base motion-picture film; however, when such film is packed with Nitrocellulose base motion-picture film (inflammable) all requirements must be complied with as if all film were inflammable.	There are no stowage or container restrictions on packages containing only Cellulose Acetate base motion-picture film; however, when such film is packed with Nitrocellulose base motion-picture film (inflammable) all requirements must be complied with as if all film were inflammable.
Motion-picture film, old and worn out. (*Nitrocellulose base*).	*Old and worn out (not scrap) film, no longer exhibitable and with value only for reclamation of material.* Characteristics and hazards are the same as for "Motion-picture film (*Nitrocellulose base*)," which see.	Yellow..	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C, 6J) not over 110 gal. cap. (ICC-37E) STC, not over 55 gal. cap. Metal cases (ICC-32A, 32B) not exceeding core capacity. Metal boxes (ICC-32D) not over 250 lbs. net wt. of film. Wooden boxes, WIML: (ICC-15A) not over 450 lbs. gr. wt. (ICC-15A, 15B, 15C, 16A, 19A) WIMC not over 450 lbs. gr. wt.	Not permitted..............	Not permitted..............	Not permitted.
Motion-picture film, old and worn out (cellulose acetate base). Motion-picture film, scrap (cellulose acetate base).	*Old and worn out (including scrap) film, no longer exhibitable and with value only for reclamation of material. Material is combustible with about the same hazard as paper.* Outside containers shall be marked with descriptive name of contents.	No label required.	No restrictions..............	No restrictions..............	No restrictions..............	No restrictions.
Motion-picture film scrap (*nitrocellulose base*).			See: "Pyroxylin plastic scrap."			

(10th Amend.—Film scrap (cellulose acetate base) added.
Markings required—Feb. 1942)

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Motion-picture film, toy	Pieces of, exposed, of approximately ¾ inch by 1⅜ inches in size. Not to exceed 1,000 such pieces enclosed in a tight metal box. Also motion-picture outfits, toy, consisting of one projecting apparatus and not to exceed one roll of motion-picture film, 12 feet or less in length. Film shall be in a tight metal box, this enclosed in a wooden box and packed with the projection apparatus in an outside container. Outside containers shall be marked with descriptive name of contents.	No label required.	No restrictions	No restrictions	No restrictions	No restrictions.
Motion-picture film, toy, standard width (*nitrocellulose base*). Each reel shall be in a tightly closed metal can.	Film 1⅜ inches wide on metal reel; not over 200 feet of film on each reel. Characteristics and hazards as for "Motion-picture film (*nitrocellulose base*)", which see.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes, WIMC (ICC-15A, 15B, 15C), not over 250 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes, WIMC (ICC-15A, 15B, 15C), not over 250 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Wooden boxes, WIMC (ICC-15A, 15B, 15C), not over 250 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes, WIMC (ICC-15A, 15B, 15C), not over 250 lbs. gr. wt.
Nitrates:	All outside containers of nitrates shall be marked with the appropriate descriptive name of the nitrate packed within the container.					
Aluminum nitrate	*Colorless crystals or salts. Soluble in water. Involved in a fire will greatly intensify the burning of all combustible materials.* Stow separate from all combustible materials, explosives and acids (white label).	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes.	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes.

Ammonium nitrate	*Colorless, odorless, hygroscopic crystal or white granules.* *Under conditions of exposure to temperatures above 400° F. rapid decomposition and ignition may occur with evolution of heat. Under exposure to severe shock, detonation is possible although not probable under conditions of transportation.* *Soluble in water.* Stow separate from all combustible materials, explosives, and acids (white label), and well away from chlorates and other nitrates.	No label required.	Fiberboard boxes, not over 90 lbs. gr. wt. Fiber drums, not over 150 lbs. gr. wt. Plywood drums, not over 150 lbs. gr. wt. Bags, not over 224 lbs. net wt. Bulk. Bulk in tight R. R. cars. Bulk in tight highway vehicles of a closed type. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.	Fiberboard boxes, not over 90 lbs. gr. wt. Fiber drums, not over 150 lbs. gr. wt. Plywood drums, not over 150 lbs. gr. wt. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.	Fiberboard boxes, not over 90 lbs. gr. wt. Fiber drums, not over 150 lbs. gr. wt. Plywood drums, not over 150 lbs. gr. wt. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.	Fiberboard boxes, not over 90 lbs. gr. wt. Fiber drums, not over 150 lbs. gr. wt. Plywood drums, not over 150 lbs. gr. wt. NOTE: It is not required that the above containers be ICC specification containers, although ICC specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.
Barium nitrate	*Colorless, odorless crystals or white crystalline powder thereof.* *Soluble in water.* *Poisonous if taken internally.* Stow away from foodstuffs. Stow separate from all combustible materials, explosives or acids (white label).	No label required.				
Calcium nitrate	*A white, deliquescent mass* *Involved in a fire will greatly intensify the burning of all combustible materials.* *Soluble in water.* Stow separate from all combustible materials, explosives or acids (white label).	No label required.				
Guanidine nitrate	*Colorless crystals or fine granular powder.* *Moderately soluble in water.* Stow separate from all combustible materials, explosives or acids (white label).	No label required.				
Lead nitrate	*A heavy, white crystalline salt.* *Will support combustion of organic matter. Is also poisonous.* *Soluble in water.* Stow separate from all combustible materials, explosives, acids (white label), or foodstuffs.	No label required.				

146.22-100 Table E.—Classification: Inflammable solids and oxidizing matierals—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Nitrates—Continued.						
Magnesium nitrate	*Colorless, clear crystals.* *Soluble in water.* *Involved in a fire will greatly intensify the burning of all combustible materials.* Stow separate from all combustible materials, explosives or acids (white label).	No label required.				
Nitro-carbo nitrate	*Composed principally of ammonium nitrate.* *Involved in a fire will greatly intensify the burning of all combustible material and under conditions of exposure to high temperatures (above 400° F.) rapid decomposition and ignition may occur. Will burn with explosive violence.* Stow separate from all combustible material, explosives, or acids (white label) and away from chlorates. *Soluble in water.*	No label required.				
Nitrates N. O. S.	*Any nitrate, classifying as an oxidizing material in accordance with these regulations, that is not specified by name herein.* *Involved in a fire will greatly intensify the burning of all combustible material.* Stow separate from all combustible material, explosives, or acids (white label). *Soluble in water.*	No label required.				

Potassium nitrate	*White granular or crystalline powder.* *Soluble in water.* *Involved in a fire will greatly intensify the burning of all combustible materials.* Stow separate from all combustible materials, explosives, inflammable liquids, or acids. Nitrates in bulk or in bags should not be stowed in the same compartment with combustible materials, explosives, inflammable liquids (red label), or acids (white label). Carefully clean and remove all residue of nitrate remaining in a compartment used for the stowage of this substance.	No label required.				
Sodium nitrate	*White or yellowish crystalline salts.* *Soluble in water.* *Involved in a fire will greatly intensify the burning of all combustible materials.* Stow separate from all combustible materials, explosives, inflammable liquids (red label), or acids (white label). Nitrates in bulk or in bags should not be stowed in the same compartment with combustible materials, explosives, inflammable liquids (red label), or acids (white label). Carefully clean and remove all residue of nitrate remaining in a compartment used for the stowage of this substance.	No label required.				
Strontium nitrate	*White granules or powder* *Soluble in water.* *Involved in a fire will greatly intensify the burning of all combustible materials.* *Stow separate from all combustible materials, explosives, inflammable liquids (red label), or acids (white label).*	No label required.				
Zinc nitrate		No label required.				

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Nitrates—Continued. Zirconium nitrate	*White, very hygroscopic crystals or white pieces or scales. Soluble in water. Involved in a fire will greatly intensify the burning of all combustible materials.* Stow separate from all combustible materials, explosives, or acids (white label).	No label required.				
Nitro-carbo nitrate			See: "*Nitrates.*"			
Nitrates, N. O. S.			See: "*Nitrates.*"			
Nitrocellulose or Collodion cotton, wet with water. Nitrocellulose, colloided, granular, or flake, wet with water. For export shipments only, the shipping name "Collodion cotton, wet with water" may be used when required by country of destination. Material: shall be uniformly wet with at least 20 pounds of water to 80 pounds of dry material. Shipping containers shall have marked thereon the gross, tare, and net weight of the package.	*An inflammable solid consisting of nitrated cotton. When wet with not less than 20% water this substance is classified as an inflammable solid. When dry, this substance is classified as a high explosive. Involved in a fire will give off nitrous fumes, deep orange in color, and extremely irritating and poisonous.* Check gross weight of containers to be certain no leakage has occurred. Refuse leaking containers or ones showing signs of having leaked. Outside containers will be marked "Wet nitrocellulose—20% water."	Yellow.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-6A, 6B, 6C) not over 450 lbs. gr. wt. (ICC-37D) STC, not over 5 gal. cap. (ICC-17E) STC, not over 450 lbs. gr. wt. Wooden barrels or kegs (ICC-10A, 10B) not over 450 lbs. gr. wt. Wooden boxes, WIL (ICC-15A, 15B) not over 250 lbs. gr. wt.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A, 6B, 6C) not over 450 lbs. gr. wt. (ICC-37D) STC, not over 5 gal. cap. (ICC-17E) STC, not over 450 lbs. gr. wt. Wooden barrels or kegs (ICC-10A, 10B) not over 450 lbs. gr. wt. Wooden boxes, WIL (ICC-15A, 15B) not over 250 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums: (ICC-6A, 6B, 6C) not over 450 lbs. gr. wt. (ICC-37D) STC, not over 5 gal. cap. (ICC-17E) STC, not over 450 lbs. gr. wt. Wooden barrels or kegs (ICC-10A, 10B), not over 450 lbs. gr. wt. Wooden boxes, WIL (ICC-15A, 15B) not over 250 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A, 6B, 6C) not over 450 lbs. gr. wt. (ICC-37D) STC, not over 5 gal. cap. (ICC-17E) STC, not over 450 lbs. gr. wt. Wooden barrels or kegs, (ICC-10A, 10B) not over 450 lbs. gr. wt. Wooden boxes, WIL (ICC-15A, 15B) not over 250 lbs. gr. wt.
Nitroguanidine, wet with water. Material shall be uniformly wet with at least 20 pounds of water to 80 pounds of dry material. Shipping containers shall have marked thereon the gross, tare, and net weight of the package.	*Formed by the nitration of guanidine.* Characteristics and hazards as for "Nitrocellulose, wet with water," which see. Outside containers will be marked "Wet nitroguanidine—20% water."	Yellow.				

14th Amend.—Nitrocellulose, wet with water deleted; Nitrocellulose or Collodion cotton, wet with water and Nitrocellulose, colloided granular or flake, wet with water added—Apr. 1943)

Nitrostarch, wet with water. Material shall be uniformly wet with at least 20 pounds of water to 80 pounds of dry material. Shipping containers shall have marked thereon the gross, tare, and net weight of the package.	*Formed by nitration of starch.* Characteristics and hazards as for "Nitrocellulose, wet with water," which see. Outside containers will be marked "Wet nitrostarch—20% water."	Yellow.				
Oxidizing materials, N. O. S.	May be any substance classifying as an oxidizing material in accordance with the definitions contained in these regulations, provided such oxidizing material is not otherwise specified by name in these regulations. *Involved in a fire, will greatly intensify the burning of all combustible materials.* Stow separate from all combustible materials, explosives or acids (white label).	Yellow..	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B), WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIMC, not over 150 lbs. gr. wt.	Stowage: "On deck protected." "On deck uner cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums, (ICC-6A) not over 55 gal. cap. Wooden barrels or kegs, WIC: (ICC-11A, 11B) not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs, WIC: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIMC, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs, WIC: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A), not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIMC, not over 150 lbs. gr. wt.
Paper stock, wet Paper waste, wet.	*Paper stock, new, or waste paper that is wet.*	Yellow..	Stowage: "On deck protected." Outside containers: Hermetically sealed metal lined wooden boxes. Airtight metal containers.	Not permitted	Not permitted	Ferry stowage (BB). Outside containers: Hermetically sealed metal lined wooden boxes. Airtight metal containers.

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passengre vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Perchlorates: Ammonium perchlorate. Barium perchlorate. Calcium perchlorate. Magnesium perchlorate. Perchlorate, N. O. S. Potassium perchlorate. Sodium perchlorate.	*Colorless crystals or white crystalline powder; strong oxidizing agents.* *Soluble in water.* *Perchlorates mixed with organic matter form very inflammable compositions, and frequently act as high explosives when mixed with finely divided organic material or finely divided metals somewhat the same as chlorates, but to a lesser degree.* Perchlorates shall not be stowed in the same compartment with explosives, acids (white label), or combustible material such as cotton, charcoal, sulfur, etc.	Yellow..	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck but not overstowed." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A. 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, (ICC-21A) not over 150 lbs. gr. wt. Plywood drums, WIMC (ICC-22B) not over 150 lbs. gr. wt.	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (AA).....	Ferry stowage (BB).
					Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, (ICC-21A) not over 150 lbs. gr. wt. Plywood drums, WIMC (ICC-22B) not over 150 lbs. gr. wt.	Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums, (ICC-21A) not over 150 lbs. gr. wt. Plywood drums, WIMC (ICC-22B) not over 150 lbs. gr. wt.

Permanganates: Ammonium permanganate. Barium permanganate. Calcium permanganate. Permanganates, N. O. S. Potassium permanganate. Sodium permanganate. Zinc permanganate.	*In crystal or powder form, having a metallic sheen in rich colors, purple to reddish-black, violet-brown or black, or dark purple shades.* *A powerful oxidizing material.* *All permanganates mixed with combustible materials are liable to ignition by friction, by spontaneous combustion, or if acted upon by the corrosive liquid acids. Such mixtures have been known to react with explosive force.* *Potassium permanganate is known to ignite spontaneously in contact with glycerin (including the anti-freeze glycerin compounds).* *Barium permanganate is also poisonous if taken internally. Stow away from foodstuffs.* *Soluble in water.* Do not stow with explosives, acids (white label), glycerin, formaldehyde, organic materials, chalk, charcoal, sulfur or similar substances. Keep cool.	Yellow..	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F, 37G) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC or with liner not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A), (ICC-22B) WIC, not over 159 lbs. gr. wt.	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F, 37G) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-11A, 11B) WIC, or with liner, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F, 37G) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, or with liner not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gt. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A), (ICC-22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (BB) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F, 37G) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, or with liner not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A), (ICC-22B) WIC, not over 150 lbs. gr. wt.
Permanganate of potash.	----------	----------	See: "*Permanganates.*"			
Phosphoric anhydride.	*A finely divided white powder, having a strong affinity for water. Rapidly absorbs moisture from the air.* *Mixed with organic matter in the presence of moisture (even moisture in the air) it causes great heat and oftimes the ignition of the material.* *Soluble in water, somewhat slowly, and with evolution of much heat.* Stow separate from all combustible materials, explosives, inflammable liquids (red label) or acids (white label). Keep dry.	Yellow..	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A, 6B 6C) not over 55 gal. cap. (ICC-17E, 37D) STC, not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C) not over 250 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Phosphorus amorphous, red.	*An inflammable solid in the form of a reddish-brown powder. Is readily ignited by friction.* *Insoluble in water.* *Will contaminate foodstuffs.* *In the presence of fire, fumes given off by this substance are irritating and suffocating.* Do not stow with nitrates, chlorates, perchlorates or permanganates. Mixtures may result in explosions by friction or shock. Stow well away from all living quarters, all sources of heat, foodstuffs or oxidizing materials (yellow label).	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A, 6B). (ICC-37D) STC, not over 160 lbs. gr. wt. Wooden boxes (ICC-15A, 15B) with airtight metal inside containers, not over 250 lbs. gr. wt	Stowage: "On deck under cover" Outside containers: Steel barrels or drums: (ICC-6A, 6B). (ICC-37D) STC, not over 160 lbs. gr. wt. Wooden boxes (ICC-15A, 15B) with airtight metal inside containers, not over 250 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A, 6B). (ICC-37D) STC, not over 160 lbs. gr. wt. Wooden boxes (ICC-15A, 15B) with airtight metal inside containers, not over 250 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A, 6B). (ICC-37D) STC, not over 160 lbs. gr. wt. Wooden boxes (ICC-15A, 15B) with airtight metal inside containers, not over 250 lbs. gr. wt.
Phosphorus pentachloride.	*An inflammable solid in the form of a grayish-yellow crystalline mass.* *In contact with air, gives off fumes which have a strong irritating effect upon the eyes and mucous tissue.* *Decomposes upon contact with water, with liberation of much heat and formation of hydrochloric acid.* *Irritating odor.* *Will contaminate foodstuffs.* *In the presence of fire, fumes given off by this substance are irritating.* Keep dry. Stow well away from living quarters, all sources of heat, foodstuffs or oxidizing materials (yellow label).	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: "Black Iron" barrels or drums: (ICC-6A, 6B, 6C) not over 55 gal. cap. (ICC-37D) STC, not over 55 gal. cap. Wooden barrels or bags: (ICC-10A) Asphaltum lined not over 50 gal. cap. (ICC-11B) WIC, not over 50 lbs. net wt. of material. Wooden boxes, WIC (ICC-15A 15B, 15C, 16A, 19A) not over 50 lbs. net wt. of material. Metal-jacketed lead carboys (ICC-28A) not over 15 gal. cap.	Not permitted	Not permitted	Not permitted.

Phosphorus sesquisulfide.	*Yellow crystalline mass generally in finely ground form very inflammable. Is readily ignited by slight friction.* *Involved in a fire will give off fumes that are irritating and suffocating.* *Insoluble in water.* Do not stow with nitrates, chlorates, or other oxidizing materials—(yellow label). Stow away from all living quarters, sources of heat, or foodstuffs.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes (ICC-15A, 15B, 16A) with airtight metal inside containers, not over 250 lbs. gr. wt.	Not permitted	Not permitted	Not permitted
Phosphorus, white or yellow, in water. Shipping containers shall have marked thereon the gross, tare, and net weight of the package.	*Almost colorless or yellowish semitransparent mass becoming somewhat darker or white and waxy in appearance with aging.* *Fumes are poisonous and possess a strong garlic-like odor.* *In event of breakage, do not handle this substance with bare hands.* *White or yellow phosphorus will ignite spontaneously in in air.* *Melting point 110° F.* *Protect from freezing.* Do not stow with explosives, inflammable liquids (red label), corrosive liquids (white label), nor with nitrates, chlorates, or permanganates. Stow away from living quarters and foodstuffs. Check gross weight of containers to be certain no leakage has occurred. Refuse leaking containers or ones showing signs of having leaked.	Yellow	Stowage: "On deck in open." "On deck under cover." Outside containers: *When packed in water:* Steel barrels or drums: (ICC-6A, 6B) not over 30 gal. cap. Wooden boxes: (ICC-15A, 15B, 16A) with hermetically sealed metal cans or metal linings, not over 200 lbs. gr. wt. Tank cars: (ICC-103) without bottom discharge outlet and with insulated covering.	Not permitted	Not permitted	Not permitted.
Phosphorus, white or yellow, dry.	Characteristics and hazards as for "Phosphorus, white or yellow, in water," which see above. Observe stowage precautions shown above for "Phosphorus, white or yellow, in water." In stowing projectiles or bombs, wood dunnage shall be liberally used to prevent these articles coming in contact with the structural parts of the vessel.	Yellow	Stowage: "On deck in open." "On deck under cover." Outside containers: *When dry and cast solid:* Steel barrels or drums: (ICC-6A, 6B, 6C) not over 30 gal. cap. Projectiles or bombs without bursting elements. May be accepted only when shipped by, for, or to the War or Navy Departments of the U. S. Government. Stowage of such projectiles or bombs may also be "Under deck away from heat."	Not permitted	Not permitted	Not permitted.

(5th Amend.—Characteristics; stowages; projectiles or bombs, added—July 1941)

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Photographic film *nitrocellulose base*). X-ray film (*nitrocellulose base*).	*Highly inflammable* *Decomposition may start and ignition occur at relatively low temperatures. If inhaled the products of decomposition are irritating and poisonous even in small concentrations.*	No label required	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat."	Stowage:* "On deck under cover." "Tween decks readily accessible." "Cargo hatch trunkway." *Note: Refrigerated stowage (which may be under deck) may be furnished if desired by the shipper.	Ferry stowage (AA)	Ferry stowage (BB).
Including developed or undeveloped or processed film in rolls or sheets enclosed in individual cartons, wrappings or packing.	Provide cool stowage in a compartment having a temperature of not exceeding 100° F. and well away from any source of heat, and in position to project or move, even to jettisoning in event of fire. Do not stow in same compartment with explosives, inflammable liquids (red label), other inflammable solids or oxidizing materials (yellow label), or acids (white label).		Outside containers: Wooden boxes. Nonspecification. With inside individual carton containers. Not over 400 lbs. gr. wt. Fiberboard boxes. Nonspecification. With inside, individual carton containers. Not over 75 lbs. gr. wt. Strapped with two steel bands. Full frame solid Fiberboard boxes. Not over 400 lbs. gr. wt.	Outside containers: Wooden boxes. Nonspecification. With inside individual, carton containers. Not over 400 lbs. gr. wt. Fiberboard boxes. Nonspecification. With inside, individual carton containers. Not over 75 lbs. gr. wt. Strapped with two steel bands. Full frame solid Fiberboard boxes. Not over 400 lbs. gr. wt.	Outside containers: Wooden boxes. Nonspecification. With inside individual carton containers. Not over 400 lbs. gr. wt. Fiberboard boxes. Nonspecification. With inside, individual carton containers. Not over 75 lbs. gr. wt. Strapped with two steel bands. Full frame solid Fiberboard boxes. Not over 400 lbs. gr. wt.	Outside containers: Wooden boxes. Nonspecification. With inside, individual carton containers. Not over 400 lbs. gr. wt. Fiberboard boxes. Nonspecification. With inside, individual carton containers. Not over 75 lbs. gr. wt. Strapped with two steel bands. Full frame solid Fiberboard boxes Not over 400 lbs. gr. wt.
Photographic film (cellulose acetate base). X-ray film (cellulose acetate base). Including developed or undeveloped or processed film in rolls or sheets enclosed in individual cartons, wrappings, or packing.	*Material is combustible with about the same hazard as paper.*	No label required.	No restrictions	No restrictions	No restrictions	No restrictions.
Photographic film scrap (*nitrocellulose base*).			See: "Pyroxylin plastic scrap."			
Photographic film scrap (cellulose acetate base).			No restrictions	No restrictions	No restrictions	No restrictions.

Picric acid, wet with not less than 10% water, *in excess of 16 ounces, but not exceeding 25 pounds.* Picric acid, wet with not less than 10% water in quantity not exceeding 16 ounces in one outside package may be accepted as "Drugs, chemicals, medicines, or cosmetics." Shipping containers shall have marked thereon the gross, tare, and net weight of the package.	*Pale yellow crystals. In its dry state is classified by these regulations as a high explosive but is not sensitive in this respect when wet with at least 10% of water.* *Soluble in water.* *Is also poisonous.* Keep cool. In accepting shipments observe outside containers carefully for signs of leakage of the water content. Refuse packages showing leakage or signs of having leaked. Stow separate from all metals, metallic powders, finely divided organic material, lime, potash, soda or any chlorates, nitrates or other oxidizing materials (yellow label). Do not stow with explosives, acids (white label), or adjacent to living quarters.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes, WIC (ICC-15A) not to exceed 25 lbs. dry weight of material in one outside container.	Not permitted	Not permitted	Not permitted.
Potassium bromate	*Potassium bromate is an oxidizing material in the form of white crystalline salts having properties similar to "potassium chlorate" but less dangerous. Is highly inflammable.* *Soluble in water.* Do not stow in same compartment with combustible materials, explosives, or acids (white label). Keep dry.	Yellow	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums (ICC-21A), not over 150 lbs. gr. wt. Plywood drums: (ICC-22A.) (ICC-22B) WIMC, not over 150 lbs. gr. wt.	Stowage: "On deck protected." "On deck under cover." Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums (ICC-21A), not over 150 lbs. gr. wt. Plywood drums: (ICC-22A). (ICC-22B) WIMC, not over 150 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums (ICC-21A), not over 150 lbs. gr. wt. Plywood drums: (ICC-22A). (ICC-22B) WIMC, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B), not over 65 lbs. gr. wt. Fiber drums (ICC-21A), not over 150 lbs. gr. wt. Plywood drums: (ICC-22A). (ICC-22B) WIMC. not over 150 lbs. gr. wt.
Potassium chlorate			See: "*Chlorates.*"			

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Potassium metallic	*Potassium metallic is an inflammable, soft, white metal, with a silvery luster on freshly cut surfaces.* *Reacts violently with water evolving hydrogen which ignites from the intense heat of the reaction; also violently and similarly decomposed by acids.* Stow separate from all combustible materials, explosives, acids (white label), inflammable liquids (red label), or oxidizing materials (yellow label). Do not overstow with other cargo. Keep dry.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes (ICC-15A, 15B) with hermetically sealed metal inside containers not over 250 lbs. gr. wt. Note: Potassium metallic immersed in neutral petroleum oil may also be accepted in: Wooden boxes (ICC-15A, 15B) with glass inside containers each enclosed in a tin container, not over 250 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Potassium nitrate			See: "*Nitrates.*"			
Potassium nitrate mixed (fused) with sodium nitrite.	*A mixture of potassium nitrate and sodium nitrite fused solid.*		Stowage: "On deck." "On deck under cover." "Under deck." Outside containers: Tank cars (ICC-103W).	(Shipped only in tank cars)	(Shipped only in tank cars)	Ferry stowage (BB). Outside containers: Tank cars (ICC-103W).
Potassium nitrite	*White or slightly yellow granules, or rods.* *Decomposed in contact with acids evolving brown fumes of nitrous anhydride.* *Involved in a fire will intensify the burning of all combustible materials.* Stow separate from all combustible materials, explosives, inflammable liquids or acids (white label). Carefully clean and remove all residue of nitrite remaining in a compartment used for the stowage of this substance.	Yellow	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt.	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt.

(10th Amend.—Potassium nitrite added—Feb. 1943)
(2nd Rev.—Potassium perchlorate; Potassium permanganate relocated on page N-207—Feb. 1943)
(14th Amend.—Potassium nitrate mixed (fused) with sodium nitrite added—Apr. 1943)
(3rd Rev.—Containers relocated on page N-207—Sep. 1943)

			Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes (ICC-12B) WIC, not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes (ICC-12B) (WIC, not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes (ICC-12B) WIC, not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes (ICC-12B) (WIC, not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIC, not over 150 lbs. gr. wt.
Potassium perchlorate.	----------	----------	See: "*Perchlorates.*"			
Potassium permanganate.	----------	----------	See: "*Permanganates.*"			
Potassium peroxide....	*Oxidizing agent in the form of a yellow, amorphous mass.* *Decomposes in water, evolving oxygen.* Keep dry. Stow separate from all combustible materials, explosives or acids (white label).	Yellow..	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (AA)..... Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums (ICC-22A) (ICC-22B) WIC, not over 150 lbs. gr. wt.
Potassium sulfide (fused or concentrated and ground).	*In the form of yellow to yellowish red crystals strongly caustic.* *Freely soluble in water with evolution of much heat.* *May also spontaneously oxidize in the air with evolution of so much heat as to ignite.* Keep dry and cool. Stow separate from all combustible materials, explosives, acids (white label), and well away from any living quarters.	Yellow..	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Stowage: "On deck under cover." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (AA)..... Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.

(2nd Rev.—Potassium perchlorate; Potassium permanganate relocated from Page N-206—Feb. 1942)
(3rd Rev.—Containers relocated from Page N-206—Sep. 1943)

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Potassium sulfide (fused or concentrated but not ground—*may be chipped or broken*). Crystallized potassium sulfide or potassium sulfide fused solid in a metal container is not subject to these regulations.	Characteristics and hazards as for "potassium sulfide (fused or concentrated and ground)," which see above.	Yellow..	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F, 37G) STC not 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Stowage: "On deck under cover." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes, WIC (ICC -15A, 15B, 15C, 16A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F, 37G) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F, 37G) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt.
Pyroxylin plastics, rods, rolls, sheets or tubes. Film support (*nitrocellulose base*). Note: Manufactured pyroxylin plastic articles, not otherwise named herein, when containing more than 10% by weight of nitrocellulose shall be shipped described as "Pyroxylin plastics."	*Solid solutions composed mainly of nitrocellulose, camphor and small amounts of volatile solvents. Highly inflammable. Decomposition may start and ignition occur at relatively low temperatures. If inhaled, the products of decomposition are irritating and poisonous even in low concentrations.* Provide cool stowage in a compartment having a temperature of not exceeding 100° F. and well away from any source of heat, and in position to protect or move, even to jettisoning in event of fire. Do not stow in same compartment with explosives, inflammable liquids (red label), other inflammable solids or oxidizing materials (yellow label), or corrosive liquids (white label).	Yellow..	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes (ICC-15A, 15B, 19A) not over 450 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 200 lbs. gr. wt. For sheet pyroxylin only: Special fiberboard box (ICC-12B) telescope type, not over 90 lbs. gr. wt.	Stowage:* "On deck under cover." "Tween decks readily accessible." "Cargo hatch trunkway." *Note: Refrigerated stowage (which may be under deck) may be furnished if desired by the shipper. Outside containers: Wooden boxes (ICC-15A, 15B, 19A) not over 450 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 200 lbs. gr. wt. For sheet pyroxylin only: Special fiberboard box (ICC-12B) telescope type, not over 90 lbs. gr. wt	Ferry stowage (AA). Outside containers: Wooden boxes (ICC-15A, 15B, 19A) not over 450 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 200 lbs. gr. wt. For sheet pyroxylin only: Special fiberboard box (ICC-12B) telescope type, not over 90 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes (ICC-15A, 15B, 19A) not over 450 lbs. gr. wt. Fiberboard boxes (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 200 lbs. gr. wt. For sheet pyroxylin only: Special fiberboard box (ICC-12B) telescope type, not over 90 lbs. gr. wt.

Pyroxylin plastic scrap. Motion picture film scrap (*Nitrocellulose base*). Photographic film scrap (*Nitrocellulose base*). X-ray film scrap (*Nitrocellulose base*).	*Consists of trimmings, clippings, and other waste obtained in the manufacture of pyroxylin plastic articles, or the scrap obtained from motion picture film, X-ray film and photographic film. Being finely divided, it is more hazardous than the original materials.* Stow well away from all sources of heat. Protect from temperatures exceeding 100° F.	Yellow	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-6A, 6J) not over 880 lbs. gr. wt. (ICC-6B, 6C) not over 1,760 lbs. gr. wt. (ICC-37E) STC, not over 880 lbs. gr. wt. Wooden barrels of kegs, WIL (ICC-11B) not over 375 lbs. gr. wt. Wooden boxes, WIL (ICC-15A, 15B) not over 450 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Rags, oily			See: "Fibers or fabrics with animal or vegetable oil."			
Rags, wet			See: "Fibers, burnt, wet or damp."			
Rough ammoniate tankages, *Containing less than 7% moisture.*			See: "*Tankage.*"			
Rubber scrap, *ground, powdered or granulated.*	*Rubber scrap, without cotton or fabric insertion, if ground, powdered, or granulated, and the rubber content of which exceeds 45%, as determined by subtracting the sum of the percentage of ash and the percentage of acetone from 100.*	Yellow	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes, WIL (ICC-15A) not over 250 lbs. gr. wt. NOTE.—For additional containers authorized during the war emergency see Section 146.28-6.	Not permitted	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes, WIL (ICC-15A) not over 250 lbs. gr. wt. NOTE.—For additional containers authorized during the war emergency see Section 146.28-6.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes, WIL (ICC-15A) not over 250 lbs. gr. wt. NOTE.—For additional containers authorized during the war emergency see Section 146.28-6.
Rubber buffings	*Buffings from any grade of rubber irrespective of percentage of rubber content.*	Yellow				
Rubber shoddy, regenerated rubber, or reclaimed rubber. NOTE: When in the form of dense homogeneous nonporous sheets or rolls, the sheets of a thickness of ⅛ inch or greater packed flat or in rolls, this material is nonhazardous and not subject to these regulations.	*Rubber shoddy, regenerated rubber or reclaimed rubber consists of old rubber which has been subjected to chemical treatment of some kind in preparing it for further use in the rubber industry. Certain grades of rubber scrap if ground, powdered or granulated or the buffings from rubber as well as rubber shoddy or regenerated or reclaimed rubber are subject to the risk of spontaneous heating and ignition. This hazard does not apply to rubber scrap that is not ground or powdered or granulated and neither does it apply to rubber scrap in the form of dense, homogeneous nonporous sheets or rolls.*	Yellow				

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Saltpeter			See: "Potassium nitrate."			
Saltpeter, Chile			See: "Sodium nitrate."			
Sodium chlorate			See: "*Chlorates*."			
Sodium chlorite			See: "Calcium chlorite."			
Sodium hydrosulfite	*White or grayish-white crystalline powder.* *Oxidizes in air, and more readily so in presence of moisture, giving off sulfur dioxide, a pungent, intensely irritating gas.* *Very soluble in water.* Keep dry.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11B) not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 150 lbs. gr. wt. Plywood drums, WIC (ICC-22B) not over 150 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37E) STC, not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11B) not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 150 lbs. gr. wt. Plywood drums, WIC (ICC-22B) not over 150 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11B) not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 150 lbs. gr. wt. Plywood drums, WIC (ICC-22B) not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11B) not over 400 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiber drums, WIC (ICC-21A) not over 150 lbs. gr. wt. Plywood drums, WIC (ICC-22B) not over 150 lbs. gr. wt.

NOTE.—For additional container authorized during the war emergency see Section 146.28-16.

Sodium metallic	*Sodium metallic is a light, silver-white metal, lustrous when freshly cut.* *Burns with a yellow flame; violently decomposes water forming sodium hydroxide and hydrogen which ignites spontaneously.* Stow separate from all combustible materials, explosives, acids (white label), inflammable liquids (red label), oxidizing materials (yellow label). Keep dry.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums. (ICC-6A) not over 55 gal cap. (ICC-6B, 6C) not over 110 gal. cap. Wooden boxes (ICC-15A, 15B) with hermetically sealed metal inside containers, not over 250 lbs. gr. wt. *Sodium Metallic which has been fused solid in the container may be accepted in:* Steel barrels or drums, STC (ICC-17E, 37D) not over 55 gal. cap. *Sodium Metallic immersed in neutral petroleum oil may also be accepted in:* Wooden boxes (ICC-15A, 15B) with glass inside containers each enclosed in a tin container, not over 250 lbs. gr. wt. Tank cars (ICC-105A300) the metallic sodium to be in a molten condition when loaded into the tank and allowed to solidify before car is accepted by carrier.	Not permitted	Not permitted	Not permitted.
Sodium nitrate			See: "*Nitrates.*"			

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Sodium nitrite	*A yellowish-white salt, somewhat moist in appearance. It is an oxidizing material which, while containing less oxygen than the nitrates, more readily decomposed, and therefore generally more active. When mixed with organic matter, it is more readily ignited than a corresponding mixture of sodium nitrate.* *Sodium nitrite if mixed with ammonium salts decomposes spontaneously and may cause fires.* Therefore, do not stow with ammonium nitrate. *Absorbs moisture.* *Soluble in water.* *Involved in a fire will greatly intensify the burning of all combustible materials.* Stow away from all combustible materials, explosives or acids (white label).	Yellow	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 460 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A.) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 460 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A.) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 460 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A.) (ICC-22B) WIC, not over 150 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 460 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Fiber drums (ICC-21A) not over 150 lbs. gr. wt. Plywood drums: (ICC-22A.) (ICC-22B) WIC, not over 150 lbs. gr. wt.

Sodium perchlorate			See: "*Perchlorates.*"			
Sodium permanganate			See: "*Permanganates.*"			
Sodium peroxide	*Yellowish-white granular powder. Absorbs water from the air.* *In contact with organic matter or readily oxidizable substances ignition and explosion may take place.* Do not stow in same compartment with explosives or acids (white labels). Stow separate from combustible materials or other oxidizing substances (yellow label). *Soluble in water.* Keep dry.	Yellow	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums: (ICC-6A) not over 55 gal. cap. (ICC-6B, 6C) not over 110 gal. cap. (ICC-17E, 37D) STC, not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt. Wooden barrels or kegs, WIC (ICC-11B) not over 400 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Sodium picramate, wet with 20% water. NOTE: Transportation of Sodium picramate containing less than 20% of water by weight not permitted. Shipping containers shall have marked thereon the gross, tare and net weight of the package.	*An inflammable material in the form of a dark red, finely divided crystalline powder.* *When dry, and involved in fire, will burn with almost explosive rapidity.* Outside containers will be marked: "Sodium picramate—20% water. Reject leaking containers or containers that show signs of having leaked.	Yellow	Stowage: "On deck under cover." Outside containers: Wooden barrels or kegs (ICC-10A, 10B) not over 50 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Sodium sulfide			Stowage and containers as authorized for "Potassium sulfide.."			
Strontium chlorate			See: "*Chlorates.*"			
Strontium chlorate, wet.			See: "*Chlorates, wet.*"			
Strontium nitrate			See: "*Nitrates.*"			

146.22-100 Table E.—Classification: Inflammable solids and oxidizing materials—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Tankages: Garbage tankage (*containing less than 8% moisture*). Rough ammoniate tankages (*containing less than 7% moisture*). Tankage fertilizers (*containing less than 8% moisture*).	*Garbage tankage is the product obtained after digesting and extracting grease from garbage. It consists principally of vegetable fibers and is dried and ground. Rough ammoniate tankages are made from ammoniates such as leather scrap, horns, hoofs, garbage, hair waste, felt waste, dried and ground. Tankage fertilizers consist chiefly of various kinds of slaughter-house scraps and offal. The above substances when overdried are subject to spontaneous heating and ignition.*	Yellow	Stowage: "On deck protected." Outside containers: Hermetically sealed metal lined wooden-boxes. Airtight metalcontaines.	Not permitted	Not permitted	Not permitted.
Textile waste, wet			See: "Fibers, burnt, wet or damp."			
Trinitrobenzene, wet (*when wet with not less than 10% of water and in a quantity not exceeding 16 ounces in one outside package*). Trinitrotoluene, wet (*when wet with not less than 10% of water and in a quantity not exceeding 16 ounces in one outside package*).			May be packed and shipped as for "Drugs, chemicals, medicines or cosmetics," which see.	May be packed and shipped as for "Drugs, chemicals, medicines or cosmetics," which see.	May be packed and shipped as for "Drugs, chemicals, medicines or cosmetics," which see.	May be packed and shipped as for "Drugs, chemicals, medicines or cosmetics," which see.
Wool waste, wet			See: "Fibers, burnt, wet, or damp."			
X-ray film (*nitrocellulose base*).			See: "Photographic film (*Nitrocellulose base*)."			
X-ray film (cellulose acetate base).			No restrictions	No restrictions	No restrictions	No restrictions.
X-ray film scrap (*nitrocellulose base*).			See: "Pyroxylin plastic scrap."			

X-ray film scrap (cellulose acetate base).			No restrictions.	No restrictions	No restrictions	No restrictions.
Zinc chlorate			See "*Chlorates.*"			
Zinc nitrate			See "*Nitrates.*"			
Zinc permanganate			See: "*Permanganates.*"			
Zirconium metallic, dry.	*An inflammable amorphous, black powder or grayish, brittle, hard lustrous lumps. Insoluble in water.* Stow separate from all combustible materials, explosives or acids (white label).	Yellow	Stowage: "On deck under cover." Outside containers: Wooden boxes, WIC (ICC-15A, 15B) not over 75 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Zirconium metallic, wet. Zirconium metallic, sludge. Shipping containers shall have marked thereon the gross, tare and net weight of the package.	The above described dry crystalline wet with water, or in water. Check gross weight of containers to be certain no leakage has occurred. Refuse leaking containers or ones showing signs of having leaked.	Yellow	Stowage: "On deck under cover." Outside containers: Wooden barrels or kegs (ICC-10A) not over 75 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B) not over 150 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Zirconium nitrate			See: "*Nitrates.*"			
Zirconium picramate, wet with 20% water. Shipping containers shall have marked thereon the gross, tare and net weight of the package.	Zirconium picramate must be wet with not less than 20% of water by weight. Reject leaking containers or contsiners showing signs of having leaked.	Yellow	Stowage: "On deck under cover." Outside containers: Wooden barrels or kegs (ICC-10A, 10B) not over 50 gal. cap. Wooden boxes, with inside glass containers not exceeding 1 qt. cap. each (ICC-15A, 15B, 15C, 16A, 19A) not over 250 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.

DETAILED REGULATIONS GOVERNING CORROSIVE LIQUIDS

146.23–1 Definition of corrosive liquid.—A corrosive liquid is defined by the ICC regulations as set forth in § 146.23–2 herein, and such definition is binding upon all shippers making shipments of corrosive liquids by common carrier vessels engaged in interstate or foreign commerce by water. This definition is accepted and adopted and forms part of the regulations in this subchapter applying to all shippers making shipments of corrosive liquids by any vessel, and shall apply to the owners, charterers, agents, master, or other person in charge of a vessel and to other persons, transporting, carrying, conveying, storing, stowing or using corrosive liquids on board any vessel subject to R. S. 4472, as amended, and the provisions of the regulations in this subchapter.

146.23–2 Corrosive liquid defined.—Acids and other corrosive liquids are strong mineral acids or other corrosive fluids which are liable to cause fire when mixed with chemicals or with organic matter, or are liable, in case of leakage, to damage other freight materially.

146.23–3 Stowage on board vessels.—All corrosive liquids permitted for transportation on board vessels shall, if taken on board a vessel, be stowed in accordance with the provisions applying to the particular character of vessel as shown in the tables forming § 146.23–100 and with the detailed regulations for stowage.

146.23–4 General stowage requirements.—In the stowage of corrosive liquids, the following conditions shall be observed:

(a) Corrosive liquids shall not be stowed in a compartment or hold in which explosives are stowed. (See § 146.23–7.)

(b) Such liquids shall be stowed well away from living quarters, foodstuffs or cargo of an organic nature.

(c) Stowage shall be in such manner that the containers may be readily observed.

(d) Corrosive liquids shall not be stowed in proximity to or over other dangerous articles of cargo.

(e) Corrosive liquids shall not be stowed over any combustible substance even though such substance is not dangerous by the regulations in this part.

146.23–5 Stowage of glass carboys.—Glass carboys containing corrosive liquids, unless completely boxed, shall not be stowed more than 2 tiers high. The transportation of acids and other corrosive liquids in glass carboys on board barges is not subject to this provision. The term "completely boxed carboys" may include regularly boxed carboys with neck protection extending to the sides of the carboy box; or of crate construction; either type to be of strength commensurate with the strength of the carboy box itself and to be sufficiently adequate to permit stacking one on top of the other.

146.23–6 "On deck" stowage requirements.—(a) Acids and other corrosive liquids permitted to be stowed "On deck" shall be so stowed that any leakage from a container will drain away from other cargo and readily reach an overboard scupper or freeing port. Such drainage shall not be permitted to enter an enclosed drainage system other than a direct

overboard scupper. If such stowage is not possible to arrange, clean, hard, dry sand shall be placed under and around the lower tier of containers to absorb any leakage.

(b) Dunnage shall be provided on the deck and otherwise and so arranged that any appreciable leakage will be apparent.

(c) Any leakage occurring shall be washed down, using liberal quantities of water.

146.23–7 Stowage on vessels carrying explosives.—Acids and other corrosive liquids required by the regulations in this part to be stowed "On deck" shall not be transported on vessels carrying explosives except in conformity with the following provisions:

(a) When stowed "On deck" on vessels having machinery spaces amidship, the engine and boiler room spaces shall intervene between the holds which contain the explosives and the spaces over which the corrosive substances are stowed.

(b) When stowed "On deck" on vessels having machinery spaces aft, the bridge structural erections shall intervene between holds which contain explosives and the spaces over which the corrosive substances are stowed. This stowage shall not be utilized unless it provides a distance between the stowages of at least one complete hold space.

(c) When carried "Under deck" the engine and boiler room spaces, or one complete hold free of any explosive or inflammable liquid shall intervene between stowage of the explosives and the corrosive liquids.

146.23–8 Electric storage batteries of the non-spillable type.—Batteries of the non-spillable type containing electrolyte or corrosive battery fluid, protected against short circuits and completely and securely boxed, are exempt from labeling requirements of the regulations in this part.

146.23–9 Electric storage batteries.—Carload or truckload shipment of electric storage batteries containing electrolyte or battery fluid, loaded or braced in the vehicle in accordance with the ICC regulations, are exempt from labeling requirements of these regulations and may be accepted for transportation on ferry vessels or railroad car ferries when loaded within such highway or railroad vehicle.

146.23–10 Sulfuric and spent acid in bulk.—Sulfuric acid may be transported in bulk on board cargo vessels in conformity with the following provisions:

(a) In tanks forming an integral part of the structure of the vessel:

(1) Provided the sulfuric acid is of a specific gravity of not less than 1.8125 (65° Baumé) or of greater strength.

(2) Sulfuric acid of a specific gravity of not less than 1.7059 (60° Baumé) and of greater strength, up to but not exceeding 1.8068 specific gravity (64.75° Baumé) provided the acid has been treated with an inhibitor that renders its corrosive effects on steel no greater than 66° Baumé, commercial sulfuric acid.

(3) All tanks used for such stowage shall be vented to the atmosphere to prevent development of internal pressure. No openings shall be permitted in the tanks below deck except such manhole covers or bolted plates necessary to provide access for cleaning or maintenance purposes. Filling and discharge lines shall terminate above the weather deck.

(4) Vents shall be fitted with flame screens made of corrosive resistant wire of at least 30 x 30 mesh for a single screen, or two screens of corrosive resistant wire, at least 20 x 20 mesh, placed not less than 1 inch or more than 1½ inches apart. Vents from independent tanks shall be constructed of steel pipe extended to a height at least above the weather deck and of a size and strength equivalent to that of the shell of the tank. Any extension of the vent duct above the weather deck may be constructed of sheet metal.

(5) An outage space of not less than 1% of the capacity of the tank shall be maintained at all times.

(b) In tanks (pressure vessel type) independent of the structure of the vessel, acid of 52° Bé. minimum strength or over may be transported without restriction provided:

(1) Tanks shall be constructed to withstand a test pressure of 100 lbs. per square inch and shall conform to the applicable provisions of subchapter F, Title 46, Code of Federal Regulations (Rules I and II General Rules and Regulations, Bureau of Marine Inspection and Navigation).

(2) Tanks shall be equipped with safety vents terminating above the weather deck in a location clear of obstruction and away from any source of open flame and such vents shall at about their uppermost point be closed with a frangible disc of lead or other suitable material of a thickness that will hold a pressure of 30 pounds per sq. in. for a period of 1 hour but will rupture within 8 hours. A filling line that also serves as a safety vent shall have a positive stop valve fitted in such a location in the filling line as will provide that the frangible disc is in position between the tank and the stop valve. No stop valve shall be located in a vent line between the tank and a frangible disc.

(3) An outage space of not less than 1% of the capacity of the tank shall be maintained at all times.

(4) Independent tanks shall be so fitted that sufficient space is provided between any inner bottom, tank top, deck shell, or bulkhead for inspection purposes. Such space must be sufficient to permit unobstructed examination.

(c) Spent acid may be transported in bulk on board cargo vessels in conformity with the provisions of sub-section (b) above.

(d) When loading or unloading sulfuric or spent acid in bulk, the following precautions shall be observed:

(1) No naked light shall be permitted in the vicinity of filling or discharge lines or tank vents.

(2) Smoking is prohibited and the master or person in charge of the vessel shall post "No Smoking" signs.

(3) All artificial lights other than electric lights or portable battery lights are prohibited.

(4) A hose shall be connected ready for use and any leakage or acid shall be washed down.

(5) Any tools necessary in loading or unloading shall be kept clean and so used as to prevent any metallic spark.

(6) Air pressure shall not be used to discharge the contents of a tank forming an integral part of the hull of a vessel.

(e) Frozen (congealed) sulfuric acid. The only satisfactory method of liquefying frozen (congealed) sulfuric acid is by the application of heat as from a steam heating coil installed under the tank. Fire or other naked light shall not be applied to any tank for the purpose of liquefying congealed sulfuric acid.

146.23-11 Limited quantity shipments.—(a) Acids and other corrosive liquids in quantity not exceeding 1 pound in bottles, each enclosed in a metal can, and packed in outside containers, are exempt from specification packaging, marking other than name of contents, and labeling requirements unless otherwise provided by the regulations in this part.

(b) Such limited quantity shipments may be accepted on board all vessels subject to the regulations in this part provided the bill of lading or other shipping paper correctly describes the article in accordance with the true name as shown in the commodity list. Stowage shall be "On deck under cover" or "Tween decks" in a compartment not subject to artificial heat.

(c) The provisions of (a) herein do not extend to shipments of the following acids and other corrosive liquids:

Acid sludge.
Bromine.
Chloracetyl chloride.
Dimethyl sulfate.
Electrolyte or alkaline battery fluid packed with storage batteries, battery charges or radio current supply devices.
Hydrofluoric acid, anhydrous.
Nitrating (mixed) acid.
Nitric acid.
Phosphorus oxychloride.
Phosphorus tribromide.
Phosphorus trichloride.
Spent acid (sulfuric or mixed).
Sulfur chloride.
Less than carload and truckload shipments of wet storage batteries.

146.23-12 Specification export carboy.—(a) Corrosive liquids for which the specification (ICC-1A) boxed glass carboy is authorized by the provisions of the table in § 146.23-100 may also be offered and accepted for export shipments only, when packed in specification (ICC-1X) boxed glass carboy.

(b) Such export shipments may be accepted for transportation provided the bill of lading or other shipping paper correctly describes the article in accordance with the true name as shown in the commodity list. Stowage shall be as prescribed by the provisions of the table in § 146.23-100 for the particular substance laden within the carboy and applicable for the particular character of vessel upon which its acceptance is permitted.

146.23-13 Hydrochloric acid in bulk.—(a) Hydrochloric acid may be transported in bulk on board cargo vessels when loaded in rubber-lined tanks (pressure vessel type) independent of the structure of the vessel; constructed, tested and otherwise in full accordance with ICC Specifications 103B or 103BW.

(b) Independent tanks shall be so fitted as to provide sufficient space between the tank and any fixed structural part of the vessel, or in lieu thereof the installation shall be such as it will be practicable to move said tanks for the inspection of the structure of the vessel and

(5th Amend.—146.23-12 added—July 1941)
(10th Amend.—146.23-11 amended; 146.23-12 amended—Feb. 1942)
(8th Amend.—Hydrochloric acid in bulk added—Dec. 1941)

the tanks. The design indicative of the manner in which the tank is to be supported and secured on board the vessel shall be approved by the Commandant of the Coast Guard prior to installation. Plans shall be submitted when requesting approval.

(c) Hydrochloric acid adulterated by other chemicals, inhibitors, oils, solvents, water, etc., shall not be accepted or transported in bulk on board vessels in rubber-lined specification containers ICC 103B or 103BW.

(d) Hydrochloric acid shall not be accepted or transported in specification containers ICC 103B or 103BW when such tank last contained a product other than one authorized to be transported in such tank by the regulations of the Interstate Commerce Commission. Hydrochloric acid shall not be loaded into a tank which last contained one of the other substances authorized to be loaded in said tank until the tank has been thoroughly washed.

(e) In addition to the markings required by the I. C. C. Specifications the legend "Hydrochloric Acid Only" shall be stenciled, or painted in block letters (said stenciling or lettering to be at least 2″ high) upon the dome or upper portion of the tank in a position plainly visible under operating conditions. This lettering shall be maintained legible at all times.

(f) Conductor piping forming the loading or delivery line of the tank shall be constructed of material that will withstand the severe action of the lading. Any one of the following materials may be used:

(1) Rubber-lined steel pipe, not less than 2″ inside diameter before lining.

(2) Strong, acid-resistant, pressure-suction rubber hose.

(3) Hard rubber pipe.

(4) Flange connections shall, if of steel, be adequately protected by means of rubber lining from acid coming in contact therewith.

(5) All valves and fittings shall be of a material resistant to the action of hydrochloric acid.

(6) A design layout of the piping, valves and fittings to be installed on the vessel (other than covered by I. C. C. specifications applicable to the tank) to be used in loading or unloading hydrochloric acid on or from the vessel shall be submitted to the Commandant of the Coast Guard prior to installation; said plans shall be in sufficient detail to identify the characteristics of all piping, valves and fittings.

(7) Filling and discharge pipe connections shall be kept disconnected at the tank except when actually loading or unloading the lading of the tank and the outlets on the tank blanked off: *Provided, however*, Such piping need not be disconnected when an efficient stop valve is fitted in the line in a location as close to the tank dome as is practicable.

(8) Discharge connections shall not be detached until pressure in the tank and line has been completely released.

(g) Unloading of hydrochloric acid may be by acid pump, siphon, or compressed air.

(1) Air pressure in excess of 30 pounds per square inch shall not be used in unloading hydrochloric acid.

(2) Compressed air used for unloading shall be as free as possible from oil, moisture, or foreign matter. To insure this, the air supply shall be taken from the top of the air receiver (reservoir). This reservoir shall be drained at regular intervals. Compressor shall be

disconnected from air line at all times except when actually being used to discharge contents of tank. The air line shall be thoroughly blown out in a reverse direction before making connections to discharge acid. The open ends of the air line at the point of connection to the shore system and tank shall be carefully blanked off when not in use.

(3) All caution markings on sides of tank or dome shall be observed before commencing filling or discharge operations.

(4) When air pressure is used for unloading acid the air line shall include the following fittings: Commencing at the tank and working towards the compressor, these fittings shall be installed in the following order; an ell having a flange on one end to connect with the air inlet flange on the tank with a full faced soft rubber gasket, the opposite end of the ell may consist of a flange or ordinary pipe connection to take either a pipe or flexible rubber hose. Fixed air piping leading to compressor, when desired, an acid resisting flexible rubber hose of optional length may be installed between the ell and the fixed piping. A bleeder valve to release air pressure. A pop valve set to blow at 30# pressure. An air gauge. A pressure-reducing valve set at 30#. An air shutoff valve. A water separator or trap. When it is desired to install these fittings as part of the shore system the only portion of this assembly that is required to be part of the vessel's equipment shall consist of the "ell", the bleeder valve to release air pressure, the pop valve set to blow at 30# pressure, and an air shutoff valve which shall be located at the dome of each tank.

(h) Tools necessary in the operation of loading or unloading of the acid shall be kept clean and so used as to prevent damage to the rubber lining of dome closures, piping or fittings. A hammer or chisel shall not be used for loosening dome fittings, for connecting or disconnecting the filling, discharge or air lines, or upon the tank at any time while the tank is filled with acid or is under discharge pressure.

Gauging rods, if used, shall be of wood. The lower end of such rods shall be equipped with a soft rubber plug.

Tools, bolts, nuts or other material actually dropped into a tank through dome openings shall be removed from the tank before the next loading.

Organic solvents, oils and greases, even in the most minute quantity, shall never be used where they will come in contact with the rubber-coated surfaces of the tank, dome, opening covers or discharge lines. To lubricate nuts or bolts a mixture of flake graphite and glycerol shall be used.

Tanks shall be kept closed at all possible times to prevent sunlight coming in contact with the rubber lining. Connecting flanges of rubber-lined pipe shall "when broken" be protected from the action of sunlight.

Protect the interior of the tank from the weather. Water or other liquids shall not be introduced into tanks except upon permission of competent authority.

Persons shall not be permitted to remove dome cover and enter tanks except upon permission of competent authority.

(i) Tanks and their fittings shall be retested at intervals conforming with the requirements of the applicable ICC specifications.

(j) Before a tank is placed in service the vessel owner shall furnish the Commandant of the Coast Guard a report certifying that the tank and its equipment comply with all the requirements of the applicable specification ICC–103B or ICC–103BW.

146.23-100 Table F.—Classification: Corrosive liquids

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Acetyl chloride	*A clear, colorless, fuming liquid. Gives off fumes which are extremely irritating to the eyes.* *Decomposes violently with water or alcohol with the evolution of hydrochloric acid fumes which are irritating and suffocating.* Do not stow adjacent to alcohol and protect stowage from water. *Inflammable. Flashpoint 40° F., boils at 135° F.* Keep cool. Protect from sparks and open flame.	White	Stowage: "On deck under cover." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Carboys in kegs, glass, earthenware, clay or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Tank cars (ICC-103A).	Not permitted	Not permitted	Not permitted.
Acids, liquids, N. O. S	*Any acid not otherwise specified by name herein that qualifies in accordance with the definition contained in these regulations as a corrosive liquid.* Keep cool. Protect from sparks and open flame.	White	Stowage: "On deck under cover." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A), not over 13 gal. cap. Lead carboys, boxed (ICC-1B), not over 13 gal. Carboys in kegs, glass, earthenware, clay or stone (ICC-1C), not over 13 gal. cap. Metal-jacketed lead carboys (ICC-28), not over 15 gal. cap. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 100 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 100 lbs. net wt.	Not permitted	Not permitted	Not permitted.

Alkaline corrosive battery fluid.	Liquid used in alkaline storage batteries. For characteristics and hazards see "Alkaline corrosive liquids N.O.S."	White	Stowage: "On deck in open." "On deck under cover." Outside containers: Carboys, boxed: Glass, earthenware, clay, or stone (ICC-1A), not over 13 gal. cap. Lead carboys, boxed (ICC-1B), not over 13 gal. Carboys in kegs, glass, earthenware, clay or stone (ICC-1C), not over 13 gal. cap. Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap. and not over 1,760 lbs. gr. wt. Wooden barrels or kegs: (ICC-10A) asphalt lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 100 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrel or drums (ICC-5, 5A) not over 110 gal. cap, and not over 1,760 lbs. gr. wt. Wooden barrels or kegs: (ICC-10A) asphalt lined not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 100 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap, and not over 1,760 lbs. gr. wt. Wooden barrels or kegs: (ICC-10A) asphalt lined not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 100 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap, and not over 1,760 lbs. gr. wt. Wooden barrels or kegs: (ICC-10A) asphalt lined not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 100 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103, 103A).
Alkaline corrosive liquids, N.O.S.	*May be any alkaline corrosive liquid properly described as such in accordance with the definition for a corrosive liquid and not otherwise shown by name within these regulations. Particularly hazardous in contact with organic substances and textiles. Miscible with water.*	White				
Alkaline corrosive battery fluid with storage batteries.		White	See "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries."	See "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries."	See "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries."	See "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries."
Antimony pentachloride.	*A heavy, reddish brown liquid, having an offensive odor. Decomposed by water, evolving hydrochloric acid, the fumes of which are irritating in contact with mucous membrane and in sufficient quantities will be suffocating. Reacts strongly with organic matter giving dense fumes. Boiling point 197° F.*	White	Stowage: "On deck protected." "On deck under cover." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Carboys in kegs, glass, earthenware, clay or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Tank cars (ICC-103A).	Not permitted.	Not permitted.	Not permitted.
Batteries, dry.			No restrictions.	No restrictions.	No restrictions.	No restrictions.

146.23-100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Batteries, electric, storage, wet. NOTE: Electric storage batteries containing electrolyte or corrosive battery fluid of the nonspillable type, protected against short circuits and completely and securely boxed, are exempt from specification packaging, marking other than name of contents, and labeling requirements.	Charged electric storage batteries containing electrolyte (acid) or alkaline corrosive battery fluid. NOTE: Shall be completely protected so that short circuit will be prevented. NOTE: Shall not be packed with other articles except electrolyte or corrosive battery fluid, or portable searchlights properly cushioned. NOTE: Observe instructions regarding "This side up" stowage.	White unless exempt from labeling requirements	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes (ICC-15D, 16B) not over 400 lbs. gr. wt. Wooden boxes (Nonspecification) completely closed, having cleated ends, and two skids of at least 3" x 3" size attached to the bottom of the box. Wooden or metal trays (Nonspecification) Carload or truckload shipments of electric storage batteries permitted by regulations to be shipped without being packed in an outside container, shall when stowed on board a vessel be packed in wooden or metal trays so constructed as to protect the batteries from damage, short circuit or from the weight of imposed stowage resting upon the batteries. NOTE: Electric storage batteries, wet, with case of impregnated rubber, asphaltum composition, wooden-battery-box type, or steel-case type may be packed as follows: 1 to 3 batteries not over 20 pounds each in outside box, gross weight not over 75 pounds, specification container not required; 1 battery not over 75 pounds in outside box, specification container not required.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes (ICC-15D, 16B) not over 400 lbs. gr. wt. Wooden boxes (Nonspecification) completely closed, having cleated ends, and two skids of at least 3" x 3" size attached to the bottom of the box. Wooden or metal trays (Nonspecification) Carload or truckload shipments of electric storage batteries permitted by regulations to be shipped without being packed in an outside container, shall when stowed on board a vessel be packed in wooden or metal trays so constructed as to protect the batteries from damage, short circuit or from the weight of imposed stowage resting upon the batteries. NOTE: Electric storage batteries, wet, with case of impregnated rubber, asphaltum composition, wooden-battery-box type, or steel-case type may be packed as follows: 1 to 3 batteries not over 20 pounds each in outside box, gross weight not over 75 pounds, specification container not required; 1 battery not over 75 pounds in outside box, specification container not required.	Ferry stowage (AA) Outside containers: Wooden boxes (ICC-15D, 16B) not over 400 lbs. gr. wt. Carload or truckload shipments of electric storage batteries containing electrolyte or battery fluid, loaded or braced to prevent damage in transit and short circuits, are exempt from specification packaging, marking other than name of contents, and labeling requirements. NOTE: Electric storage batteries, wet, with case of impregnated rubber, asphaltum composition, wooden-battery-box type, or steel-case type may be packed as follows: 1 to 3 batteries not over 20 pounds each in outside box, gross weight not over 75 pounds, specification container not required; 1 battery not over 75 pounds in outside box, specification container not required.	Ferry stowage (BB). Outside containers: Wooden boxes (ICC-15D, 16B) not over 400 lbs. gr. wt. NOTE: Electric storage batteries, wet, with case of impregnated rubber, asphaltum composition, wooden-battery-box type, or steel-case type may be packed as follows: 1 to 3, batteries not over 20 pounds each in outside box, gross weight not over 75 pounds, specification container not required; 1 battery not over 75 pounds in outside box, specification container not required.
Batteries, electric, storage, wet with containers of corrosive battery fluid.	----------	----------	See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries."	See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries."	See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries."	See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries."
Battery charger with electrolyte (acid) or alkaline corrosive liquid.	----------	----------	See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with battery charger or radio current supply device or parts thereof."	See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with battery charger or radio current supply device or parts thereof."	See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with battery charger or radio current supply device or parts thereof."	See: "Electrolyte (acid) or alkaline corrosive battery fluid packed with battery charger or radio current supply device or parts thereof."

Battery fluid			See: "Electrolyte (acid) battery fluid" or "Alkaline corrosive battery fluid."	See: "Electrolyte (acid) battery fluid" or "Alkaline corrosive battery fluid."	See: "Electrolyte (acid) battery fluid" or "Alkaline corrosive battery fluid."	See: "Electrolyte (acid) battery fluid" or "Alkaline corrosive battery fluid."
Benzoyl chloride	*A clear, colorless liquid which even at ordinary temperatures gives off a vapor very irritating to the eyes, nose, and throat.* *Decomposes on contact with water liberating fumes which are irritating to the mucous membrane and in sufficient quantities will be suffocating.*	White	Stowage: "On deck protected." "On deck under cover." Outside containers: Carboys boxed; glass, earthenware, clay or stone (ICC-1A) not over 13 gal. cap. Carboys in kegs; glass, earthenware, clay or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. net wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) WIC not over 200 lbs. net wt. Tank cars (ICC-103A). NOTE: Benzyl chloride may also be shipped in steel drums, lead lined (ICC-5H) not over 55 gal. cap.	Not permitted	Not permitted	Not Permitted.
Benzyl chloride	*A colorless liquid possessing a rather unpleasant odor and vapors which are very irritating to the eyes, nose, and throat.* *Immiscible with water.* *Also combustible. Flashpoint 140° F.*	White				
Boron trichloride	*Colorless fuming liquid.* *Decomposes in contact with water.* *Boils at 54° F.*	White	Stowage: "On deck protected." "On deck under cover." Outside containers: Cylinders as prescribed for any compressed gases except acetylene.	Not permitted	Not permitted	Not permitted.
Bromine	*A heavy, reddish brown liquid. At ordinary temperatures it gives off toxic, suffocating vapors of the same color as the liquid.* *It causes heat when in contact with organic matter and may cause fire.* *Caustic to the skin, inflicting deep, painful burns.* *Fumes or vapors even in low concentrations have a strong corrosive effect on mucous membrane and inflames the eyes.* Do not stow with combustible materials. Protect from direct rays of the sun. Keep cool. *Slightly miscible with water.* *Boils at 137° F.*	White	Stowage: "On deck in open." "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums, lead lined (ICC-5H) not over 10 gal. capacity. Wooden boxes, WIC (ICC-15A, 15B) not, over 15 qts. in any one outside box.	Not permitted	Not permitted	Not permitted.

146.23-100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Caustic potash, liquid. Potassium hydroxide solution. Caustic soda, liquid. Sodium hydroxide solution.	*Odorless, corrosive liquids. Will attack flesh and destroy organic material.* Stow well away from other corrosive (white label) liquids. Do not stow over cargo of an organic nature.	White	Stowage: "On deck in open." "On deck under cover." "Under deck." "Tween decks." Outside containers: Carboys, boxed; glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs; glass, earthenware, clay or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) Asphaltum lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 100 lbs. net wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) WIC, not over 100 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap. Tank cars (ICC-103, 103A). In tanks on deck or under deck. In tank barges. See section covering Barges in these regulations.	Stowage: "On deck in open." "On deck Under cover." Outside containers: Carboys, boxed; glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs; glass, earthenware, clay or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) Asphaltum lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 100 lbs. net wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) WIC, not over 100 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap. In tanks on deck or under deck.	Ferry stowage (AA). Outside containers: Carboys, boxed; glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs; glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) Asphaltum lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 100 lbs. net wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) WIC, not over 100 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap. Motor truck vehicles having cargo tanks.	Ferry stowage (BB). Outside containers: Carboys boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs; glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap. Wooden barrels, or kegs: (ICC-10A) Asphaltum lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 100 lbs. net wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) WIC, not over 100 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap. Tank cars (ICC-103, 103A). Motor truck vehicles having cargo tanks.
Chloracetyl chloride	*A colorless, corrosive liquid having a very pungent odor. Decomposes in water, evolving hydrochloric acid fumes, which are irritating to mucous membranes and in sufficient quantities will be suffocating.*	White	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5H) lead lined, not over 110 gal. cap. Wooden boxes (ICC-15A, 15B) WIC, not over 100 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.	Not permitted	Not permitted	Not permitted.

Chloride of phosphorus.			See: "Phosphorus trichloride."			
Chloride of sulfur			See: "Sulfur chloride."			
Chlorosulfonic acid Chlorosulfonic acid-sulfur trioxide, mixture.	*Colorless or slightly yellow liquid.* *Fumes in air giving off dense vapor cloud.* *In contact with water reacts violently, forming steam and giving off fumes of hydrochloric acid gas, which are irritating in contact with mucous membrane and in sufficient quantities will be suffocating. Very caustic to the skin.*	White	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5A, 5C) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) WIC, not over 100 lbs. net wt. Tank cars (ICC-103A).	Not permitted	Not permitted	Not permitted.
Chromic acid solution.	*A solution of chromic acid. Will have a strong caustic effect upon the skin.* *Observe containers carefully for signs of leakage and reject any that are found leaking.* Do not stow with other acids (white label), inflammable liquids (red label), glycerin or any combustible material. Observe special requirements for stowage on board vessels also transporting explosives.	White	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Carboys, boxed; glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs; glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums: (ICC-5A) not over 110 gal. cap. (ICC-17E) STC, not over 5 gal. cap. Tight wooden barrels or kegs (ICC-10A) asphalt lined, not over 50 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.	Stowage: "On deck protected." "On deck under cover." Outside containers Carboys, boxed; glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) no/ over 13 gal. Carboys in kegs; glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. (ICC-17E) STC, not over 5 gal. cap. Tight wooden barrels or kegs (ICC-10A) asphalt lined, not over 50 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not ove 15 gal. cap.	Ferry stowage (AA) Outside containers: Carboys, boxed; glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carbous, boxed (ICC-1B) not over 13 gal. Carboys in kegs; glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. (ICC-17E) STC, not over 5 gal. cap. Tight wooden barrels or kegs (ICC-10A) asphalt lined, not over 50 gal. cap. Wooden barrels or kegs. WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.	Ferry stowage (BB). Outside containers: Carboys boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxe (ICC-1B) not over 13 gal. Carboys in kegs; glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. (ICC-17E) STC, not over 5 gal. cap. Tight wooden barrels or kegs (ICC-10A) asphalt lined, not over 50 gal. cap. Wooden barrels or kegs. WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.

NOTE.—For additional container authorized during the war emergency see Section 146.28-17.

(5th Amend.—Containers added—July 1941)
(14th Amend.—Note added—Apr. 1943)

146.23-100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Compounds, cleaning liquid. Compounds, lacquer paint or varnish removing liquid. Compounds, vulcanizing liquid.	*Any compounds under these descriptive names that classify in accordance with the definitions given in these regulations as a corrosive liquid.*	White...	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Carboys, boxed: Glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed, (ICC-1B) not over 13 gal. cap. Carboys in kegs. Glass, earthenware, clay or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Tight wooden barrels or kegs (ICC-10A) asphalt lined, not over 50 gal cap. Wooden barrels or kegs, WIC (ICC-11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums (ICC-5A) not over 110 gal. cap. Tight wooden barrels or kegs (ICC-10A) asphalt lined, not over 50 gal cap. Wooden barrels or kegs, WIC (ICC-11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.	Ferry stowage (AA): Outside containers: Carboys, boxed: Glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. cap. Carboys in kegs. Glass, earthenware, clay or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Tight wooden barrels or kegs (ICC-10A) asphalt lined, not over 50 gal. cap. Wooden barrels or kegs, WIC (ICC-11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.	Ferry stowage (BB): Outside containers: Carboys, boxed. Glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. cap. Carboys in kegs. Glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Tight wooden barrels or kegs (ICC-10A) asphalt lined, not over 50 gal. cap. Wooden barrels or kegs, WIC (ICC-11) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.

Corrosive liquid, N. O. S.	*Any liquid not otherwise specified by name in this chart that qualifies as a corrosive liquid according to the definition contained in these regulations.*	White	Stowage: "On deck protected." "On deck under cover." Outside containers: Carboys, boxed: Glass, earthenware, clay or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs, glass, earthenware, clay or stone (ICC-1C), not over 13 gal. cap. Steel barrels or drums (ICC-5A), not over 110 gal cap. Tight wooden barrels or kegs (ICC-10A), Asphalt lined, not over 50 gal. cap. Wooden barrels or kegs, WIC (ICC-11B), not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 100 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.	Not permitted	Ferry stowage (AA) Outside containers: Carboys, boxed: Glass, earthenware, clay or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs, glass, earthenware, clay or stone (ICC-1C), not over 13 gal. cap. Steel barrels or drums (ICC-5A), not over 110 gal. cap. Tight wooden barrels or kegs (ICC-10A), Asphalt lined, not over 50 gal. cap. Wooden barrels or kegs, WIC (ICC-11B), not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 100 lbs. net wt. Metal-jacketed lead carboys (ICC-28), not over 15 gal. cap.	Ferry stowage (BB). Outside containers: Carboys, boxed: Glass, earthenware, clay or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs, glass, earthenware, clay or stone (ICC-1C), not over 13 gal. cap. Steel barrels or drums (ICC-5A), not over 110 gal. cap. Tight wooden barrels or kegs (ICC-10A), Asphalt lined, not over 50 gal. cap. Wooden barrels or kegs, WIC (ICC-11B), not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 100 lbs. net wt. Metal-jacketed lead carboys (ICC-28), not over 15 gal. cap.
Dimethyl sulfate	*A heavy, colorless liquid.* *Its vapors are extremely dangerous if inhaled, likely to be fatal.* *Immiscible with water.* *Has a powerful caustic action on the skin.*	White	Stowage: "On deck protected." Outside containers: Steel barrels or drums: (ICC-5A) not over 55 gal. cap. (ICC-5) enclosed in strong wooden crates, not over 15 gal. cap. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) containing one glass inside container, not over 1 quart cap.	Not permitted	Not permitted	Not permitted.

146.23-100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Drugs, chemicals, medicines, or cosmetics. A unit substance or a compound classified as a corrosive liquid in accordance with the definition contained herein, when prepared, packed and offered to the trade as drugs, chemicals, medicines or cosmetics. In quantity not exceeding 1 pint or 16 ounces by weight in bottles in metal containers.	----------	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65l bs. gr. wt.	Ferry stowage (AA) Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt.
Drugs, chemicals, medicines, or cosmetics, N. O. S. A unit substance or a compound classified as a corrosive liquid in accordance with the definition contained herein, when prepared, packed, and offered to the trade as drugs, chemicals, medicines or cosmetics. In containers exceeding 1 pint capacity or 16 ounces by weight	----------	White	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A), not over 13 gal. cap. Lead carboys, boxed (ICC-1B), not over 13 gal. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C), not over 13 gal. cap. Steel barrels or drums (ICC-5A), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) Asphaltum lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Metal-jacketed lead carboys (ICC-28), not over 15 gal. cap.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A), not over 13 gal. cap. Lead carboys, boxed (ICC-1B), not over 13 gal. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C), not over 13 gal. cap. Steel barrels or drums (ICC-5A), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) Asphaltum lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 200 lbs. gr. wt. Metal-jacketed lead carboys (ICC-28), not over 15 gal. cap.	Ferry stowage (AA) Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A), not over 13 gal. cap. Lead carboys, boxed (ICC-1B), not over 13 gal. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C), not over 13 gal. cap. Steel barrels or drums (ICC-5A), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) Asphaltum lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 200 lbs. gr. wt. Metal-jacketed lead carboys (ICC-28), not over 15 gal. cap.	Ferry stowage (BB). Outside containers: Carboys boxed, glass, earthenware, clay or stone (ICC-1A), not over 13 gal. cap. Lead carboys, boxed (ICC-1B), not over 13 gal. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C), not over 13 gal. cap. Steel barrels or drums (ICC-5A), not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) Asphaltum lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 200 lbs. gr. wt Metal-jacketed lead carboys (ICC-28), not over 15 gal. cap.

Electrolyte (acid) battery fluid. Electrolyte (acid) must not be over 47% strength (39° Baume).	*Electrolyte acid is a term commonly applied to dilute sulfuric acid used in electric storage batteries.* *This acid generates heat when mixed with water.* *Will char organic material.* Do not stow with combustible materials. *Miscible with water.* Observe closely for signs of leakage and reject packages that are leaking or show signs of having leaked.	White	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Carboys, boxed (ICC-1A) glass only, not over 13 gal. cap. Carboys in kegs (ICC-1C) glass only, not over 13 gal. cap. Jugs in tubs (ICC-31) not over 2 gal. each and limited to 1 jug in each tub. Steel barrels or drums: (ICC-5H) lead lined, not over 55 gal. cap. (ICC-5D) rubber lined, not over 110 gal. cap. Rubber drum (ICC-43A) not over 30 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Carboys, boxed, (ICC-1A) glass only, not over 13 gal. cap. Carboys in kegs (ICC-1C) glass only, not over 13 gal. cap. Jugs in tubs (ICC-31) not over 2 gal. each and limited to 1 jug in each tub. Steel barrels or drums: (ICC-5H) lead lined, not over 55 gal. cap. (ICC-5D) rubber lined, not over 110 gal. cap. Rubber drum (ICC-43A) not over 30 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Ferry stowage (AA) Outside containers: Carboys, boxed (ICC-1A) glass only, not over 13 gal. cap. Carboys in kegs (ICC-1C) glass only, not over 13 gal. cap. Jugs in tubs (ICC-31) not over 2 gal. each and limited to 1 jug in each tub. Steel barrels or drums: (ICC-5H) lead lined, not over 55 gal. cap. (ICC-5D) rubber lined. not over 110 gal. cap. Rubber drum, (ICC-43A) not over 30 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Ferry stowage (BB). Outside containers: Carboys, boxed (ICC-1A) glass only, not over 13 gal. cap. Carboys in kegs (ICC-1C) glass only, not over 13 gal. cap. Jugs in tubs (ICC-31) not over 2 gal. each and limited to 1 jug in each tub. Steel barrels or drums: (ICC-5H) lead lined, not over 55 gal. cap. (ICC-5D) rubber lined, not over 110 gal. cap. Rubber drum (ICC-43A) not over 30 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103A).
Electrolyte (acid) or alkaline corrosive battery fluid packed with battery charger or radio current supply device or parts thereof.	This designation provides for shipping one battery charger or one radio current supply device with electrolyte packed within the same outside container, with such electrolyte container closed, cushioned and separated from the mechanical device by wooden partition.	White	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt.
Electrolyte (acid) or alkaline corrosive battery fluid packed with storage batteries.	*Electric storage batteries in specification outside wooden boxes having glass bottles containing electrolyte packed in the same outside case.* Note: Must be packed in accordance with the requirements of the I. C. C. regulations.	White	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Wooden boxes (15D, 16B) not over 400 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes (15D, 16B) not over 400 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Wooden boxes (15D, 16B) not over 400 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes (15D, 16B) over 400 lbs. gr. wt.
Fire-extinguisher charges (consisting of sulfuric acid in strong eight-fluid ounce or smaller bottles).	For characteristics and hazards see: "Sulfuric acid."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck."	Stowage: "On deck under cover." "Tween decks."	Ferry stowage (AA)	Ferry stowage (BB).

146.23-100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Fire-extinguisher charges—Con.						
Fire-extinguisher charges (consisting of sulfuric acid in ten-ounce or smaller bottles).	For characteristics and hazards see: "Sulfuric acid."	No label required.	Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt.	Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt.	Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt.	Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. net wt.
Fire-extinguisher charges (consisting of chlorosulfonic acid in a hermetically sealed bottle not exceeding 2 ounces capacity).	For characteristics and hazards see: "Chlorosulfonic acid."	No label required.	Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Wooden boxes, WIC (nonspecification box) acceptable to vessels' officers in charge of loading.	Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Wooden boxes, WIC (nonspecification box) acceptable to vessels' officers in charge of loading.	Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Wooden boxes, WIC (nonspecification box) acceptable to vessels' officers in charge of loading.	Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Wooden boxes, WIC (nonspecification box) acceptable to vessels' officers in charge of loading.
Formic acid	*A colorless liquid with pungent irritating odor. Is combustible and will give off vapors which may form explosive mixtures in air. In concentrated form it is dangerously caustic to the skin. Miscible with water. Solidifies at 45° F.*	White	Stowage: "On deck in open." "On deck protected." "On deck under cover." "Tween decks." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) asphaltum or latex rubber lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap. Tank cars (ICC 103CW) stenciled "For formic acid only."	Stowage: "On deck protected." "On deck under cover." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) asphaltum or latex rubber lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.	Ferry Stowage (AA). Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) asphaltum or latex rubber lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap.	Ferry stowage (BB). Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Lead carboys, boxed (ICC-1B) not over 13 gal. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A) asphaltum or latex rubber lined, not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap. Tank cars (ICC 103CW) stenciled "For formic acid only."

Hydriodic acid	*A clear, colorless or pale yellow fuming liquid.* *Gives off fumes which are irritating in contact with mucous membrane and in sufficient quantities will be suffocating.* *Is corrosive but will not cause fire.* Shall not be accepted in metal drums. *Miscible with water.*	White	Stowage: "On deck in open." "On deck protected." "On deck under cover." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap.	Stowage: "On deck protected." Outside containers	Ferry stowage (AA) Outside containers	Ferry stowage (BB). Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 13 gal. cap. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C) not over 13 gal. cap.
Hydrobromic acid	*A corrosive, fuming liquid, varying from colorless to slightly yellow.* *Gives off fumes which are irritating in contact with mucous membrane and in sufficient quantities will be suffocating.* *Is corrosive but will not cause fire.* Shall not be accepted in metal drums. *Miscible with water.*	White	Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Rubber drums (ICC-43A) not over 30 gal. cap.	Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Rubber drums (ICC-43A) not over 30 gal. cap.	Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Rubber drums (ICC-43A), not over 30 gal. cap.	Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Rubber drums (ICC-43A) not over 30 gal. cap.
Hydrochloric acid Muriatic acid.	*A corrosive, fuming liquid, varying from colorless to yellow.* *Gives off fumes which are irritating in contact with mucous membrane and in sufficient quantities will be suffocating.* *Hydrochloric acid will damage or destroy many articles by contact but does not cause fire. Will dissolve tin, iron, and steel with evolution of hydrogen gas.* Shall not be accepted in unlined metal drums. *Miscible with water.* Do not stow with sulfuric acid, nitric acid, or chlorates. Do not stow over other cargo. *Non-inflammable.*	White	Stowage: "On deck protected." "On deck under cover." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 15 gal. cap. Carboys in kegs glass, earthenware, clay, or stone. (ICC-1C) not over 15 gal. cap. Wooden barrels or kegs (ICC-10A) rubber lined, not over 50 gal. cap. Steel barrels or drums (ICC-5D) rubber lined, not over 110 gal. cap. Rubber drums (ICC-43A) not over 30 gal. cap.	Stowage: "On deck protected." Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 15 gal. cap. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C) not over 15 gal. cap. Wooden barrels or kegs (ICC-10A) rubber lined, not over 50 gal. cap. Steel barrels or drums (ICC-5D) rubber lined, not over 110 gal. cap. Rubber drums (ICC-43A) not over 30 gal. cap.	Ferry stowage (AA) Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 15 gal. cap. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C) not over 15 gal. cap. Wooden barrels or kegs (ICC-10A) rubber lined, not over 50 gal. cap. Steel barrels or drums (ICC-5D) rubber lined, not over 110 gal. cap. Rubber drums (ICC-43A) not over 30 gal. cap.	Ferry stowage (BB). Outside containers: Carboys, boxed, glass, earthenware, clay, or stone (ICC-1A) not over 15 gal. cap. Carboys in kegs, glass, earthenware, clay, or stone (ICC-1C) not over 15 gal. cap. Wooden barrels or kegs (ICC-10A) rubber lined, not over 50 gal. cap. Steel barrels or drums (ICC-5D) rubber lined, not over 110 gal. cap. Rubber drums (ICC-43A) not over 30 gal. cap.
Hydrochloric acid mixtures.	See "Hydrochloric acid"	White	Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt.	Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt.	Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt.	Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt.

146.23-100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Hydrochloric acid mixtures—Con.	See "Hydrochloric acid"	White	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103B, 108, 108A). NOTE: Hydrochloric acid of not over 20% strength (13.25° Baumé) may also be accepted in: Wooden barrels or kegs (ICC-10A) Asphaltum lined, not over 50 gal. cap.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. NOTE: Hydrochloric acid of not over 20% strength (13.25° Baumé) may also be accepted in: Wooden barrels or kegs (ICC-10A) Asphaltum lined, not over 50 gal. cap.	Wooden boxes, WIC (ICC-15A, 16B, 15C, 16A, 19A) not over 100 lbs. net wt. NOTE: Hydrochloric acid of not over 20% strength (13.25° Baumé) may also be accepted in: Wooden barrels or kegs (ICC-10A) Asphaltum lined, not over 50 gal. cap.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103B, 108, 108A). NOTE: Hydrochloric acid of not over 20% strength (13.25° Baumé) may also be accepted in: Wooden barrels or kegs (ICC-10A) Asphaltum lined, not over 50 gal. cap.
Hydrofluoric acid. Originating bill of lading or other shipping paper shall certify as to the strength of this acid.	*A fuming, corrosive liquid used primarily for etching glass. Dissolves glass and certain metals.* *Miscible with water.* *Produces painful burns when allowed to contact flesh.* *Gives off fumes which are irritating in contact with mucous membrane and caustic in their effects thereon.* Observe special requirements for stowage on board vessels also transporting explosives. Keep cool.	White	Stowage: "On deck protected." Outside containers: Steel barrels or drums (ICC-5H) Lead lined, not over 55 gallons cap. Wooden barrels or kegs (ICC-11A, 11B) with inside containers of India rubber, ceresine or lead, not over 200 lbs. net wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) with inside containers of India rubber, ceresine, or lead, not over 200 lbs. net wt. Metal-jacketed lead carboys (ICC-28) not over 15 gal. cap. Boxed lead carboys (ICC-1B) not over 13 gal. cap. NOTE: Hydrofluoric acid of not less than 60% strength may also be accepted in: Steel barrels or drums (ICC-5A) unlined, not over 55 gal. cap.	Not permitted	Not permitted	Not permitted.

			NOTE: Hydrofluoric acid of from 60 to 80% strength may also be accepted in: Tank cars: (ICC-103A, 104A, 105A) (ARA-IV-A). NOTE: Hydrofluoric acid of not over 65% strength may also be accepted in: Rubber drums (ICC-43A) not over 30 gal. cap. NOTE: Hydrofluoric acid of not over 40% strength may also be accepted in: Steel barrels or drums (ICC-5D), Rubber lined, not over 55 gal. cap. Tank cars (ICC-103B), Rubber-lined tanks. NOTE: Hydrofluoric acid of not over 30% strength may also be accepted in: Wooden barrels or kegs, (ICC-10A) Asphaltum-lined, not over 50 gal. cap. Wooden tanks (ICC-108, 108A) lined with asphaltum or other suitable material which will remain in a plastic condition and not subjected to destruction by the lading.			
Hydrofluoric acid, anhydrous.	*Hydrofluoric acid in a gaseous state at normal temperature and pressure.* *Pressure about 30 lbs. per sq. in. at 130° F.* *Boils at 66° F.* *Vapor lighter than air.* Do not stow with anhydrous ammonia or ammonia liquid. Keep cool.	White	Stowage: "On deck protected." Outside containers: Cylinders (ICC-3, 3A, 3B, 3C, 3E, 4, 4A, 25, 38) (ICC-4B, 4C, if not brazed). Tank cars (ICC-105, 105A500) (ARA-V).	Not permitted	Not permitted	Not permitted.

(14th Amend.—Container added; spec. changed—Apr. 1943)

146.23-100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Hydrofluosilicic acid	*A clear, colorless, fuming liquid. Has a strong corrosive action on steel, lead, and glass.* *Caustic to the skin and will inflict severe burns.* *Irritating and caustic to mucous membrane.* *Miscible with water.* Do not use paint in the vicinity of hydrofluosilicic acid.	White	Stowage: "On deck protected." Outside containers: Wooden barrels or kegs: (ICC-10A) asphaltum lined, not over 50 gal. cap. (ICC-11A, 11B). With India rubber or ceresin, not over 200 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) with inside containers of India rubber or ceresin, not over 100 lbs. net wt. Tank cars, wooden tanks, asphaltum lined (ICC-108, 108A).	Not permitted	Not permitted	Not permitted.
Hydrofluosilicic acid (*of not exceeding 40% strength*).	See "Hydrofluosilicic acid"	White	Outside containers: As shown above for "Hydrofluosilicic acid" and also in the following: Steel barrels or drums (ICC-5D) rubber lined, not over 55 gal. cap. Rubber drums (ICC-43A) not over 30 gal. cap. Tank cars (ICC-103B) rubber lined.	Not permitted	Not permitted	Not permitted.
Hydrofluosilicic acid (containing no free hydrofluoric acid).	See "Hydrofluosilicic acid"	White	Outside containers: All containers as shown above for "Hydrofluosilicic acid" and "hydrofluosilicic acid (of not exceeding 40% strength") and also in the following: Carboys, boxed (ICC-1A) Glass only, not over 13 gal. cap. Carboys in kegs (ICC-1C) Glass only, not over 13 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Not permitted	Not permitted	Not permitted.

Hydrogen peroxide. Hydrogen dioxide. *Containing over 7.41% (25 volume) H_2O_2 and not over 40%.*	*A colorless, heavy liquid having powerful oxidizing properties.* *Miscible with water.* *Expands rapidly with an increase in temperature.* Keep cool and protect from direct rays of the sun. Stow well away from organic substances, and other cargo likely to give off organic vapor, and well away from living quarters, explosives and acids (white label). NOTE: In event of leakage wash down freely with water to prevent the liquid drying on fibrous or combustible materials.	White	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible."* Outside containers: Glass carboys (boxed or completely boxed), with vented stoppers (ICC-1A) not over 13 gal. cap. *Tween deck stowage not permitted for glass carboys. Aluminum carboys (ICC-34B) not over 15 gal. cap. Aluminum drums (ICC-42D) with vented closure, drums marked "Keep this end up," not over 30 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 100 lbs. net wt. NOTE: Solutions of a strength certified to be not greater than 10% H_2O_2 by weight may also be shipped in: Wooden barrels, paraffin lined (ICC-10A) not over 30 gal. cap. tank cars.	Stowage: "On deck protected." "On deck under cover." Outside containers: Glass carboys (completely boxed), with vented stoppers (ICC-1A) not over 13 gal. cap. Aluminum drums (ICC-42D) with vented closure, drums marked: "Keep this end up," not over 30 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. NOTE: Solutions of a strength certified to be not greater than 10% H_2O_2 by weight may also be shipped in: Wooden barrels, paraffin lined (ICC-10A) not over 30 gal. cap.	Ferry stowage (AA) Outside containers: Glass carboys (boxed or completely boxed), with vented stoppers (ICC-1A) not over 13 gal. cap. Aluminum carboys (ICC-34B) not over 15 gal cap. Aluminum drums (ICC-42D) with vented closure, drums marked: "Keep this end up," not over 30 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. NOTE: Solutions of a strength certified to be not greater than 10% H_2O_2 by weight may also be shipped in: Wooden barrels, paraffin lined (ICC-10A) not over 30 gal cap. Tank cars: Highway vehicle cargo tanks.	Ferry stowage (BB). Outside containers: Glass carboys (boxed or completely boxed), with vented stoppers (ICC-1A) not over 13 gal. cap. Aluminum carboys (ICC-34B) not over 15 gal. cap. Aluminum drums (ICC-42D) with vented Closure, drums marked: "Keep this end up," not over 30 gal. cap. Wooden boxes, WIC, (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. NOTE: Solutions of a strength certified to be not greater than 10% H_2O_2 by weight may also be shipped in: Wooden barrels, paraffin lined (ICC-10A) not over 30 gal. cap. Tank cars: Highway vehicle cargo tanks.
Hydrogen peroxide. Hydrogen dioxide. *(Solution of a strength certified to be not greater than 7.41% (25 volume) H_2O_2).*	Solutions of such strength are not classified as dangerous and accordingly are not included within these regulations.					
Hydrogen peroxide *(solutions of greater strength than 40%.)*	Transportation not permitted except under special permission and upon freight vessels only.					

146.23–100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Mixed acid Nitrating acid.	*Is a mixture of nitric and sulfuric acids. This acid mixture coming in contact with organic matter may cause fire.* *Is a fuming liquid giving off suffocating, irritating vapors.* *Miscible with water with evolution of heat.* Shall not be transported in any vessel carrying Class A or Class B explosives. Stow separate from any other corrosive (white label) liquid.	White	Stowage: "On deck protected." Outside containers: Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103A).	Not permitted	Not permitted	Not permitted.
Muriatic acid			See "Hydrochloric acid."			
Nitrating acid			See "Mixed acid."			
Nitric acid	*A fuming, corrosive liquid, varying from colorless to red. has a corrosive action on almost all metals. Is a strong oxidizing agent.* *In contact with organic matter will be likely to cause fire.* *Gives off very poisonous, volatile reddish-brown fumes. Poisonous effects often occur from inhalation of fumes after several hours or longer time has elapsed and may result fatally. Do not breathe these fumes.* *In contact with skin will produce very bad burns. Protect the eyes from fumes or liquid.* *Vapors heavier than air.* Stow well clear of other corrosive (white label) liquids and all combustible substances. *Miscible with water with evolution of much heat.* Do not accept for transportation if packed in the same container with any other substance. Shall not be transported on any vessel carrying Class A or Class B explosives.	White	Stowage: "On deck protected." Outside containers: Carboys, boxed (ICC-1A) straight sided, not over 13 gal. cap. Carboys in kegs (ICC-1C) straight sided, not over 13 gal. cap. Steel barrels or drums ICC-5C) not over 110 gal. cap. Steel drums (ICC-5X) aluminum lined, not over 110 gal. cap. Aluminum drums (ICC-42B) Not over 110 gal. cap. Wooden barrels or kegs (ICC-11A, 11B) WIC of glass, not over 200 lbs. net wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) WIC of glass, not over 100 lbs. net wt. Aluminum drums (ICC-42D) with vented closure, drums marked "Keep this end up," not over 30 gal. cap. Tank cars (ICC-103C) (ICC-103 CAL) for the shipment of 95% or greater nitric acid.	Not permitted	Not permitted	Not permitted.

Oil of vitriol		White	See "Sulfuric acid."			
Perchloric acid (*of not exceeding 72% strength*).	*A clear, colorless liquid.* *Powerful oxidizer. Caustic to the skin.* *Vapors are irritating.* *Mixed with combustible material in the presence of fire will burn with explosive rapidity* Do not stow with organic substances or with ether, benzol, alcohol, petroleum, or any of the inflammable gases. *Miscible with water with evolution of heat.* Note: Perchloric acid shall not be accepted if packed with any other article.	White	Stowage: "On deck protected." Outside containers: Carboys, boxed (ICC-1A) not over 13 gal. cap. Carboys in kegs (ICC-1C) not over 13 gal. cap. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) WIC of glass not over 100 lbs. net wt.	Not permitted	Not permitted	Not permitted.
Perchloric acid (*exceeding 72% strength*).			Not accepted for transportation on board vessels.	Not accepted for transportation on board vessels.	Not accepted for transportation on board vessels.	Not accepted for transportation on board vessels.
Phosphorus oxychloride.	*A colorless, fuming liquid, with pungent odor. Strong oxidizer.* *Decomposed by water with evolution of heat, forming hydrochloric and phosphoric acids the vapors of which are irritating to mucous membrane and will be dangerous for even short exposure.* *It acts strongly on organic matter, producing great heat.* Keep dry.	White	Stowage: "On deck under cover." Outside containers: Steel barrels or drums (ICC-5H) lead lined, not over 110 gal. cap. Nickel barrels or drums (ICC-5K) not over 110 gal. cap. Metal-jacketed lead carboys (ICC-23) not over 15 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tanks cars, lead lined (ICC-103A).	Not permitted	Not permitted	Not permitted.
Phosphorus tribromide.	*A colorless, corrosive, fuming liquid.* *Very penetrating odor.* *Decomposed by water with evolution of heat.* Keep dry.	White	Stowage: "On deck under cover." Outside containers: Steel barrels or drums (ICC-5H) lead lined, not over 110 gal. cap. Metal-jacketed lead carboys (ICC-23) not over 15 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Not permitted	Not permitted	Not permitted.

146.23-100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Phosphorus trichloride.	As for "Phosphorus oxychloride."	White	Stowage: "On deck under cover." Outside containers: As shown for "Phosphorus oxychloride" and also in steel barrels or drums (ICC-5A) not over 110 gal. cap.	Not permitted	Not permitted	Not permitted.
Potassium hydroxide solution.		White	See: "Caustic potash, liquid."			
Pyrosulfuryl chloride	*A colorless, corrosive, fuming liquid. Decomposed by water forming hydrochloric and sulfuric acid, the fumes of which are irritating to mucous membrane.* Keep dry.	White	Stowage: "On deck under cover". Outside containers: Carboys, boxed: Glass, earthenware, clay or stone (ICC-1A) not over 13 gal. cap. Carboys, in kegs: Glass, earthenware, clay or stone (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 200 lbs. net wt. Tank cars, (ICC-103A).	Not permitted	Not permitted	Not permitted.
Silicon chloride tetrachloride.	*A colorless liquid, fuming strongly in air. Gives off suffocating fumes. Mixed with water it decomposes, forming hydrochloric acid, the fumes of which are irritating to mucous membranes.* Keep dry.	White				
Sodium hydroxide solution.		White	See: "Caustic soda, liquid."			
Sludge acid	*Waste or spent sulfuric acid, usually that from refining petroleum oils and crude benzenes. Will disintegrate organic material in general. Soluble in water, evolving heat.*	White	Stowage: "On deck protected". Outside containers: Carboys, boxed (ICC-1A) not over 13 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. nt. wt.	Not permitted	Not permitted	Not permitted.

Spent sulfuric acid	*Acid residue resulting from the use of sulfuric acid in various processes.* *Will disintegrate organic material in general.* *Soluble in water, evolving heat.*	White	Tank cars (ICC-103, 103A). Bulk: In tanks, on or under deck, for cargo vessels only.			
Spent mixed acid	*Mixed acid which has given up part of its nitric acid resulting from its use in some process.* *Strongly corrosive.* *Soluble in water, evolving heat.* *Will disintegrate organic material in general.*	White.				
Sulfur chloride (mono and di).	*A yellowish-red liquid; penetrating odor.* *Fumes have an irritating effect on the eyes, lungs and mucous membrane and in sufficient quantities will be suffocating.* *Decomposed by water with separation of sulfur.* Keep dry.	White	Stowage: "On deck under cover" Outside containers: Carboys, boxed (ICC-1A) not over 13 gal. cap. Carboys in kegs (ICC-1C) not over 13 gal. cap. Steel barrels or drums (ICC-5A) not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103A).	Not permitted	Not permitted	Not permitted.
Sulfur trioxide	*A corrosive, strongly fuming liquid in contact with air, and possessing a pungent odor.* *Crystallizes at about 60° F. Liquid at higher temperatures.* *Miscible with water with evolution of much heat and sometimes almost with explosive violence.* *Has a destructive effect upon organic materials similar to sulfuric acid but to a stronger degree.* *Irritating to mucous membrane and caustic to the skin.* Do not stow over other cargo. Observe special requirements for stowage on board vessels also transporting explosives. Keep dry.	White	Stowage: "On deck under cover." Outside containers: Steel barrels or drums (ICC-5A) not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Not permitted	Not permitted	Not permitted.

146.23-100 Table F.—Classification: Corrosive liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Sulfuric acid Oil of vitriol.	*A heavy, oily, corrosive liquid. It varies from colorless to almost black. Will char wood, textiles or almost any other organic matter, but is unlikely to cause fire.* *Miscible with water, evolving heat.* Do not stow with Nitric Acid, Nitrates, Chlorates, Carbides, nor with finely divided organic or metallic substances. *Sulfuric acid has a caustic effect when in contact with the human body, producing severe burns. Very hazardous to the eyes. Fumes of sulfuric acid are irritating to mucous membranes.* See also: "Electrolyte (acid) battery fluid".	White	Stowage: "On deck protected." "On deck under cover." "Under deck" (steel drums only). Outside containers: Carboys, boxed (ICC-1A) not over 13 gal. cap. Carboys in kegs (ICC-1C) not over 13 gal. cap. Jugs in tubs (ICC-31) WIC, not over 2 gal. net cap. Steel barrels or drums: (ICC-5A) not over 110 gal. cap. (ICC-5H) lead lined, not over 110 gal. cap. (ICC-5D) rubber lined, not over 110 gal. cap. (ICC-17F) STC not over 55 gal. cap. Wooden barrels or kegs, WIC, (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC, (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103A). Bulk: In tanks on or under deck.	Stowage: "On deck protected." Outside containers: Carboys, boxed (ICC-1A) not over 13 gal cap. Carboys in kegs (ICC-1C) not over 13 gal. cap. Jugs in tubs (ICC-31) WIC, not over 2 gal. net cap. Steel barrels or drums (ICC-5A) not over 110 gal. cap. Wooden barrels or kegs, WIC, (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC, (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Ferry stowage (AA) Outside containers: Carboys, boxed (ICC-1A) not over 13 gal. cap. Carboys in kegs (ICC-1C) not over 13 gal. cap. Jugs in tubs (ICC-31) WIC, not over 2 gal. net cap. Steel barrels or drums: (ICC-5A) not over 110 gal. cap. (ICC-5H) lead lined, not over 110 gal. cap. (ICC-5D) rubber lined, not over 110 gal. cap. (ICC-17F) STC not over 55 gal. cap. Wooden barrels or kegs, WIC, (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC, (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank motor vehicle (MC310)	Ferry stowage (BB) Outside containers: Carboys boxed (ICC-1A) not over 13 gal. cap. Carboys in kegs (ICC-1C) not over 13 gal. cap. Jugs in tubs (ICC-31) WIC, not over 2 gal. net cap. Steel barrels or drums: (ICC-5A) not over 110 gal. cap. (ICC-5H) lead lined, not over 110 gal. cap. (ICC-5D) rubber lined, not over 110 gal. cap. (ICC-17F) STC not over 55 gal. cap. Wooden barrels or kegs, WIC, (ICC-11A, 11B) not over 200 lbs. net wt. Wooden boxes, WIC, (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103A). Tank motor vehicle (MC310).
Sulfuric acid, fuming Oleum. Nordhausen	*Solution of sulfuric anhydride in sulfuric acid in the form of a heavy, oily, very corrosive liquid.* *Dangerous as a fire hazard.* *Reacts with water explosively.* *Fumes on exposure to air giving off dense vapors which are caustic to the skin and mucous membrane. Dangerous to the eyes.* Stow well away from all organic matter. Do not stow over other cargo. Shall not be transported on any vessel carrying Class A or Class B explosives.	White	Stowage: "On deck protected." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5A), not over 100 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B), not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 100 lbs. net wt. Tank cars (ICC-103A). Bulk (in tanks on or under deck.)	Not permitted	Not permitted	Not permitted.

(5th Amend—"Precautions" changed—July 1941)
(14th Amend—"117F Drum", Tank motor vehicle added—Apr. 1943)

Tetrachloride		White	See: "Silicon chloride."			
Tin tetrachloride, anhydrous.	*A heavy, colorless, fuming, corrosive liquid, which gives off fumes on exposure to air. Miscible with water with evolution of much heat. Fumes are visible and are caustic and irritating to mucous membrane.*	White	Stowage: "On deck protected." Outside containers: Steel barrels or drums (ICC-5A), not over 55 gal. cap. Wooden barrels or kegs, WIC (ICC-11A, 11B), not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 100 lbs. net wt. Tank cars (ICC-105A-300).	Not permitted	Not permitted	Not permitted.
Titanium tetrachloride.	*A heavy, clear, colorless liquid, fuming strongly in moist air. The fumes given off are visible and are irritating to mucous membrane. Miscible with cold water.*	White	Stowage: "On deck protected." Outside containers: Steel barrels or drums (ICC-5A), not over 55 gal. cap. Wooden barrels or kegs (ICC-11A, 11B), not over 200 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A), not over 100 lbs. net wt. Tank cars (ICC-103A).	Not permitted	Not permitted	Not permitted.

DETAILED REGULATIONS GOVERNING COMPRESSED GASES

146.24–1 Definition of compressed gases.—A compressed gas is defined by the ICC regulations as set forth in § 146.24–2 herein, and such definition is binding upon all shippers making shipments of compressed gases by common carrier vessels engaged in interstate or foreign commerce by water. This definition is accepted and adopted and forms part of the regulations in this subchapter applying to all shippers making shipments of compressed gases by any vessel, and shall apply to the owners, charterers, agents, master, or other person in charge of a vessel and to other persons, transporting, carrying, conveying, storing, stowing or using compressed gases on board any vessel subject to R. S. 4472, as amended, and the provisions of the regulations in this subchapter.

146.24–2 Compressed gas defined.—A compressed gas is defined as any material with a gage pressure exceeding 25 pounds per square inch at 70° F.; or any liquid inflammable material having a Reid [1] vapor pressure exceeding 40 pounds per square inch absolute at 100° F. (See §§ 146.25–1 to 146.25–100 for gases defined and classified as poisonous.)

146.24–3 Containers.—(a) Compressed gases shall not be offered or accepted for transportation except when contained in metal cylinders unless otherwise specifically permitted in drums, tanks, motor vehicles, tank cars, or other containers as shown in the table for compressed gases, in § 146.24–100.

(b) Only containers that comply with ICC specifications shall be accepted, except foreign cylinders, which are permitted under conditions shown in (c), may be accepted on board vessels for export shipment.

(c) Cylinders of foreign manufacture, received from foreign countries for charging with compressed gas may be accepted for transportation as indicated in the table for the particular character vessels involved provided such cylinders are retested and recharged in accordance with the ICC regulations applying to such cylinders and the compressed gas involved. The bill of lading or other shipping paper shall, when possible, identify the cylinder and shall carry the following certification:

These cylinders have been retested and refilled in accordance with the ICC requirements for export.

(d) The regulations in this part require that cylinders offered for transportation on board vessels shall be fitted with valve protection caps or be of dished head design of construction with the valves recessed into the cylinders or otherwise protected, or if of a design other than "valve cap" or "dished head" the cylinder shall be boxed. It is not required that such outside box be a specification container. If the box be of solid construction, such box shall be marked "Inside Packages Comply With Prescribed Specifications", and the appropriate label shall be affixed thereto. Cylinders constructed with valves protruding need not be fitted with valve protection caps when such cylinders are shipped boxed.

[1] American Society for Testing Materials Tentative Method of Test for Vapor Pressure of Petroleum Products (Reid Method) (D-323-38-%).

(e) All containers partially or completely filled with a compressed gas shall have the proper label attached except as the regulations in this part may specifically exempt such labeling requirements.

146.24–4 Stowage on board vessels.—All compressed gases permitted for transportation on board vessels shall, when taken on board a vessel, be stowed in accordance with the provisions applying to the particular character of vessel as shown in the tables forming § 146.24–100, and the detailed requirements for stowage shown therein.

146.24–5 "On deck" stowage.—(a) Compressed gases which are permitted any type of "On deck" stowage by the provisions of the table forming § 146.24–100, shall be properly secured, when so stowed, in a manner satisfactory to the master or other person in charge of the vessel consistent with the following conditions:

(1) That the vessel has open spaces on deck suitable for such purposes of stowage.

(2) That the vessel has sufficient free board to afford structural protection from seas or adequate protection and security by bulwarks.

(3) Cylinders shall be stowed on their sides unless racks are provided for vertical stowage.

(4) Cylinders shall not be carried "On deck" over holds containing coal.

(5) When stowed "On deck protected" the cylinders shall be protected from the direct rays of the sun by means of structural erections or awnings. Tarpaulins covering cylinders and in contact therewith are not considered adequate protection. Protection by use of wood dunnage is permitted.

146.24–6 "Under deck" stowage.—(a) Cylinders stowed "Under deck" shall be stowed in cool compartments or holds either capable of being ventilated or constructed gas tight, protected from open flame and any source of artificial heat, clear of living spaces, either crew or passenger, and readily accessibly from hatches or cargo holds.

(b) Cylinders shall not be overstowed with other dangerous articles of cargo.

146.24–7 Stowage clearance, ocean going vessels.—Containers of inflammable compressed gas stowed either "On deck" or "Under deck" on board vessels on ocean voyages shall be stowed at least 8 feet clear of the ship's side; containers of non-inflammable compressed gas shall be stowed at least 3 feet clear of the ship's side.

146.24–8 Stowage clearance, vessels on inland waters.—Containers of inflammable compressed gas stowed either "On deck" or "Under deck" on board vessels on inland water voyages, including lakes, bays, sounds, rivers, and the Great Lakes, shall be stowed at least 3 feet clear of the vessel's side.

146.24–9 Stowage securing means.—In the stowage of all cylinders of compressed gases, securing means shall be such as to prevent any movement. Wooden or metal cradles or racks securely stopped, coir rope matting, rope grummets or squared metal shoes fitted at each end of each cylinder are types of acceptable means for stowage. Cylinders packed in squared wooden boxes need not be stowed in cradles or racks. When cylinder stowages are not provided with locking means, shoring or lashing with wire cable shall be provided to prevent movement. Dunnage shall be provided under the first tier of all cylinders so they

shall not rest directly on a steel or iron deck. Lashings shall be secured to pad eyes or other permanent structural parts of the vessel. Pipe rails shall not be used to secure lashings.

146.24-10 Stowage of compressed gas and explosives.—(a) Cylinders containing an inflammable compressed gas shall not be transported or stored on any vessel carrying explosives unless:

(1) When carried "on deck" on vessels having machinery spaces amidship, the engine and boiler room spaces intervene between the holds which contain the explosive and the spaces over which the cylinders are stowed.

(2) When carried "on deck" on vessels having machinery spaces aft, the bridge structural erections shall intervene between the holds which contain the explosives and the spaces over which the cylinders are stowed. This stowage shall not be allowed unless it provides a distance between the stowages of at least one complete hold space.

(3) When carried "under deck," the engine and boiler room spaces, or one complete hold free of any explosives or inflammable liquid shall intervene between the stowage of the explosives or inflammable liquids and the cylinders containing the gases.

146.24-11 Stowage of cylinders containing chlorine.—Cylinders or other containers of chlorine shall not be stowed in the same compartment with sodium metallic, potassium metallic, phosphorus, copper or brass leaf or sheets, powdered antimony, turpentine, ammonia, finely divided organic material, nor with the following compressed gases: coal gas, hydrogen, or acetylene.

146.24-12 Instructions regarding lights and smoking.—Instructions shall be given by the master or other person in charge of the vessel to all members of the crew regarding the hazards of inflammable gases. The use of open flame lights and smoking is prohibited in the vicinity of deck cargoes of inflammable compressed gases. The master or other person in charge of the vessel shall cause "NO SMOKING" warning signs to be posted in the vicinity of such deck cargoes.

146.24-13 Leaking cylinders not accepted.—A leaking cylinder or other container of compressed gas shall not be accepted for transportation.

146.24-14 Report of leaking or damaged cylinders.—(a) The owner, charterer, agent, master or person in charge of a vessel shall report in writing each occurrence of leaking or damaged cylinders of compressed gas to the Officer in Charge, Marine Inspection, for the district in which the substance was taken on board the vessel, setting forth a description of the container, and specification markings appearing thereon, the damage sustained, when possible a reason for the damage, the name and address of the consignor and consignee (or shipping mark) and a statement relative to the disposition of the container.

(b) When the failure of a cylinder of compressed gas results in a casualty involving loss of life, personal injury or damage to the vessel no report other than those required by the provisions of 46 CFR, Part 136, and §35.2-9, 62.16, 78.16, 96.16, or 115.16 shall be made.

146.24-15 Liquid chlorine in bulk.—(a) Liquid chlorine may be transported in bulk on board Class "AA", "BB", or "BC" cargo barges when loaded in Class I fusion-welded steel tanks (pressure vessel type) independent of the structure of the vessel.

(b) (1) New or existing barges proposed to be used for the transportation of chlorine in bulk shall be approved. Detail plans showing the design and construction of the barges shall be submitted for such approval. An approved barge shall be maintained in accordance with the provisions of the initial approval, normal wear and wastage excepted. Failure to maintain such physical condition may result in the withdrawal of said approval.

(2) Tanks shall be fabricated, constructed and tested in accordance with the applicable provisions of the regulations entitled "Marine Engineering Regulations and Material Specifications" of the U. S. Coast Guard. (46 CFR Parts 50 to 58, incl.) In addition to other markings required to be shown upon the tank, the water capacity of the tank in pounds shall also be stamped and stenciled thereon. Plans shall be submitted when requesting approval.

(c) Tanks shall be designed for an allowable working pressure of not less than 300 pounds per square inch and the safety valves shall be set at the maximum allowable working pressure of the tank. Each tank shall be provided with a manhole nozzle and cover on top of the tank of sufficient diameter to permit access to the interior of the tank and to provide for the proper mounting of venting, loading, unloading and safety valves. Other openings in the tank are prohibited.

(d) A protective housing of approved design shall be provided over the manhole cover and the valves and other openings in said cover, and so constructed as to provide that any leakage of the lading occurring around the cover, valves, gaskets, safety devices, etc., can readily be discharged into the water alongside the barge.

(e) Independent tanks shall be so fitted on board the barge as to provide sufficient space for visual inspection around the tanks and any adjacent fixed structural part of the barge, or in lieu thereof the installation shall be such as to make it practicable to move said tanks for the inspection of the structure of the barge and the tanks.

(f) The design indicative of the manner in which the tanks are to be installed, supported, and secured on board the barge shall be approved prior to installation. Tanks shall be supported in steel cradles and secured in place by means of base anchorages or steel bands. No appendages shall be welded to a tank after said tank has been stress relieved.

(g) The maximum weight of chlorine loaded into a tank shall not exceed 1.25 times the fresh water capacity of the tank. When more than one tank is installed in a barge, said tanks shall not be interconnected, either directly or by a manifold. When a tank is being filled or discharged no other of the barge's cargo tanks shall be connected to said filling or discharge line. Filling and discharge pipe connections shall be kept disconnected at the cargo tank, except when actually loading or unloading the lading of the cargo tank and the outlet valves on the tank shall, when the filling or discharge line is disconnected, be completely plugged or blanked off.

(h) Because of the importance of the requirement that tanks shall not be loaded with chlorine in excess of 1.25 times the water capacity (weight basis) the following procedure is required to be followed:

1. The cargo tank to be filled shall be inspected to insure that it is empty and free from foreign matter. After being again made tight the tank shall be evacuated to at least 20 inches of mercury and then loaded with chlorine through a direct pipe line from a shore tank that

is mounted on scales so that a predetermined weighted amount of chlorine is loaded into a cargo tank on board the barge. Any vapor vented during the loading operation shall be ignored in calculating the safe carrying capacity of the cargo tank.

2. After the loading operation is completed the vapor above the liquid chlorine shall be analyzed and if it should contain less than 80% chlorine, vapors shall be withdrawn through the vent line until the vapor content in the cargo tank shows at least 80% chlorine. The arsenious oxide or the potassium iodide methods of analysis shall be used in determining the percentage of chlorine in the vapor.

3. Upon completion of the loading of a cargo tank and after filling connections are removed, the cover plate gasket and fittings attached to the cover plate shall be tested for leakage of chlorine. This shall be done by using the aqua ammonia method.

4. The chlorine shall be unloaded by taking advantage of its vapor pressure to force the liquid out of the tank. If desired, compressed air may be used, provided it has been dried by passing it over activated aluminum oxide, silica gel, or other approved drying agent. The compressed air system shall contain a safety valve arranged and set so that the air pressure in the cargo tank cannot exceed 150 pounds per square inch gauge.

5. A flexible metal connection, of a design to be approved, shall be fitted in each filling discharge, and return pipe line to compensate for movement of the barge during the operation of filling or discharge.

6. A diagrammatic sketch of filling and discharge systems shall be submitted when requesting approval. Complete information shall be indicated by legends shown on the sketch.

7. Alternate methods of filling or discharging the lading may be submitted for approval for use.

(j) Cargo tanks shall be examined and retested every two years in the presence of an inspector of the Coast Guard. The examination shall consist of a thorough internal and external inspection. The hydrostatic test shall be at a pressure of 450 pounds per square inch. The relief valve or valves shall be dismantled, overhauled, and reset at the time of this biennial inspection. Said valve or valves may be dismantled, overhauled, and reset at such other times as is the desire of the carrier; provided such dismantling, overhauling, and reseting are made with the cognizance of and under such conditions as are agreed upon with the Officer in Charge, Marine Inspection. Upon satisfactory conclusion of test at the time of the biennial inspection, the inspector shall stamp upon the tank the date and other identification necessary to indicate authority for continued use of the cargo tanks and relief valves. When a carrier finds it necessary to replace a relief valve, he shall report the change in writing to the Officer in Charge, Marine Inspection, in the district where the change took place or at the first port of call. The replacement shall be the same size, capacity, and material as the replaced valve and shall be set to relieve at the safe working pressure of the tank.

(k) Deleted.

(l) No other kinds of cargo shall be on board the barge at the same time that chlorine in either liquid or vapor form is present in the cargo tank.

(m) The following substances shall not be used as stores on board barges transporting chlorine in bulk: Hydrogen, methane, liquefied petroleum gases, acetylene, ammonia, methyl ether, ethyl phosphine, turpentine, compounds containing such substances, metallic powders, finely divided metals or finely divided organic material.

(n) Repairs involving the use of welding or burning equipment shall not be undertaken on the barge while chlorine in either liquid or vapor form is present in the tanks, except in an emergency involving the safety of the barge.

(o) During the time chlorine cargo is laden in the tanks the barge shall be under constant surveillance. A towing vessel engaged in transporting such barges shall not leave the barge unattended except when the barge is moored at a pier, wharf, dock or other terminal

and then only if such facility is provided with watchman or guard service. When the barge is at the consignor's or consignee's terminal, watchman or guard service shall be provided by said consignor or consignee.

(p) The Interstate Commerce Commission's standard "Dangerous" placard shall be displayed in four locations on the barge when chlorine is laden in the tanks. A placard shall be posted approximately midship on each side and facing outboard. A placard shall be posted at each end of the barge at about the ends of the tanks facing outboard. Racks for mounting such placards will be so arranged as to provide clear visibility and be protected from becoming readily damaged or obscured. After unloading and before a tank or tanks are gas-freed, the placard shall be reversed to show the "Dangerous-Empty" legend.

(q) The word "approved" when used in Section 146.24–15 shall mean approved by the Commandant, U. S. Coast Guard.

(15th Amend.—§ 146.24–15 added—June 1943)

146.24–100 Table G.—Classification: Compressed gases

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Acetylene	*Inflammable gas.* *Violently explosive over a wide range of mixtures with air. (3 to 75% for pure acetylene.)* *Slightly lighter than air.* *Pressure usually less than 400 lbs. per square inch at 130° F.*	Red gas	Stowage: "On deck under cover." "Tween decks readily accessible." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Stowage: "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.
Air, compressed	*Non-inflammable gas.* *Pressure usually about 2,250 lbs. per square inch at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.
Anhydrous ammonia	*Non-inflammable gas.* *Toxic and suffocating even in small quantities (less than 1%). Pungent odor gives warning of dangerous quantities in air.* *Lighter than air.* *Weakly inflammable and explosive with about 16 to 27% in air, when involved in a fire at a temperature about 1,100° F.* *Pressure about 315 lbs. per square inch at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC–106A500, 105A300). Tanks (ICC–106A500). Tank motor vehicle complying with ICC motor carrier regulations.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank motor vehicle complying with ICC motor carrier regulations.	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC–106A-500, 105A-300). Tanks (ICC–106A500). Tank motor vehicle complying with ICC motor carrier regulations.

146.24-100 Table G.—Classification: Compressed gases—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Argon	*Noninflammable gas.* *Nonpoisonous, but excessive quantities in an enclosed space may cause suffocation.* *Odorless.* *Heavier than air.* *Pressure usually about 2,350 lbs. per square inch at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Stowage: "On deck protected." "On deck under cover." "Tween deck." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA). Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.
Boron trifluoride	*Noninflammable gas.* *Slightly poisonous. Suffocating. Possesses easily detectable odor.* *Heavier than air.* *Boiling point—150° F.* *Pressure usually about 2,250 to 2,500 lbs. per square inch at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders. (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC-105A500, 105A600.)	Not permitted.	Not permitted.	Not permitted.
Butane			See "Liquefied petroleum gas."			
Carbon dioxide, liquefied.	*Noninflammable gas.* *Will cause suffocation if breathed in excessive quantities. Odorless.* *Much heavier than air.* *Pressure usually about 2,250 lbs. per square inch at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC-105A500, 105A600).	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA). Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC-105A500, 105A600).

Carbon dioxide syphon bulbs. Syphon bottle charges. *Sparklets.*	*Non-inflammable gas*..... For characteristics and hazards see: "Carbon dioxide, liquefied."	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Boxes. Cartons.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Boxes. Cartons.	Ferry stowage (AA)..... Containers: Boxes. Cartons.	Ferry stowage (BB). Containers: Boxes. Cartons.
Carbon monoxide.....	*Inflammable gas*..... *Poisonous, even in small quantities (much less than 1%).* *Inflammable and explosive with about 12 to 74% in air.* *Odorless.* *About as heavy as air.* *Pressure usually about 2,200 lbs. per sq. in. at 130° F.*	Red gas.....	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Not permitted.....	Not permitted.....	Not permitted.
Chlorine.....	*Non-inflammable gas*..... *Poisonous; pungent odor; gives warning of dangerous quantities in air.* *Even in very small quantities has a choking, smothering effect and is very injurious to membranes and tissues.* *Very much heavier than air.* *May cause combustion of acetylene, turpentine and finely divided organic material.* *Pressure about 210 lbs. per sq. in. at 130° F.*	Green gas.....	Stowage: "On deck in open." "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders. (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC–105A300, 106A500). Tanks (ICC–106A500.)	Not permitted except in an emergency involving life or health, and upon application made to the Commandant of the Coast Guard, limited shipments of chlorine may be made under such conditions as the said Commandant in his judgment may authorize.	Not permitted except in an emergency involving life or health, and upon application made to the Commandant of the Coast Guard, limited shipments of chlorine may be made under such conditions as the said Commandant in his judgment may authorize.	Not permitted except in an emergency involving life or health, and upon application made to the Commandant of the Coast Guard, limited shipments of chlorine may be made under such conditions as the said Commandant in his judgment may authorize.
Coal gas.....	*Inflammable gas*..... *Composition may vary considerably.* *Poisonous.* *Lighter than air.* *Pressure usually about 2,250 lbs. per square inch at 130° F.*	Red gas.....	Stowage: "On deck proteted." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Not permitted.....	Not permitted.....	Not permitted.
Compressed gases, N. O. S.	*Inflammable gas or non-inflammable gas.*	Red gas or green gas (appropriate one.)	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Not permitted.....	Not permitted.....	Not permitted.

146.24–100 Table G.—Classification: Compressed gases—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Crude nitrogen fertilizer solution.	*Non-inflammable gas*	Green gas	Stowage: "On deck." "Under deck away from heat." Containers: Tank cars (ICC–105A300, 106A500).	(Shipped only in tank cars)	(Shipped only in tank cars)	Ferry stowage (BB). Containers: Tank cars (ICC–105A300, 106A500).
Cyclopropane	*Inflammable gas* *Inflammable and explosive with about 2 to 10% in air.* *Anesthetic.* *Heavier than air.* *Pressure about 200 lbs. per square inch at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.
Cylinders, empty Tank cars, empty.			See "Hazardous articles" table.			
Dichlorodifluoromethane.	*Non-inflammable gas* *Non-poisonous but excessive quantities in an enclosed space may cause suffocation.* *Odorless.* *Very much heavier than air.* *Decomposes when passed through flames, evolving hydrochloric and hydrofluoric acid fumes.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC–106A-500). Tanks (ICC–106A500).	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Cargo hatch trunkway." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tanks (ICC–106A500).	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tanks (ICC–106A500).	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC–106A-500). Tanks (ICC 106A500).
Dimethyl ether	*Inflammable gas* *Inflammable and explosive with about 2 to 50% in air.* *Anesthetic.* *Heavier than air.* *Pressure about 170 lbs. per sq. inch at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Not permitted	Not permitted	Not permitted.

Ethane	*Inflammable gas.* *Inflammable and explosive with about 3 to 12% in air.* *Odorless and about as heavy as air.* *Pressure usually about 2,500 lbs. per sq. in. at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Not permitted	Not permitted	Not permitted.
Ethylene	*Inflammable gas.* *Inflammable and explosive with about 3 to 28% in air.* *Anesthetic.* *About as heavy as air.* *Pressure usually about 2,500 lbs. per sq. inch at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.
Fertilizer, ammoniating solution, *containing free ammonia.*	*Non-inflammable gas*	Green gas	Stowage: "On deck." "Under deck away from heat." Containers: Tank cars (ICC-105A300, 106A500).	(Shipped only in tank cars).	(Shipped only in tank cars)	Ferry stowage (BB). Containers: Tank cars (ICC-105A300, 106A500).
Fire extinguishers, hand (*containing nonliquified gas*).	*Hand fire extinguishers containing non-liquefied gas for the purpose of expelling fire extinguishing contents.* *This applies only to fire extinguishers the gas content of which possesses a gauge pressure exceeding 25 lbs. per square inch at 70° F.*	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Stout wooden boxes. Fiberboard boxes.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Stout wooden boxes. Fiberboard boxes.	Ferry stowage (AA) Containers: Stout wooden boxes. Fiberboard boxes.	Ferry stowage (BB) Containers: Stout wooden boxes. Fiberboard boxes.
Helium	*Non-inflammable gas* *Non-poisonous, but in excessive quantities in an enclosed space may cause suffocation.* *Very much lighter than air.* *Pressure usually about 2,300 lbs. per sq. inch at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (Boxed.) Tank cars (ICC-107A****). Tanks (ICC-107A****).	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." "Cargo hatch trunkway." Containers: Cylinders: (With valve protection cap.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders Tank cars (ICC-107A****). Tanks (ICC-107A****).
Hydrocarbon gas, liquefied.	*Inflammable gas.* *May be a definite gas or mixtures of any of the liquefiable gases.* *Vapors heavier than air.* *Mixtures of vapor with air in certain proportions will be inflammable and explosive.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Not permitted	Not permitted	Not permitted.

146.24-100 Table G.—Classification: Compressed gases—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Hydrocarbon gas, nonliquefied.	*Inflammable gas.* *May be a definite gas or mixtures of nonliquefiable hydrocarbon gases.* *Vapors heavier than air.* *Mixtures of vapor with air in certain proportions will be inflammable and explosive.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Not permitted	Not permitted	Not permitted.
Hydrogen	*Inflammable gas.* *Inflammable and violently explosive with about 4 to 75% in air.* *Nonpoisonous, but excessive quantities in an enclosed space may cause suffocation.* *Very much lighter than air.* *Pressure usually about 2,300 lbs. per sq. inch at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC-107A****) (USNX 1002 to 1012.) Tanks (ICC-107A****).	Not permitted	Not permitted	Not permitted.
Hydrogen chloride	*Noninflammable gas.* *In event of leakage fumes which are irritating in contact with mucous membrane will be formed. With moisture present it is likely the fumes will show in the form of a vapor cloud and a weak Muriatic acid solution which will attack iron and steel with evolution of hydrogen gas may occur. Miscible with water.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (Boxed.)	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." "Cargo hatch trunkway." Containers: Cylinders: (With valve protection cap.) (Boxed.)	Ferry stowage (AA). Containers: Cylinders: (With valve protection cap.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.
Hydrogen sulfide	*Inflammable gas.* *Inflammable and explosive with about 4 to 46% in air.* *Foul odor gives warning of dangerous quantities in air.* *Poisonous even in small quantities (much less than 1%).* *Slightly heavier than air.* *Pressure about 550 lbs. per sq. in. at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Not permitted	Not permitted	Not permitted.
Isobutane			See: "Liquefied petroleum gas."			
Liquefied carbon dioxide.			See: "Carbon dioxide, liquefied."			
Liquified hydrocarbon gas.			See "Hydrocarbon gas liquefied."			

(14th Amend.—Hydrogen chloride added—Apr. 1943)
(3rd Rev.—Hydrocarbon gas, liquefied relocated—Sept. 1943)

Liquefied petroleum gas (pressure not exceeding 375 lbs. per sq. in. at 130° F.)	*Inflammable gas.* *Predominate components are generally propane, butane, and isobutane.* *Heavier than air.* *Mixtures with air in certain proportions will be inflammable and explosive.*	Red gas.	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC-106A500). Tanks (ICC-106A500). Special tank containers (approval required). Tank motor vehicle (complying with ICC motor carrier regulations).	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA). Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC-106A500.) Tanks (ICC-106A500.)
Liquefied petroleum gas (pressure not exceeding 225 lbs. per sq. in. at 105° F.).	*Inflammable gas.* *Predominate components are generally propane, butane, and isobutane.* *Heavier than air.* *Mixtures with air in certain proportions will be inflammable and explosive.*	Red gas.	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC-105A300). Special tank containers (approval required). Tank motor vehicle (complying with ICC motor carrier regulations).	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA). Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC-105A300).
Liquefied petroleum gas (pressure not exceeding 75 lbs. per sq. in. at 105° F.).	*Inflammable gas.* *Predominate components are generally propane, butane, and isobutane.* *Heavier than air.* *Mixtures with air in certain proportions will be inflammable and explosive.*	Red gas.	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Steel drums (ICC-5, 5F) not over 11 gal. cap. Tank cars (ICC-104A). Special tank containers (approval required). Tank motor vehicle (complying with ICC motor carrier regulations).	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished deads.) (Boxed. Steel drums (ICC-5, 5F) not over 11 gal. cap.	Ferry stowage (AA). Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Steel drums (ICC-5, 5F) not over 11 gal. cap.	Ferry stowage (BB). Containers: Cylinders. Steel drums (ICC-5, 5F) not over 11 gal. cap. Tank cars (ICC-104A).
Liquefied petroleum gas (pressure not exceeding 65 lbs. per sq. in. at 105° F.).	*Inflammable gas.* *Predominate components are generally propane, butane, and isobutane.* *Heavier than air.* *Mixtures with air in certain proportions u ill be inflammable and explosive.*	Red gas.	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC-104) (ARA-IV).	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA). Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC-104) (ARA-IV).
Machines or apparatus (*assembled for shipment containing not over 15 pounds weight of gas or liquid for their operation*).		No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Wooden boxes or crates (nonspecification).	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Cortainers: Wooden boxes or crates (nonspecification).	Ferry stowage (AA). Containers: Wooden boxes or crates (nonspecification).	Ferry stowage (BB). Containers: Wooden boxes or crates (nonspecification).

146.24-100 Table G.—Classification: Compressed gases—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Methane	*Inflammable gas.* *Nonpoisonous, but in excessive quantities in a closed space will cause suffocation.* *Forms an explosive mixture with air.* *Nonliquefied hydrocarbon gas.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Not permitted	Not permitted	Not permitted.
Methyl chloride	*Inflammable gas.* *Inflammable and explosive with about 8 to 19% in air.* *Evolves hydrochloric acid fumes when burned.* *Faintly sweet odor, like ether.* *Pressure about 160 lbs. per sq. inch at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC-106A500, 105A300). Tanks (ICC-106A500).	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC-106A-500, 105A300). Tanks (ICC-106A-500).
Monochlorodifluoromethane. Monochlorotetrafluoroethane.	*Noninflammable gas.* *Nonpoisonous, but excessive quantities in an enclosed space may cause suffocation.* *Odorless.* *Very much heavier than air.* *Decomposes when passed through flames, evolving hydrochloric and hydrofluoric acid fumes.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC-106A-500). Tanks (ICC-106A-500).	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Cargo hatch trunkway." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tanks (ICC-106A-500).	Ferry stowage (AA) Containers: Cylinders (With valve protection cap.) (With dished heads.) (Boxed.) Tanks (ICC-106A-500).	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC-106A-500.) Tanks (ICC-106A-500).
Monomethylamine	*Inflammable gas.* *Pungent, suffocating gas, like ammonia.* *Slightly heavier than air.* *Pressure about 110 lbs. per sq. inch at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Stowage: "On deck protected." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.
Neon gas	*Noninflammable gas.* *Nonpoisonous, but excessive quantities in an enclosed space may cause suffocation.* *Odorless.* *Heavier than air.* *Pressure usually about 2,300 lbs. per sq. inch at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.

Nitrogen	*Non-inflammable gas.* *Non-poisonous, but excessive quantities in an enclosed space may cause suffocation.* *About as heavy as air.* *Pressure usually about 2,300 lbs. per sq. in. at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC-107A****). Tanks (ICC-107A****).	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA). Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC-107A****). Tanks (ICC-107A****).
Nitrosyl chloride	*Non-inflammable gas.* *Corrosive to iron. Is shipped in nickel cylinders only.* *This gas involved in a fire (at high temperatures) will form chlorine and one of the oxides of nitrogen as products of decomposition.* *Pressure usually about 150 lbs. per sq. in. at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Cylinders(ICC-3BN400).	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Cargo hatch trunkway." Containers: Cylinders (ICC-3BN400).	Ferry stowage (AA). Containers: Cylinders (ICC-3BN400).	Ferry stowage (BB). Containers: Cylinders (ICC-3BN-400).
Nitrous oxide	*Non-inflammable gas.* *Will support combustion.* *Anesthetic.* *Colorless and sweet tasting.* *Lighter than air.* *Pressure usually about 2,300 lbs. per sq. inch at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Cargo hatch trunkway." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA). Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.
Oxygen	*Non-inflammable gas.* *Strong supporter of combustion. Accelerates fires.* *May cause self-ignition of rags, sawdust and other finely divided material when oxygen is present in excess.* *Colorless, odorless and tasteless.* *Slightly heavier than air.* *Pressure usually about 2,300 lbs. per sq. in. at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." Containers: Cylinders: (With valve protection cap.) (Boxed.) Tank cars (ICC-107A * * *).	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Cargo hatch trunk, way." "Under deck away from heat." Containers: Cylinders. (With valve protection cap.) (Boxed.)	Ferry stowage (AA). Containers: Cylinders. (With valve protection cap.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC-107A * * *).

146.24–100 Table G.—Classification: Compressed gases—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Petroleum gas, liquefied.			See: "Liquefied petroleum gas."			
Pintsch gas	*Inflammable gas.* *A mixture of coal gas and oil gas in various proportions.* *Very pronounced odor.* *Poisonous and suffocating.* *Pressure usually about 2,300 lbs. per sq. in. at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (Boxed.)	Not permitted	Not permitted	Not permitted.
Propane			See: "Liquefied petroleum gas."			
Propylene	*Inflammable gas.* *Inflammable and explosive with about 2 to 10% in air.* *Anesthetic.* *Heavier than air.* *Pressure about 310 lbs. per sq. in. at 130° F.*	Red gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders.
Refrigerating machines (*of the self-contained type containing not over 25 lbs. weight of gas or of the remote-control type, consisting of separate units shipped separately and each containing not over 25 lbs. weight of gas*).		No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Wooden boxes or crates (non-specification).	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Containers: Wooden boxes or crates (non-specification).	Ferry stowage (AA) Containers: Wooden boxes or crates (non-specification).	Ferry stowage (BB). Containers: Wooden boxes or crates (non-specification).
Sulfur dioxide	*Noninflammable gas.* *Pungent odor gives warning of dangerous quantities in air. Toxic and suffocating even in small quantities (less than 1%).* *Much heavier than air.* *Pressure about 125 lbs. per sq. in. at 130° F.*	Green gas	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.) Tank cars (ICC–105A300, 106A–500). Tanks (ICC–106A–500).	Stowage: "On deck protected." "On deck under cover." Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (AA) Containers: Cylinders: (With valve protection cap.) (With dished heads.) (Boxed.)	Ferry stowage (BB). Containers: Cylinders. Tank cars (ICC–105A300, 106A500). Tanks (ICC–106A500).

DETAILED REGULATIONS GOVERNING POISONOUS ARTICLES

146.25–1 Definition of poisonous articles.—Poisonous articles are divided by the ICC regulations into three classes according to degree of hazard in transportation. These are:

Extremely Dangerous Poison—Class A.
Less Dangerous Poison—Class B.
Tear Gases or Irritating Substances—Class C.

and are defined by the ICC regulations as set forth in §§ 146.25–2, 146.25–3, 146.25–4, and 146.25–5 herein, and such definitions are binding upon all shippers making shipments of poisonous articles by common carrier vessels engaged in interstate or foreign commerce by water. These definitions are accepted and adopted and form part of the regulations in this subchapter and apply to all shippers making shipments of poisonous articles by any vessel and shall apply to owners, charterers, agents, master or other person in charge of a vessel and to other persons, transporting, carrying, conveying, storing, stowing or using poisonous articles, on board vessels subject to R. S. 4472, as amended, and the provisions of the regulations in this subchapter.

146.25–2 Extremely dangerous poisons, Class A, poison gas label.—Poisonous gases or liquids of such nature that a very small amount of the gas, or vapor of the liquid, mixed with air is dangerous to life. This class includes the following:

Acrolein.	Ethyldichlorarsine.	Mustard gas.
Chlorpicrin.	Hydrocyanic acid.	Nitrogen peroxide (tetroxide).
Cyanogen.	Lewisite.	Phenylcarbylamine chloride.
Diphosgene.	Methyldichlorarsine.	Phosgene (Diphosgene).

NOTE:. Dilute solutions of hydrocyanic acid of not exceeding 5 per cent strength are classed as poisonous articles, Class B.

146.25–3 Less dangerous poisons, Class B, Liquid, poison label.—(a) Poisonous Liquids (including pastes and semisolids) are substances of such nature that they are chiefly dangerous by external contact with the body or by their being taekn internally as in contaminated food or feeds.

(b) The vapors of some of this class of materials are also offensive or dangerous, but to a much less extent than Class A poisons.

146.25–4 Less dangerous poisons, Class B, Solids, poison label.—Poisonous solids (including pastes and semi-solids) are substances of such nature that they are chiefly dangerous by external contact with the body or by their being taken internally as in contaminated food or feeds.

146.25–5 Tear gas or irritating substances, Class C, Tear gas label.—Tear gases are liquid or solid substances which upon contact with fire or when exposed to air give off dangerous or intensely irritating fumes, such as Brombenzylcyanide, chloracetophenone, diphenylaminechlorarsine, and diphenylchlorarsine, but not including any poisonous article, Class A.

146.25-6 Stowage on board vessels.—Containers of poisonous articles offered for transportation on board vessels shall, when taken on board a vessel, be stowed in accordance with the provisions applying to the particular character of vessel as shown in the tables forming § 146.25-100 and with the detailed regulations for stowage.

146.25-7 Limitation of "on deck" stowage.—When "On deck in open" stowage is permitted for any substances by § 146.25-100, it shall apply only to the waterproof containers in which such substances are packed.

146.25-8 Limitation on all stowage.—(a) Containers of poisonous articles shall be stowed well away from living quarters, refrigerated cargo and foodstuffs of any description.

(b) Cyanides, or cyanide mixtures shall not be stowed with corrosive liquids.

(c) Enclosed compartments in which are stowed any extremely dangerous poisons, Class A, shall not be left open to entrance by persons unfamiliar with the type of cargo being transported.

146.25-9 Care following leakage or sifting of poisonous articles.—Compartments or holds in which have been stowed packages containing arsenic, or arsenical compounds, calcium cyanide, potassium cyanide, or sodium cyanide shall in the event any leakage or sifting from the containers has occurred, be thoroughly cleaned after the cargo is unloaded and before the hold is used for stowage of other cargo.

146.25-10 Limited quantity shipments.—(a) Poisonous liquids, Class B, as defined herein, except hydrocyanic acid solutions, methyl bromide, motor fuel antiknock compound, phenyldichlorarsine and tetraethyl lead in tightly closed inside containers securely cushioned when necessary to prevent breakage and packed as follows are exempt from specification packaging, marking other than name of contents, and labeling requirements.

(1) In glass or earthenware containers not over 1 quart capacity each, or in metal containers not over 1 gallon capacity each, packed in strong outside wooden boxes or barrels.

(2) In glass or earthenware containers not over 1 pint capacity each, or in metal containers not over 1 quart capacity each packed in strong outside fiberboard boxes.

(b) Poisonous solids, Class B, except cyanides, as described in (c), in tightly closed inside containers, securely cushioned when necessary to prevent breakage and packed as follows, are exempt from specification packaging, marking other than name of contents, and labeling requirements.

(1) In inside glass, earthenware or metal containers or locked corner sliding lid wooden boxes of not over 5 pounds capacity each, or chipboard, pasteboard, or fiber cartons, cans, or boxes, of not over 1 pound capacity each, packed in outside wooden or fiberboard boxes or wooden barrels or kegs. Net weight of contents of outside container not over 100 pounds.

(2) In inside chipboard, pasteboard, or fiber cartons, cans, or boxes, of not over 5 pounds capacity each, packed in outside fiberboard or wooden boxes. Not more than 5 of these cartons shall be packed in any outside container.

(c) Cyanides, when packed and described as follows, are exempt from specification packaging, marking other than name of contents, and labeling requirements.

(1) Cyanides in tightly closed glass, earthenware, or metal inside containers not over 1 pound each, securely cushioned when necessary to prevent breakage, and packed in outside wooden or fiberboard boxes, or in wooden barrels. Net weight of cyanides in any outside container not over 25 pounds.

(2) Cyanide mixtures in tightly closed glass, earthenware, or metal inside containers, securely cushioned when necessary to prevent breakage, and packed in outside wooden or fiberboard boxes, or in wooden barrels. Net weight of cyanide mixtures in any outside container, not over 5 pounds.

(3) Cyanides of copper, zinc, lead and silver.

(d) Such limited quantity shipments may be accepted on board all vessels subject to the regulations in this part provided the bill of lading or other shipping paper correctly describes the article in accordance with the true name as shown in the commodity list. Stowage shall be "On deck under cover" or "Tween decks" in a compartment not subject to artificial heat.

146.25-11 Cylinder valve protection.—Cylinders containing a Class A Extremely dangerous poison, Class B less dangerous poison or Class C Tear gas or irritating substance, when offered for transportation on board vessels shall be fitted with valve protection caps or be of dished head design of construction with the valve recessed into the cylinders or otherwise protected, or if of a design other than "valve cap" or "dished head" the cylinder shall be boxed. It is not required that such outside box be a specification container. If the box be of solid construction such box shall be marked "Inside Packages Comply With Prescribed Specifications," and the appropriate label shall be affixed thereto. Cylinders constructed with valves protruding need not be fitted with valve protection caps when such cylinders are shipped boxed.

(14th Amend.—§ 146.25-11 added—Apr. 1943)

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146.25–100 Table H.—Classification: Class A: Extremely dangerous poisons

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Acrolein	*A clear, greenish yellow liquid having a pungent disagreeable odor. It is irritating to the eyes and respiratory organs* *It is also inflammable.* Stow well away from living quarters in a space not easily accessible to any persons. Protect from direct rays of the sun and from all sources of artificial heat. *Miscible with water.* Keep cool	Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC–33, 3D) with valve protection cap or when without cap in nonspecification wooden boxes marked "Inside packages comply with prescribed specifications." Wooden boxes (ICC–15A, 15B, 15C, 16A) W1C, not over 25 lbs. net wt.	Not permitted	Not permitted	Not permitted.
Bromacetone, liquid	*A clear, colorless liquid produced by the action of Bromine on Acetone.* *The vapors of this liquid are extremely irritating to the eyes.* Stow well away from living quarters and in a space not easily accessible to any persons Protect from direct rays of the sun and from all sources of artificial heat. Keep cool	Poison.				
Carbonyl chloride			See "Phosgene."			

Chemical ammunition (containing Class "A" poisonous gases or liquids). Nonexplosive. May only be shipped by, for or to the War and Navy Departments of the United States Government. Note: When chemical ammunition is shipped having ignition elements, bursting charges or detonating fuzes assembled, such shipments shall conform to the regulations prescribed for "Ammunition, Chemical Explosive", under Class "A" Dangerous Explosives.	Consists of projectiles, shells, bombs, and grenades containing Class "A" poisonous gases or liquids, but not equipped or packed with ignition elements, bursting charges, detonating fuzes or explosive components. *Marking:* Packages will be labeled with the "Poison gas" label and marked "Nonexplosive" and carry the name of the contents. Outside containers and additional requirements as to marking, as set forth by the War or Navy Department regulations, shall be conformed with before shipment.					
Chlorpicrin absorbed		Poison gas	Stowage: "On deck under cover." Outside containers: Wooden boxes WIC; metal strapped (ICC-15A) not over 24 lbs. net wt.	Not permitted	Not permitted	Not permitted.
Chlorpicrin, mixtures	*A colorless, oily liquid. Its vapors are very irritating and extremely poisonous.* Stow away from living quarters and in a space not easily accessible to any persons. Protect from direct rays of the sun and from all sources of artificial heat.	Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC-3, 3A, 3B, 3C, 4A, 4B, 4C, 7, 25, 26) with valve protection cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A) not over 24 lbs. net wt.	Fumigants containing chlorpicrin may be accepted on board passenger vessels when packed in outside wooden boxes (ICC-15A, 15B, 15C, 16A) with inside glass bottles in hermetically sealed metal cans in corrugated fiberboard cartons.	Fumigants containing chlorpicrin may be accepted on board passenger ferry vessels when packed in outside wooden boxes (ICC-15A, 15B, 15C, 16A) with inside glass bottles in hermetically sealed metal cans in corrugated fiberboard cartons.	Fumigants containing chlorpicrin may be accepted on board passenger-carrying railroad car ferry vessels when packed in outside wooden boxes (ICC-15A, 15B, 15C, 16A) with inside glass bottles in hermetically sealed metal can in corrugated fiberboard cartons.
Chlorpicrin, liquid	*Mixtures of chlorpicrin with nonpoisonous liquids or gases.*	Poison gas.	NOTE: Cylinders less than 18" in length or less than 5" in diameter shall be packed in boxes or crates, and marked with the prescribed name of contents, prescribed label, and the words "This side up," and the notation "Inside Packages Comply With Prescribed Specifications."	Not over 1 lb. of liquid in each bottle, filled to not over 95% capacity, securely cushioned in cans with sufficient absorbent material to absorb the contents of the bottle. Not over 12 lbs. of liquid in 1 outside box.	Not over 1 lb. of liquid in each bottle, filled to not over 95% capacity, securely cushioned in cans with sufficient absorbent material to absorb the contents of the bottle. Not over 12 lbs. of liquid in 1 outside box.	Not over 1 lb. of liquid in each bottle, filled to not over 95% capacity, securely cushioned in cans with sufficient absorbent material to absorb the contents of the bottle. Not over 12 lbs. of liquid in 1 outside box.

146.25-100 Table H.—Classification: Class A: Extremely dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Cyanogen, gas	*A colorless gas with a pungent penetrating color.* *Extremely poisonous.* *It is also inflammable.* Stow away from living quarters and in space not easily accessible to any persons. Protect from direct rays of the sun and sources of artificial heat. *Miscible with water.* Keep cool.	Poison gas	Stowage: "On deck under cover" Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap.	Not permitted	Not permitted	Not permitted.
Ethyldichlorasine		Poison gas	Stowage: "On deck under cover" Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap or when without cap in non-specification wooden boxes marked "Inside packages comply with prescribed specifications."	Not permitted	Not permitted	Not permitted.
Gas identification sets	*Such sets contain poisonous liquids and gases, class "A" and poisonous articles class "C", or contain poisonous liquids or gases, class "A" and class "C" and chlorine.* Stow away from living quarters and in a space not easily accessible to any persons. Protect from direct rays of the sun and all sources of artificial heat. Keep cool.	Poison gas	Stowage: "On deck under cover". Outside containers: Wooden boxes (ICC-15A, 15B) not over 100 grams or mils, or a combination of both packed in each outside box.			

Hydrocyanic acid, liquid. Prussic acid.	*A colorless, volatile liquid having an odor, and taste of bitter almonds.* *Both the type and its vapors are intensely poisonous.* *Vapors are inflammable and form explosive mixtures in air.* Stow well away from living quarters and in a space not easily accessible to any persons Protect from direct rays of the sun and all sources of artificial heat. *Miscible with water.* Keep cool.	Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap. Wooden boxes (ICC-15A) with inside metal containers, having the liquid acid completely absorbed in inert material; not over 60 lbs. net wt.	Not permitted	Not permitted	Not permitted.
Hydrocyanic acid, unstabilized. Prussic acid, unstabilized.			The transportation by vessels of unstabilized hydrocyanic acid is not permitted.	The transportation by vessels of unstabilized hydrocyanic acid is not permitted.	The transportation by vessels of unstabilized hydrocyanic acid is not permitted.	The transportation by vessels of unstabilized hydrocyanic acid is not permitted.
Lewisite		Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap or when without cap in nonspecification wooden boxes marked: "Inside packages comply with prescribed specifications."	Not permitted	Not permitted	Not permitted.
Methyldichlorarsine		Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap or when without cap in nonspecification wooden boxes marked: "Inside packages comply with prescribed specifications."	Not permitted	Not permitted	Not permitted.
Monochloroacetone		Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap or completely boxed. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A) not over 24 lbs. net wt.	Not permitted	Not permitted	Not permitted.

146.25-100 Table H.—Classification: Class A: Extremely dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Mustard gas	*A colorless oily liquid with a faint mustard odor.* *Vapors of this liquid are extremely poisonous and have a blistering effect on the skin.* *Extreme danger exists due to absence of marked odor and the fact that poisonous and irritating effects are not immediately apparent.* Stow well away from all living quarters and in a space not easily accessible to any persons. Protect from direct rays of sun and all sources of artificial heat. Keep cool.	Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap.	Not permitted	Not permitted	Not permitted.
Nitrogen dioxide, liquid. Nitrogen Peroxide. Nitrogen Tetroxide.	*A liquid at ordinary temperatures. Boils at about 71° F. Liquid evaporates rapidly in air, even at lower temperatures.* *Vapors in air are toxic, but not explosive or inflammable.* *Has corrosive action in contact with skin.* *Mixtures in water produce nitric acid.* Protect from direct rays of sun and all sources of artificial heat. Keep cool.	Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap. NOTE—For additional container authorized during the war emergency see Section 146.28-19.	Not permitted	Not permitted	Not permitted.
Phenylcarbylamine chloride.		Poison gas	Stowage: "On deck under cover." Outside containers: (Steel cylinders (ICC-33, 3D) with valve protection cap or, when without cap, in nonspecification wooden boxes marked: "Inside packages comply with prescribed specifications."	Not permitted	Not permitted	Not permitted.

Phosgene Diphosgene. Carbonyl chloride.	*A colorless gas with a stifling, choking effect.* *Extremely poisonous.* Stow well away from living quarters and in a space not easily accessible to any persons. Protect from direct rays of the sun and from all sources of artificial heat. Keep cool.	Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap.	Not permitted	Not permitted	Not permitted.
Poisonous liquid or gas, N. O. S.	*May be any poisonous liquid or gas so classified in accordance with the definition for Class "A" poisons contained herein.* Stow well away from living quarters and in a space not easily accessible to any persons. Protect from direct rays of the sun and all sources of artificial heat. Keep cool.	Poison gas	Stowage: "On deck under cover." Outside containers: Steel cylinders (ICC-33, 3D) with valve protection cap.	Not permitted	Not permitted	Not permitted.
Police grenades (liquid)	*Loaded or charged devices designed to eject poisons and tear gas.* *These devices are commonly so constructed that when they function the contents are ejected but there is no projection of the grenade or any portion of the grenade such as to cause physical injury.* Stow well away from living quarters. Protect from direct rays of the sun and sources of artificial heat. Keep cool.	Poison gas	Stowage: "On deck protected." "On deck under cover." Outside containers: Wooden boxes, metal strapped (ICC-15A, 15B, 15C, 16A) with inside containers (ICC-2C) not over 75 lbs. gr. wt.	Not permitted	Not permitted	Not permitted.
Prussic acid			See "Hydrocyanic acid, liquid."			
Prussic acid, unstabilized.			See "Hydrocyanic acid, unstabilized."			

146.25-100 Table H.—Class B: Less dangerous poisons

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Alcohol, allyl, liquid	*A clear, colorless liquid having an unpleasant, irritating odor somewhat resembling mustard oil.* *Violent effect on the eyes.* *Is poisonous.* *Immiscible with water.* *Is also inflammable with a flashpoint about 70° F.* *Mixed in certain proportions with air its vapors are explosive.* Protect from direct rays of the sun and all sources of artificial heat.	Poison	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C), (ICC-17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Not permitted	Not permitted	Not permitted.

Ammonium arsenate solid.	*White crystals, or powder.* *Becomes powder upon exposure to air, giving off ammonia fumes.* *Soluable in water.* *Dangerous. In event of breakage or sifting of containers do not breathe dust given off.* Stow away from living quarters and foodstuffs.	Poison	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs; (ICC-10A, 10B, 10C) (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL, (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Stowage: "On deck under cover". Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.
Aniline oil, liquid	*A liquid varying in color from almost colorless to brown.* *Its vapors will produce a yellow stain on wood.* *Is poisonous. (A) By absorption through the skin; (B) through digestive organs; (C) in form of vapor and dust through the respiratory organs; (D) into the digestive canal by contaminated food.* *Will contaminate foodstuffs and damage textiles.* Stow well away from living quarters. Protect from direct rays of the sun and sources of artificial heat. *Slightly miscible with water.* Note: Examine packages carefully for signs of leakage and reject any showing such signs. Marking: A returnable package notice will be shellacked in place upon the head of returnable drums.	Poison	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 915 lbs. net wt. (ICC-17C) STC, not over 55 gals. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 150 lbs. gr. wt. Tank cars (ICC-103, 103A).	Not permitted	Not permitted	Not permitted.

146.25–100 Table H.—Class B:—Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Arsenic acid, liquid	*A concentrated, aqueous solution.* *Has considerable corrosive effect on iron and steel.* *Will contaminate foodstuffs.* Stow away from living quarters. Do not stow with corrosive liquids (white label).	Poison	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Carboys, boxed; glass (ICC–1A) not over 13 gal. cap. Carboys in kegs, glass (ICC–1C) not over 15 gal. cap. Steel barrels or drums: (ICC–5, 5A, 5B) not over 110 gal. cap. (ICC–17C), (ICC–17E) STC, not over 55 gal. cap. (ICC–37D) STC, not over 10 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal cap. (ICC–11A, 11B) WIC, not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC–103; 103A).	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Carboys, boxed; glass (ICC–1A) not over 13 gal. cap. Carboys in kegs, glass (ICC–1C) not over 15 gal. cap. Steel barrels or drums: (ICC–5, 5A, 5B) not over 110 gal. cap. (ICC–17C), (ICC–17E) STC, not over 55 gal. cap. (ICC–37D) STC, not over 10 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (AA). Outside containers: Carboys, boxed; glass (ICC–1A) not over 13 gal. cap. Carboys in kegs, glass (ICC–1C) not over 15 gal. cap. Steel barrels or drums: (ICC–5, 5A, 5B) not over 110 gal. cap. (ICC–17C), (ICC–17E) STC, not over 55 gal. cap. (ICC–37D) STC, not over 10 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (BB). Outside containers: Carboys, boxed; glass (ICC–1A) not over 13 gal. cap. Carboys in kegs, glass (ICC–1C) not over 15 gal. cap. Steel barrels or drums: (ICC–5, 5A, 5B) not over 110 gal. cap. (ICC–17C), (ICC–17E) STC, not over 55 gal. cap. (ICC–37D) STC, not over 10 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 150 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC–103; 103A).
Arsenic chloride (arsenous) liquid. Arsenic trichloride, liquid.	Fuming colorless oily liquid Characteristics and hazards as for "Arsenic acid, liquid."	Poison.				

Arsenic acid, solid	*A white crystalline powdery material, not inflammable or corrosive, but very hygroscopic.* *Poisonous in the form of vapor or fine powder taken through respiratory organs, or in any form when taken through digestive organs.* Stow away from living quarters. Do not stow with acids (white label). *Will contaminate foodstuffs.* Keep dry. *Insoluble in water.*	Poison	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. (ICC-37E) STC, not over 100 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) WPL, not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WIL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. (ICC-37E) STC, not over 100 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) WPL, not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WIL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. (ICC-37E) STC, not over 100 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) WPL, not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WIL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. (ICC-37E) STC, not over 100 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) WPL, not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WIL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.
Arsenic bromide, solid	*Yellowish-white hygroscopic crystals.* *Melts at about 86° F.* *Care should be taken not to breathe a r laden with vapor or the fine powder of this substance.* Stow well away from foodstuffs and living quarters. Keep dry. *Vapors when inhaled are poisonous.* *Decomposed by water forming Hydrogen Bromide Vapors.*	Poison	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net net wt. (ICC-11A) not over 115 lbs. net wt.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 690 lbs. net wt. (ICC-11A) not over 115 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt.

146.25-100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Arsenic iodide, solid.	*In the form of finely divided orange-red scales or powder. Is odorless. Poisonous if taken internally. Care should be taken not to breathe the air laden with fine powder, of this substance.* Stow away from living quarters. *Will contaminate foodstuffs.* Soluble in water.	Poison.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-115A) not over 115 lbs. net wt.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C, not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.
Arsenic pentoxide solid.	*Is a white crystaline material not inflammable or corrosive, but highly poisonous. Will dissolve gradually and become liquid by absorbing moisture from the air. Soluble in water.* Observe precautions as shown for "Arsenic acid, solid." Keep dry.	Poison.				
Arsenic metal, solid. Arsenic, solid.	*Steel gray brittle metal like crystalline mass. Odorless and tasteless. Is poisonous but in this form is not particularly dangerous unless involved in a fire or brought in contact with strong acids. Insoluble in water.* Stow away from acids (white label).	Poison.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck." Outside containers: Steel barrels or drums. (ICC-5, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A, 6J) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. gr. wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A) not over 115 lbs. net wt.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A, 6J) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. gr. wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A) not over 115 lbs. net wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums: (ICC-5, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A, 6J) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. gr. wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A, 6J) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. gr. wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A) not over 115 lbs. net wt.

Arsenic trioxide solid. Arsenic, white solid. Arsenous acid solid.	*White, transparent, glassy crystal lumps or white powder.* *Odorless, tasteless.* *Poisonous if taken internally.* *Care shall be taken not to breathe air laden with fine powder.* Stow away from living quarters. *Will contaminate foodstuffs.* *Insoluble in water.*	Poison	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 bs. net wt. NOTE: For import shipments of Arsenic the following non-specification containers may be accepted: Strong outside wooden barrels having strong, tight metal drums enclosed, or strong, tight metal-strapped wooden boxes of material not less than ¾ in. thick throughout, with inside sift-proof containers.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 hs. netwt. Fiberboard boxes, WIC ICC-12B, 12C) not (over 50 lbs, net wt. Wooden kits WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (CC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. NOTE: For import shipments of Arsenic the following non-specification containers may be accepted: Strong outside wooden barrels having strong, tight metal drums enclosed, or strong, tight metal-strapped wooden boxes of material not less than ¾ in. thick hroughout, with inside sift-proof containers.	Wooden boxes, WIC (ICC-15A, 15B, 15C, IA, 19A) not over 100 16l. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs net. wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) no over 115 lbs. net wt. NOTE: For import shipments of Arsenic the following non-specification containers may be accepted: Strong outside wooden barrels having strong, tight metal drums enclosed, or strong, tight metal-strapped wooden boxes of material not less than ¾ in. thick throughout, with inside sift-proof containers.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. NOTE: For import shipments of Arsenic the following non-specification containers may be accepted: Strong outside wooden barrels having strong, tight metal drums enclosed, or strong, tight metal-strapped wooden boxes of material not less than ¾ in. thick throughout, with inside sift-proof containers.
Arsenic sulfide (powder), solid.	*May be the red, or the yellow arsenic sulfide, in the form of an amorphorous powder or solid.* Observe precautions as shown for "Arsenic acid, solid." Keep dry. *Insoluble in water.*	Poison	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 330 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net. wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net. wt	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 330 lbs. gr. wt. (ICC-37H) STC. not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 330 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 330 lbs. gr. wt. (ICC-37H) STC, no over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C). Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.

146.25-100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Arsenical compounds or mixtures, N.O.S., solid.	*In general these substances are in the form of finely divided powder.* *Are poisonous if taken internally.* *Care shall be taken not to breathe air laden with fine powder of this substance.* Stow away from living quarters. Do not stow with acids (white label). Keep dry. *Will contaminate foodstuffs.*	Poison	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) (not over 1760 lbs. gr. wt. (ICC-6A) not over 880 lbs gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs (ICC-10A, 10B, 10C) (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C), not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A), not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B). Authorized only for arsenical insecticides and fungicides containing 10.0 percent or less of arsenic trioxide (As_2O_3). Paper bags (ICC-44B) not over 50 lbs. gr. wt. Tank cars (ICC-103, 103A).	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs (ICC-10A, 10B, 10C) (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C), not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B), not over 30 lbs. net wt. Fiber drums (ICC-21A), not over 115 lbs. net wt. Plywood drums (ICC-22A), not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B). Authorized only for arsenical insecticides and fungicides containing 10.0 percent or less of arsenic trioxide (As_2O_3). Paper bags (ICC-44B), not over 50 lbs. gr. wt.	Ferry stowage (AA)	Ferry stowage (BB).
					Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs (ICC-10A, 10B, 10C) (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B), not over 30 lbs. net wt. Fiber drums (ICC-21A), not over 115 lbs. net wt. Plywood drums (ICC-22A), not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B). Authorized only for arsenical insecticides and fungicides containing 10.0 percent or less of arsenic trioxide (As_2O_3). Paper bags (ICC-44B), not over 50 lbs. gr. wt.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs (ICC-10A, 10B, 10C) (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C), not over 50 lbs. net wt. Wooden kits, WPL (ICC-18B), not over 30 lbs. net wt. Fiber drums (ICC-21A), not over 115 lbs. net wt. Plywood drums (ICC-22A), not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B). Authorized only for arsenical insecticides and fungicides containing 10.0 percent or less of arsenic trioxide (As_2O_3). Paper bags (ICC-44B), not over 50 lbs. gr. wt. Tank cars (ICC-103, 103A).

Arsenical dip, liquid (sheep dip).	*A liquid compound containing arsenic.* *Poisonous.* Stow away from foodstuffs and living quarters.	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 110 gal. cap. and not exceeding 1,760 lbs. gr. wt. (ICC-17C), (ICC-17E) STC, not over 55 gal. cap. and not exceeding 880 lbs. gr. wt. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 350 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 110 gal. cap. and not exceeding 1,760 lbs. gr. wt. (ICC-17C), (ICC-17E) STC, not over 55 gal. cap. and not exceeding 880 lbs. gr. wt. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 350 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (AA)	Ferry stowage (BB).
Arsenous and mercuric iodide solution, liquid	*Solutions of arsenious iodide and mercuric iodide in water.* *Also known as "Donovan's" solution.* *Poisonous if taken internally.* Stow away from foodstuffs and living quarters.	Poison.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 110 gal. cap. and not exceeding 1,760 lbs. gr. wt. (ICC-17C), (ICC-17E) STC, not over 55 gal. cap. and not exceeding 880 lbs. gr. wt. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 350 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 110 gal. cap. and not exceeding 1,760 lbs. gr. wt. (ICC-17C), (ICC-17E) STC, not over 55 gal. cap. and not exceeding 880 lbs. gr. wt. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 350 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 110 gal. cap. and not exceeding 1,760 lbs. gr. wt. (ICC-17C), (ICC-17C) STC, not over 55 gal. cap. and not exceeding 880 lb. gr. wt. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E), not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A. 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 350 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC-103, 103A).
Arsenical compounds or mixtures, N. O. S., liquid.	*These substances are in the form of liquids or liquid paste.* *Poisonous if taken internally.* *Will contaminate foodstuffs.* Stow away from living quarters and foodstuffs. Do not stow with acids (white label).	Poison.				
Bordeaux arsenites, liquid.	*Poisonous when taken into the digestive canal as by contaminated, food or through the digestive organs or in the form of vapors through respiratory organs.* Stow away from living quarters and foodstuffs.	Poison.				
Barium cyanide, solid.	*Colorless crystals.* *Soluble in water.* *Cyanides are deadly poisons if taken internally or if the fumes are inhaled.*	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC not over 300 lbs. gr. wt. (ICC-37H) STC not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. For *"Barium Cyanide, solid" only:* Wooden barrels or kegs. (ICC-11B) WIMC—not over 115 lbs. net wt.	Stowage: "On deck in open." "On deck under cover." "Tween decks." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC not over 300 lbs. gr. wt. (ICC-37H) STC not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. For *"Barium Cyanide, solid" only:* Wooden barrels or kegs. (ICC-11B) WIMC—not over 115 lbs. net wt.	Ferry stowage (AA)	Ferry stowage (BB).
Bordeaux arsenites solid,	*Insecticide.* *Poisonous when taken into the digestive canal as by contaminated food or through the digestive organs in the form of vapors through respiratory organs.* Stow away from living quarters and foodstuffs.	Poison.				

146.25-100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Brucine, solid Dimethoxy strychnine	*White crystalline powder* *Slightly soluble in water.*	Poison.	(See foregoing) Wooden boxes, WIO, (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	(See foregoing) Wooden boxes, WIO (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	(See foregoing) Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	(See foregoing) Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.
Cacodylic acid, solid Dimethylarsenic acid, solid.	*Colorless, odorless crystals* *Will gradually liquefy in air. Soluble in water.* Stow away from living quarters and foodstuffs.	Poison.	Wooden kits, WPL (ICO-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICO-12B, 12C) not over 50 lbs. net wt.	Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt.	Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt.	Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt.
Calcium arsenate, solid	*White powder; decomposes on heating, very slightly soluble in water.* Stow away from living quarters and foodstuffs.	Poison.	Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.
Calcium arsenite, solid	*White, amorphous or granular powder.* *Insoluble in water.*	Poison.	Tank cars (ICC-103, 103A). For "*Calcium Arsenate*" *only* paper bags (ICC-44B) not over 50 lbs. gr. wt.	---------- For "*Calcium Arsenate*" *only* paper bags (ICC-44B) not over 50 lbs. gr. wt.	---------- For "*Calcium Arsenate*" *only* paper bags (ICC-44B) not over 50 lbs. gr. wt.	Tank cars (ICC-103, 103A). For "*Calcium Arsenate*" *only* paper bags (ICC-44B) not over 50 lbs. gr. wt.

Carbolic acid, liquid.... Phenol. liquid. *(Liquid tar acid containing over 50% Benzophenol).*	*Dark, viscous liquid having a distinctive odor.* *Will attack and burn skin and flesh.* Stow away from food stuffs and living quarters. *Poisonous by absorption through the skin and through the digestive organs.*	Poison.....	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal .cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC, (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Glass carboys (ICC-1A, 1C) completely boxed, not over 13 gal. cap. Tank cars, (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (AA)..... Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Glass craboys (ICC-1A, 1C) completely boxed, not over 13 gal. cap. Tank cars (ICC-103, 103A).

146.25–100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Carbolic acid, solid..... Phenol, solid. Carbolic acid, fused solid.	*White crystalline mass which turns pink or red if not perfectly pure or under influence of light; absorbs water from the air and liquefies; sharp burning taste; distinctive odor.* *Strong, corrosive poison.* *Soluble in water.* *Melting point 109° F.*	Poison.....	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E) STC, not over 450 lbs. net wt. (ICC-37H) STC, not over 200 lbs. net wt. (ICC-37G) STC, securely cushioned in outside wooden barrel, not over 250 lbs. net wt. Aluminum barrels or drums (ICC-42B, 42C) not over 1,760 lbs. gr. wt. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 150 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E) STC, not over 450 lbs. net wt. (ICC-37H) STC, not over 200 lbs. net wt. (ICC-37G) STC, securely cushioned in outside wooden barrel, not over 250 lbs. net wt. Aluminum barrels or drums (ICC-42B, 42C) not over 1,760 lbs. gr. wt. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 150 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt.	Ferry stowage (AA).....	Ferry stowage (BB).
					Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E) STC, not over 450 lbs. net wt. (ICC-37H) STC, not over 200 lbs. net wt. (ICC-37G) STC, securely cushioned in outside wooden barrel, not over 250 lbs. net wt. Aluminum barrels or drums (ICC-42B, 42C) not over 1,760 lbs. gr. wt. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 150, lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E) STC, not over 450 lbs. net wt. (ICC-37H) STC, not over 200 lbs. net wt. (ICC-37G) STC, securely cushioned in outside wooden barrel, not over 250 lbs. net wt. Aluminum barrels or drums (ICC-42B, 42C) not over 1,760 lbs. gr. wt. Wooden barrels or kegs (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 150 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Tank cars (ICC-103, 103A).

Chemical ammunition containing Class "B" poisons, liquids or gases, Nonexplosive. Note: When chemical ammunition is shipped having ignition elements, bursting charges, detonating fuzes or other explosive components, such shipments shall conform to the regulations prescribed for "Ammunition, chemical, explosive" under class "A" Dangerous Explosives.	Consisting of projectiles, shells, bombs, grenades, and other containers filled with gases, liquids, or chemicals. Class B, without ignition elements, bursting charges, detonating fuzes, or other explosive components. Marking: Packages will be labeled as prescribed by these regulations for gases, liquids, or chemicals contained therein, and marked with the name of the contents.					
Cocculus, solid (fish berry).	*Dried, ripe fruitberry; used in medicine and as an insecticide.*	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,700 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs. (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B). Paper bags (ICC-44B) not over 50 lbs. gr. wt. Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs. (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B). Paper bags (ICC-44B) not over 50 lbs. gr. wt.	Ferry stowage (AA)	Ferry stowage (BB).
Copper acetoarsenite, solid. Paris green, solid. *Emerald green.* *Imperial green.* *Kings green.* *Moss green.* *Meadow green.* *Mitis green.* *Parrot green.* *Vienna green.*	*Emerald green amorphous powder.* *Insoluble in water.* Do not stow with acids (white label), ammonia, liquid or anhydrous, and stow well away from living quarters and foodstuffs.	Poison.			Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs. (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B). Paper bags (ICC-44B) not over 50 lbs. gr. wt.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs. (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIV (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B). Paper bags (ICC-44B) not over 50 lbs. gr. wt. Tank cars (ICC-103, 103A).
Copper arsenite, solid. Scheele's green, solid. *Cupric green.* *Copper.* *Orthoarsenite.* *Mineral green.* *Swedish green.*	*Fine light green amorphous powder.* *Insoluble in water.* *Decomposes on heating.* Do not stow with acids (white label), stow away from heat. Stow away from living quarters and foodstuffs.	Poison.				

146.25–100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Cyanide of calcium, solid.	*White or grayish powder, decomposes on heating.* *Soluble in water.* Stow in a dry place.	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–37D) STC, not over 100 lbs. net wt. (ICC–37H) STC, not over 245 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. Wooden barrels or kegs, WIC (ICC–11A, 11B) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C) not over 100 lbs. net wt. Fiberboard boxes (WIC) (ICC–12B, 12C) not over 50 lbs. net wt. Bags (cloth and paper, lined): (ICC–45B) for sodium cyanides of globular or pellet form. Not over 100 lbs. net wt. Bulk. In airtight rail road cars. Bulk. In airtight metal-body covered motor vehicles. NOTE.—See Section 146.28–5 for additional containers.	Stowage: "On deck in open." "On deck under cover." "Tween decks." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–37D) STC, not over 100 lbs. net wt. (ICC–37H) STC, not over 245 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. Wooden barrels or kegs, WIC (ICC–11A, 11B) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C) not over 100 lbs. net wt. Fiberboard boxes (WIC) (ICC–12B, 12C) not over 50 lbs. net wt. Bags (cloth and paper, lined): (ICC–45B) for sodium cyanides of globular or pellet form. Not over 100 lbs. net wt.	Ferry stowage (AA)	Ferry stowage (BB).
Cyanides, dry Cyanide mixtures, dry.	*When containing the cyanogen equivalent of 10% or more of potassium cyanide.* *May be powder, crystalline or lump in form.*	Poison			Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–37D) STC, not over 100 lbs. net wt. (ICC–37H) STC, not over 245 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. Wooden barrels or kegs, WIC (ICC–11A, 11B) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Bags (cloth and paper, lined): (ICC–45) for sodium cyanides of globular or pellet form. Not over 100 lbs. net wt.	Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–37D) STC, not over 100 lbs. net wt. (ICC–37H) STC, not over 245 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. Wooden barrels or kegs, WIC (ICC–11A, 11B) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Bags (cloth and paper, lined): (ICC–45) for sodium cyanides, of globular or pellet form. Not over 100 lbs. net wt. Bulk. In airtight railroad cars. Bulk. In airtight metal-body covered motor vehicles.
Cyanide of potassium, solid.	*White amorphous or crystalline mass. Gradually liquefies in air.*	Poison				
Cyanide of sodium, solid.	*Extremely poisonous! Do not handle with bare hands.* *Soluble in water.* *In the presence of moisture and carbon dioxide will decompose and give off hydrocyanic acid gas which is poisonous and rapidly fatal when present in the air even in small amounts.* Do not stow with acids (white label). Do not stow with carbon dioxide cylinders. Stow away from foodstuffs and living quarters. Keep dry. Do not stow with carbon dioxide.	Poison				
Cyanide of copper			No restrictions.			
Cyanide of lead			No restrictions.			
Cyanide of silver			No restrictions.			
Cyanide of zinc			No restrictions.			

Cyanide of potassium, liquid. Cyanide of sodium, liquid.	*Colorless liquid, extremely poisonous.* *Vapors are poisonous. In the event of leakage and exposure to air, hydrocyanic acid gas can be evolved which is poisonous and rapidly fatal when present in the air even in small amounts.* *Do not allow to contact the skin.* Do not stow with acids white label. Stow away from foodstuffs and living quarters.	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) without galvanizing inside, not over 110 gal. cap. (ICC-17C, 17E, 37D) not over 55 gal. cap. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Tank cars (ICC-103).	Not permitted	Not permitted	Not permitted.
Dinitrobenzol, liquid		Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 110 gal. cap. and not exceeding 1,760 lbs. gr. wt. (ICC-17C, 17E) STC, not over 55 gal. cap. and not exceeding 880 lbs. gr. wt. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 350 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 110 gal. cap. and not exceeding 1,760 lbs. gr. wt. (ICC-17C, 17E) STC, not over 55 gal. cap. and not exceeding 880 lbs. gr. wt. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 350 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, B5) not over 110 gal. cap. and not exceeding 1,570 lbs. gr. wt. (ICC-17C, 17E) STC, not over 55 gal. cap. and not exceeding 880 lbs. gr. wt. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 350 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 110 gal. cap. and not exceeding 1,760 lbs. gr. wt. (ICC-17C, 17E) STC, not over 55 gal. cap. and not exceeding 880 lbs. gr. wt. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 350 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene) Tank cars (ICC-103, 103A).

146.25–100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Dinitrochlorbenzol solid	*A colorless or yellow crystalline solid which melts at about 100° F.*	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 880 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt. Tank cars (ICC–103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D)/STC, not over 880 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt.	Ferry stowage (AA)	Ferry stowage (BB).
Dinitrobenzol, solid	*Poisonous when taken internally and also when in contact with the skin.* *Do not breathe dust-laden air.* *Insoluble in water.* Do not stow with foodstuffs or near living quarters. Do not stow with acids (white label).		Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 880 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt. Tank cars (ICC–103, 103A).	Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 880 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt.	Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 880 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt. Tank cars (ICC–103, 103A).

Drugs, chemicals, medicines or cosmetics. A unit substance or a compound classified as a less dangerous poison—Class B—in accordance with the definition contained herein, when prepared, packed and offered to the trade as drugs, chemicals, medicines, or cosmetics. In quantity not exceeding 1 pint or 16 ounces by weight in glass or earthenware containers, or 1 quart capacity each in inside metal containers. The following substances shall not be shipped under this designation: Hydrocyanic acid solutions, tetraethyl lead.	----------	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck away from heat." Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt. NOTE: Observe instructions regarding "This side up" stowage. It is not required that the above containers be I. C. C. specification containers although I. C. C. specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself that they are sufficient in all respects for the purpose intended. He may refuse any containers showing damage, leakage or an inability to properly contain the substance.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt. NOTE: Observe instructions regarding "This side up" stowage. It is not required that the above containers be I. C. C. specification containers although I. C. C. specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself that they are sufficient in all respects for the purpose intended. He may refuse any containers showing damage, leakage or an inability to properly contain the substance.	Ferry stowage (AA) Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 65 lbs. gr. wt.

146.25–100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Drugs, chemicals, medicines or cosmetics N. O. S. A unit substance or a compound classified as a less dangerous poison—Class B—in accordance with the definition contained herein, when prepared, packed and offered to the trade as drugs, chemicals, medicines, or cosmetics. In quantity exceeding 1 pint or 16 ounces by weight, in glass or earthenware containers, or 1 quart capacity each in inside metal containers. When packed in accordance with ICC requirements for the particular substance, and separated and cushioned by incombustible absorbent material when the characteristics of the substances so require. The following substances shall not be shipped under this designation: Hydrocyanic acid solutions, tetraethyl lead.		Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 300 lbs. gr. wt. (ICC–37H) STC, not over 100 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–12B, 12C) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt.	Stowage: "On deck in open." "On deck under cover." "Tween decks." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 300 lbs. gr. wt. (ICC–37H) STC, not over 100 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–12B, 12C) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 300 lbs. gr. wt. (ICC–37H) STC, not over 100 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–12B, 12C) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 300 lbs. gr. wt. (ICC–37H) STC, not over 100 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–12B, 12C) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt.

Ferric arsenate, solid	*Green, amorphous powder.* *Insoluble in water.*	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760. lbs gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B), not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B), not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (AA)	Ferry stowage (BB).
Ferric arsenite, solid	*Brownish-yellow powder.* *Insoluble in water.*	Poison.			Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B), not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B), not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	
Ferrous arsenate, solid Iron arsenate, solid.	*Greenish or yellowish-brown amorphous powder.* *Insoluble in water.*	Poison.				
Hydrocyanic acid solutions. (Solution of not over 5% strength in glass bottles not over 1 pound capacity). (Solution of not over 2% strength in glass bottles not over 5 pounds capacity).	*Colorless, volatile liquid.* *Vapors intensely poisonous.* *Strong characteristic odor.* *Soluble in water.* Stow well away from living quarters and foodstuffs. Protect from direct rays of the sun and sources of artificial heat. Keep cool.	Poison	Stowage: "On deck under cover." Outside containers: Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt.	Not permitted.	Not permitted	Not permitted.

146.25–100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Insecticide, dry Arsenical dust. Arsenical flue dust.	*Generally contains more or less of some highly poisonous substance, often an arsenic compound.* *Do not breathe air laden with dust of these substances.* Stow away from foodstuffs and living quarters. Do not stow with acids (white label). Do not allow in contact with the skin.	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 300 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes(ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt. Tank cars (ICC–103, 103A). Triplex bags (ICC–36A, 36B) authorized only for arsenical insecticides and fungicide dusting mixtures containing 8.0% or less of arsenic trioxide. Paper bags (ICC–44B) not over 50 lbs. net wt.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 300 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes(ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt. Triplex bags (ICC–36A, 36B) authorized only for arsenical insecticides and fungicide dusting mixtures containing 8.0% or less of arsenic trioxide. Paper bags (ICC–44B) not over 50 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 300 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes(ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt. Triplex bags (ICC–36A, 36B) authorized only for arsenical insecticides and fungicide dusting mixtures containing 8.0% or less of arsenic trioxide. Paper bags (ICC–44B) not over 50 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D), STC, not over 300 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net wt. (ICC–11A) not over 115 lbs. net wt. Wooden boxes(ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC–21A) not over 115 lbs. net wt. Plywood drums (ICC–22A) not over 115 lbs. net wt. Tank cars (ICC–103, 103A). Triplex bags (ICC–36A, 36B) authorized only for arsenical insecticides and fungicide dusting mixtures containing 8.0% or less of arsenic trioxide. Paper bags (ICC–44B) not over 50 lbs. net wt.

Insecticide, liquid	*Generally contains more or less of some highly poisonous substances, often an arsenic compound.* *Do not breathe air containing vapors of these substances.* Stow away from foodstuffs and living quarters. Do not stow with acids (white label). *Do not allow in contact with the skin.*	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC, (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC, (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C, 17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC, (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C, 17E) STC, not 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes (ICC-15A 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC, (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene.
Lead arsenate, solid	*White crystalline powder* *Highly poisonous.* *Decomposes on heating.* *Poisonous if taken internally.* *Care shall be taken not to breathe air laden with fine powder.* Stow away from living quarters and foodstuffs.	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC-6A), not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC-6A), not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt.
Lead arsenite, solid	*White powder* *Insoluble in water.* *Poisonous if taken internally.* *Care shall be taken not to breathe air laden with fine powder.* Stow away from living quarters and foodstuffs.	Poison				

146.25-100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
London purple, solid	*Arsenic compound in powder form. Major constituent Arsenic trioxide.* *Insoluble in water.* *Do not breathe dust.* *Poisonous if taken internally.*	Poison.	(See foregoing.) Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIO (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A). Triplex bags (ICC-36A, 36B) authorized only for arsenical insecticide and fungicide dusting mixtures containing 8.0 per cent or less of arsenic trioxide (As_2O_3). Paper bags (ICC-44B) not over 50 lbs. gr. wt.	(See foregoing.) Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIO (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B) authorized only for arsenical insecticide and fungicide dusting mixtures containing 8.0 per cent or less of arsenic trioxide (As_2O_3). Paper bags (ICC-44B) not over 50 lbs. gr. wt.	(See foregoing.) Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIO (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Triplex bags (ICC-36A, 36B) authorized only for arsenical insecticide and fungicide dusting mixtures containing 8.0 per cent or less of arsenic trioxide (As_2O_3). Paper bags (ICC-44B) not over 50 lbs. gr. wt.	(See foregoing.) Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIO (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A). Triplex bags (ICC-36A, 36B) authorized only for arsenical insecticide and fungicide dusting mixtures containing 8.0 per cent or less of arsenic trioxide (As_2O_3). Paper bags (ICC-44B) not over 50 lbs. gr. wt.
Magnesium arsenate, solid.	*Ivory-colored, finely divided powder.*	Poison.				
Mercury compounds	*The following mercury compounds possess generally the same characteristic hazards and the following cautions shall be observed in handling stowage:* Stow away from foodstuffs and living quarters. Stow in a cool, dry place. Stow away from acids. *Dangerous if taken internally, or in the form of vapor through the respiratory organs. Do not breathe air laden with the dust of these compounds. Do not allow excessive contact with the skin.*		Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. net wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. net wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. net wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. net wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt.
Mercuric acetate	*White crystals or crystalline powder.* *Soluble in water.*	Poison.				

Mercuric-ammonium chloride, solid.	*White powder, or lumps. Insoluble in water.*	Poison.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) 50 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) 50 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WFL (ICC-18B) 50 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) 50 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).
Mercuric benzoate solid.	*White crystalline powder. Slightly soluble in water.*	Poison.				
Mercuric bromide, solid.	*White crystals. Sparingly soluble in water.*	Poison.				
Mercuric cyanide, solid.	*White or colorless crystals or powder. Very poisonous! Soluble in water.*	Poison.				
Mercuric iodide solid.	*Red or yellow crystals. Insoluble in water.*	Poison.				
Mercuricyanamid solid.	*A mixture of an organic mercury compound and cadmium oxide.*	Poison.				
Mercuric oleate, solid.	*Yellowish to red liquid, semi-solid or solid mass. Insoluble in water.*	Poison.				
Mercuric oxide (red), solid.	*Heavy, bright, orange-red powder; very poisonous. Slightly soluble in water.*	Poison.				
Mercuric oxide (yellow), solid.	*Light amorphous, orange-yellow powder. Odorless. Slightly soluble in cold water.*	Poison.				
Mercuric oxycyanide, solid.	*White crystalline powder. Moderately soluble in water.*	Poison.				
Mercuric-potassium cyanide, solid.	*Colorless crystals, very poisonous. Soluble in water.*	Poison.				
Mercuric-potassium iodide, solid.	*Yellow crystalline pieces. Soluble in water.*	Poison.				
Mercuric salicylate, solid.	*White, with yellow or pink tinge, powder. Odorless. Almost insoluble in water.*	Poison.				

146.25-100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Mercury compounds—Continued.						
Mercuric subsulfate, solid.	*Heavy, lemon yellow powder or bright yellow scales. Slightly soluble in water.*	Poison.				
Mercuric sulfate, solid.	*White crystalline powder. Insoluble in water.*	Poison.				
Mercuric sulfo cyanate, solid.	*White powder. Insoluble in water.*	Poison.				
Mercurol, solid.	*Colorless or brownish-white powder. Soluble in water.*	Poison.				
Mercury nucleate, solid.						
Mercurous bromide, solid.	*White powder, white fibrous mass or small colorless crystals. Slightly soluble in water.*	Poison.				
Mercurous gluconate, solid.	*Metallo-organic compounds in powder form. Slightly soluble in water.*	Poison.				
Mercurous iodide, solid.	*Bright yellow, amorphous powder. Odorless. Insoluble in water.*	Poison.				
Mercurous nitrate, solid.	*Short prismatic crystals. Effervesces and becomes anhydrous in dry air.*	Poison.				
Mercurous oxide, black, solid.	*Black to grayish-black powder. Insoluble in water.*	Poison.				
Mercurous sulfate, solid.	*White crystalline powder. Almost insoluble in water.*	Poison.				
Mercury acetate, solid.	*White crystalline powder. Soluble in water.*	Poison.				
Mercury bichloride, solid.	*White crystals or powder. Very poisonous. Soluble in water.*	Poison.				
Mercury bisulfate, solid.	*White crystalline powder. Decomposed by water.*	Poison.				
Mercury compounds, N. O. S., solid.	*Any compound of mercury that classifies as a Less Dangerous Poison—Class B—in accordance with these regulations.*	Poison.				
Mercury cyanide, solid.	*Colorless, transparent prisms. Soluble in water.*	Poison.				

Methyl bromide, liquid. Bromomethane, liquid..	*Colorless, transport, volatile liquid. Chloroform-like odor.* *Exists as gas under usual temperature conditions as liquid form has boiling point of 40° F.*	Poison.....	Stowage: "On deck protected." "On deck under cover." Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) with inside metal cans containing not over 1 pound each. Fiberboard boxes, WIC (ICC-12B) with inside metal cans containing not over 1 pound each. Cylinders (ICC-3A300, 3B300, 3E1800, 4B300). Note: Cylinders less than 18 inches in length or less than 5 inches in diameter must be packed in boxes or crates. Tank cars (ICC-104A).	Stowage: "On deck protected." "On deck under cover." Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) with inside metal cans containing not over 1 pound each. Fiberboard boxes, WIC (ICC-12B), with inside metal cans containing not over 1 pound each. Cylinders (ICC-3A300, 3B300, 3E1800, 4B300). Note: Cylinders less than 18 inches in length or less than 5 inches in diameter must be packed in boxes or crates.	Ferry stowage (AA).....	Ferry stowage (BB). Outside containers: Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) with inside metal cans containing not over 1 pound each. Fiberboard boxes, WIC (ICC-12B) with inside metal cans containing not over 1 pound each. Cylinders (ICC-3A300, 3B300, 3E1800, 4B300). Note: Cylinders less than 18 inches in length or less than 5 inches in diameter must be packed in boxes or crates. Tank cars (ICC-104A).
			NOTE.—For additional container for methyl bromide, liquid authorized during the war emergency see Section 146.28 20.			
Motor fuel antiknock compound.	*A mixture of tetraethyl lead and ethylene dibromide and ethylene dichloride.* *This liquid is poisonous due to the presence of tetraethyl lead.* *Absorption of this liquid through the skin or inhalation of its vapors are dangerous.* Stow away from foodstuffs and living quarters. *Insoluble in water.* *Keep cool.*	Poison.....	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap. Wooden boxes (ICC-15A) with inside containers of not over 3 pints capacity each, not over 100 lbs. net wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC-105A300) stenciled on both sides "For Motor Fuel Antiknock Compound Only."	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap. Wooden boxes (ICC-15A) with inside containers of not over 3 pints capacity each, not over 100 lbs. net wt. (Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (AA).....	Ferry stowage (BB). Outside containers: Steel barrels or drums (ICC-5, 5A) not over 110 gal. cap. Wooden boxes (ICC-15A) with inside containers of not over 3 pints capacity each, not over 100 lbs. net wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC-105A300) stenciled on both sides "For Motor Fuel Antiknock Compound Only."

146.25–100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Nickel cyanide, solid	*Apple-green plates or powder.* *Insoluble in water.*	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6A, 6B, 6C) not over 880 lbs. gr. wt. (ICC-37D) STC, not over 100 lbs. net wt. (ICC-37H) STC, not over 100 lbs. gr. wt. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C) not over 115 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6A, 6B, 6C) not over 880 lbs. gr. wt. (ICC-37D) STC, not over 100 lbs. net wt. (ICC-37H) STC, not over 100 lbs. gr. wt. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C) not over 115 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6A, 6B, 6C) not over 800 lbs. gr. wt. (ICC-37D) STC, not over 100 lbs. net wt. (ICC-37H) STC, not over 100 lbs. gr. wt. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C) not over 115 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6A, 6B, 6C) not over 880 lbs. gr. wt. (ICC-37D) STC, not over 100 lbs. net wt. (ICC-37H) STC, not over 100 lbs. gr. wt. Wooden barrels or kegs, WIC (ICC-11A, 11B) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C) not over 115 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt.
Nicotine hydrochloride	*White deliquescent crystals.* *Soluble in water.*	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt.
Nicotine salicylate	*White, odorless, crystals.* *Freely soluble in water.* *Melts 117°–118° C.*	Poison.				

Nicotine tartrate	*White to reddish-white crystals.* *Very soluble in water.* *Melts 88°-90° C.*	Poison.	Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C. 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).	Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).
Nicotine, liquid			See "Insecticide, liquid."			
Nicotine sulfate, solid or liquid.			See: "Insecticide, dry or liquid."			
Nitrobenzene, liquid Oil of mirbane. Nitrochlorobenzene, ortho, liquid.	*A heavy, oily liquid, yellow and brownish color, having the odor of bitter almonds.* *Ignites at a temperature of about 200° F. Gives off inflammable vapor.* *Is in the form of bright yellow crystals below a temperature of about 48° F.* *The vapors given off by this liquid are poisonous when inhaled. Is a powerful narcotic poison when induced into the digestive organs. May also be poisonous by absorption into the skin.* *Will contaminate foodstuffs.* Stow away from foodstuffs and living quarters. Protect from direct rays of the sun and all sources of artificial heat. Keep cool. *Slightly soluble in water.*	Poison	Stowage: "On deck in open." "On deck under cover." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C ,17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 200 lbs. gr. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC-103, 103A).	Not permitted	Not permitted	Not permitted.

146.25–100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Nitrochlorobenzene, meta or para, solid.	*Pale yellow crystalline mass. Insoluble in water. Dangerous if taken internally, or in the form of vapors through the respiratory organs. Do not breathe air laden with the dust of these substances. Do not allow excessive contact with the skin.* Will contaminate foodstuffs. Stow away from foodstuffs and living quarters.	Poison	Stowage: "On deck in open." "On deck under cover." "Under deck." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. (ICC–17E, 37D) STC, not over 880 lbs. gr. wt. (ICC–37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 600 lbs. net. wt. For "*Paranitraniline*" only (ICC–11A) not over 335 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 18A, 19A), not over 100 lbs. net wt. Wooden kits, WPL (ICC–18B), not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC–12B, 12C), not over 50 lbs. net wt. Fiber drums (ICC–21A), not over 115 lbs. net wt. Plywood drums (ICC–22A), not over 115 lbs. net wt. Tank cars (ICC–103, 103A).	Not permitted	Not permitted	Not permitted.
Paranitraniline, solid	*Yellow crystalline powder. Insoluble in water.* Protect from direct rays of sun and any sources of artificial heat. Keep cool and dry.	Poison.				
Phenyldichlorarsine liquid.	*A poisonous material used in warfare.*	Poison	Stowage: "On deck in open." Outside containers: Steel barrels or drums (ICC–5A), not over 30 gallons cap.	Not permitted	Not permitted	Not permitted.

Poisonous liquids, N. O. S.	*May be any liquid classifying as a Less Dangerous Poison—Class B—in accordance with the definitions contained in these regulations, provided such liquid is not otherwise specified by name in these regulations.* Stow away from foodstuffs and living quarters. Stow away from acids. Keep cool and well away from all sources of artificial heat.	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C-17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. Wooden barrels or kegs: (ICC-11A, 11B) WIC not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C-17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B) not over 55 gal. cap. (ICC-17C-17E) STC, not over 55 gal. cap. (ICC-37D) STC, not over 10 gal. cap. (ICC-37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC-12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (103, 103A).

146.25–100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Poisonous solids, N. O. S.	*May be any solid classifying as a Less Dangerous Poison—Class B—in accordance with the definitions contained in these regulations, provided such solid is not otherwise specified by name in these regulations.* Stow away from foodstuffs and living quarters. Stow away from acids. Keep cool and well away from any sources of artificial heat.	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." *Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 880 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooten kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-17E) STC 18 gauge only. For materials fused solid in the drum. Not over 880 lbs. gr. wt. (ICC-37H) STC, not over 200 lb. net wt. Wooden barrels or kegs: (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (AA)	Ferry stowage (BB).
			Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 880 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 880 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC, (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC not over 880 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C), not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).

Potassium arsenate solid. Sodium arsenate solid.[1]	*Colorless crystals.* *Soluble in water.* *Poisonous if taken internally. Care should be taken not to breathe the air laden with fine dust.* Stow away from living quarters and foodstuffs.	Poison.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17C, 17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits. WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes. WIC, (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17C, 17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums, (ICC-21A) not over 115 lbs. net wt. Plywood drums, (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6N) not over 880 lbs. gr. wt. (ICC-17C, 17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not 50 lbs. net wt. Fiber drums, (ICC-21A) not over 115 lbs. net wt. Plywood drums, (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6N) not over 880 lbs. gr. wt. (ICC-17C, 17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums, (ICC-21A) not over 115 lbs. net wt. Plywood drums, (ICC-22A) not over 115 bs. net wt. Tank cars (ICC-103, 103A).
Potassium arsenite, solid.	*White powder. Decomposes on exposure to air.* *Soluble in water.* *Poisonous if taken internally. Care should be taken not to breathe air laden with fine dust.* Stow away from living quarters and foodstuffs.	Poison.				
Sodium cacodylate, solid. Sodum dimethylarsenate.	*White odorless, crystals or granular powder.* *Soluble in water.*	Poison.				
Strontium arsenite, solid.	*White odorless powder.* *Soluble in water.*	Poison.				
Strychnine and salts thereof, solid.	*In the form of small, hard crystals or white crystalline powder.* *Poisonous if taken internally. Care should be taken not to breathe air laden with fine dust.* Stow away from foodstuffs and living quarters. Stow away from acids.	Poison.				

146.25–100 Table H.—Class B: Less dangerous poisons—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Sodium arsenite (solution), liquid.	*Solution of arsenic trioxide and sodium carbonate or hydroxide.* *Soluble in water.* *Poisonous if taken internally.* Stow away from living quarters and foodstuffs.	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B) not over 55 gal. cap. (ICC–17C, 17E) STC, not over 55 gal. cap. (ICC–37D) STC, not over 10 gal. cap. (ICC–37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC–103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B) not over 55 gal. cap. (ICC–17C, 17E) STC, not over 55 gal. cap. (ICC–37D) STC, not over 10 gal. cap. (ICC–37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A,11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (AA). Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B) not over 55 gal. cap. (ICC–17C, 17E) STC, not over 55 gal. cap. (ICC–37D) STC, not over 10 gal. cap. (ICC–37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene.)	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B) not over 55 gal. cap. (ICC–17C, 17E) STC, not over 55 gal. cap. (ICC–37D) STC, not over 10 gal. cap. (ICC–37E) STC, not over 5 gal. cap. Wooden barrels or kegs: (ICC–10A, 10B, 10C) not over 50 gal. cap. (ICC–11A, 11B) WIC, not over 200 lbs. gr. wt. Wooden boxes, WIC (ICC–15A, 15B, 15C, 16A, 19A) not over 100 lbs. gr. wt. Fiberboard boxes, WIC (ICC–12B) not over 65 lbs. gr. wt. Cylinders (as prescribed for any compressed gas except acetylene). Tank cars (ICC–103, 103A).
Tetraethyl lead, liquid	*Colorless liquid.* *Insoluble in water.* *Absorption of this liquid through the skin or inhalation of the vapors are poisonous.* Stow away from foodstuffs and living quarters. Keep cool.	Poison	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums (ICC–5, 5A) not over 110 gal. cap. Wooden boxes (ICC–15B) with inside containers of not over 1-pint capacity each, not over 100 lbs. net wt. Cylinders (as prescribed for any compressed gas except acetylene).	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums (ICC–5, 5A) not over 110 gal. cap. Wooden boxes (ICC–15B) with inside containers of not over 1-pint capacity each, not over 100 lbs. net wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (AA). Outside containers: Steel barrels or drums (ICC–5, 5A) not over 110 gal. cap. Wooden boxes (ICC–15B) with inside containers of not over 1-pint capacity each, not over 100 lbs. net wt. Cylinders (as prescribed for any compressed gas except acetylene).	Ferry stowage (BB). Outside containers: Steel barrels or drums (ICC–5, 5A) not over 110 gal. cap. Wooden boxes (ICC–15B) with inside containers of not over 1-pint capacity each, not over 100 lbs. net wt. Cylinders (as prescribed for any compressed gas except acetylene).

Thallium salts, solid	*In the form of crystals, needles, or powder, some of which are soluble in water; others insoluble.*	Poison	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. (ICC-17E, 37D) STC, not over 300 lbs. gr. wt. (ICC-37H) STC, not over 200 lbs. net wt. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 600 lbs. net wt. (ICC-11A) not over 115 lbs. net wt. Wooden boxes, WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 100 lbs. net wt. Wooden kits, WPL (ICC-18B) not over 30 lbs. net wt. Fiberboard boxes, WIC (ICC-12B, 12C) not over 50 lbs. net wt. Fiber drums (ICC-21A) not over 115 lbs. net wt. Plywood drums (ICC-22A) not over 115 lbs. net wt. Tank cars (ICC-103, 103A).
Thallium sulfate, solid	*Solid white or colorless powder. Soluble in water.*	Poison.				
Zinc arsenate		Poison.				
Zinc arsenite, solid	*Colorless powder. Insoluble in water.*	Poison.				

146.25–100 Table H.—Class C: Tear gas or irritating substances

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Chemical ammunition containing class "C" poisons, liquids, or gases. Nonexplosive. NOTE: When shipped with ignition elements, bursting charges, detonating fuzes or other explosive components such shipments shall conform to the regulations prescribed for "Ammunition, chemical explosive" under class A dangerous explosives.	Consists of projectiles, shells, bombs, and other containers, except grenades, filled with gases, liquids, or chemicals, class C without ignition elements, bursting charges, detonating fuzes, or other explosive components. Boxes will be marked with name of contents and labeled as prescribed by these regulations for the gases, liquids, or chemicals contained therein.					
Brombenzyl cyanide, liquid.	*A dark brown viscous liquid which solidifies at about 75° F.* *The vapors given off by this material are intensely irritating to the eyes and have a strong corrosive action on the throat and lungs.* Stow well away from living quarters and in a space not easily accessible to any persons. Vapor heavier than air.	Tear gas	Stowage: "On deck under cover." Outside containers: Steel barrels or drums: (ICC 5, 5A, 5B) not over 100 gal. cap. (ICC 6, 6B, 6C) not over 55 gal. cap. Wooden boxes, WIC (ICC 15A, 15B) not over 80 lbs. net wt. Cylinders (as prescribed for any compressed gas except acetylene).	Not permitted	Not permitted	Not permitted.
Chloracetophenone, gas, liquid or solid.	*In solid form is a crystalline body of pale yellow color which melts at about 131° F.* *Is also shipped in liquid form.* *Is also shipped in the form of gas.* *Vapors intensely irritating to the eyes.* Stow well away from living quarters. Keep cool.	Tear gas	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums (ICC-5, 5A, 5B, 6A, 6B, 6C) not over 30 gal. cap. or 480 lbs. gr. wt. Wooden boxes (ICC-15A, 15B) WIMC, not over 8 liquid gallons or 80 lbs. net wt. in any outside container. Cylinders (as prescribed for any compressed gas except acetylene).	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums (ICC-6A, 6B, 6C) not over 480 lbs. gr. wt. Wooden boxes (ICC-15A, 15B) WIMC, not over 80 lbs. net wt.	Not permitted	Not permitted.

Diphenylaminechlorarsine, gas, liquid or solid.	*In solid form is capable of giving off irritating vapors.* *Is also shipped in liquid form.* *Is also shipped in the form of gas.* Stow well away from living quarters.	Tear gas.				
Diphenylchlorarsine, solid.	*A solid substance giving off irritating vapors.* Stow well away from living quarters. Keep cool.	Tear gas.				
Gas identification sets.	*Such sets contain poisonous liquids and gases, class A and poisonous articles class C; or contain poisonous liquids or gases, class A or class C, and chlorine.* Stow away from living quarters and in a space not easily accessible to any persons. Protect from direct rays of the sun and all sources of artificial heat. Keep cool.	Tear gas.	Stowage: "On deck under cover." Outside containers: Wooden boxes (ICC-15A, 15B) not over 100 grams or mils or a combination of both packed in each outside box.	Not permitted.	Not permitted.	Not permitted.
Monochloracetone, stabilized.		Tear gas.	Stowage: "On deck under cover." Outside containers: Metal barrels or drums: (ICC 5, 5A) not over 5 gal. cap. (ICC 17C) STC, not over 5 gal. cap. Wooden boxes (ICC-15 A, 15B, 15C, 16A) WIC not over 24 lbs. net wt. of liquid.	Not permitted.	Not permitted.	Not permitted.
Poisonous liquids, N. O. S.	*Any liquid classifying as a poison, class "C", in accordance with these regulations.* Stow well away from living quarters. Keep cool.	Tear gas.	Stowage: "On deck in open." "On deck under cover." Outside containers: Steel barrels or drums: (ICC-5, 5A, 5B, 6B, 6C) not over 1,760 lbs. gr. wt. (ICC-6A) not over 880 lbs. gr. wt. Wooden boxes, WIMC (ICC-15A, 15B) not over 8 liquid gallons in any outside container. Cylinders (as prescribed for any compressed gas except acetylene).	Not permitted.	Not permitted.	Not permitted.
Poisonous solids, N. O. S.	*Any solid classifying as a poison, class "C" in accordance with these regulations.* Stow well away from living quarters. Keep cool.	Tear gas.				

146.25–100 Table H—Class C: Tear gas or irritating substances—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Police grenades, tear gas.	Devices containing lachrymatory (tear producing) substances.	Tear gas	Stowage: "On deck in open." "On deck under cover."	Stowage: "On deck in open."	Ferry stowage (AA)	Ferry stowage (BB).
Tear gas candles	*These devices are commonly so constructed that when they function, the contents are ejected, but there is no projection of any portion of the grenade such as to cause physical injury.* Stow well clear of living quarters. NOTE: Grenades or other similar devices may be shipped completely assembled when shipments are made by, for, or to the War or Navy Department of the United States Government, providing the functioning element is so packed that it cannot accidentally function.	Tear gas	Outside containers: Wooden boxes (metal strapped) (ICC–15A, 15B, 15C) not over 75 lbs. gr. wt. Metal drums: (ICC–37D) not more than 24 grenades and not over 75 lbs. gr. wt.	Outside containers: Wooden boxes (metal strapped) (ICC–15A, 15B, 15C) not over 75 lbs. gr. wt. Metal drums: (ICC–37D) not more than 24 grenades and not over 75 lbs. gr. wt.	Outside containers: Wooden boxes, (metal strapped) (ICC–15A, 15B, 15C) not over 75 lbs. gr. wt. Metal drums: (ICC–37D) not more than 24 grenades and not over 75 lbs. gr. wt.	Outside containers: Wooden boxes, (metal strapped) (ICC–15A, 15B, 15C) not over 75 lbs. gr. wt. Metal drums: (ICC–37D) not more than 24 grenades, and not over 75 lbs. gr. wt.
Tear gas material, liquid or solid, N. O. S.	*May be any liquid or solid material used as a tear-producing gas.* Stow well clear of living quarters.	Tear gas	Stowage: "On Deck in open." "On Deck under cover." Outside containers: Steel barrels or drums: (ICC–5, 5A, 5B, 6B, 6C) not over 1760 lbs. gr. wt. (ICC–6A) not over 880 lbs. gr. wt. Wooden boxes, WIMO (ICC–15A, 15B) not over 8 liquid gallons in any outside container. Cylinders (except acetylene cylinders).	Not permitted	Not permitted	Not permitted.
Xylyl bromide	*A gas having lachrymatory effects. Used for military purposes.* *Stow well clear of living quarters.*	Tear gas.				

DETAILED REGULATIONS GOVERNING COMBUSTIBLE LIQUIDS

146.26–1 Definition of combustible liquids.—A combustible liquid is defined by these regulations as set forth in § 146.26–2 and such definition is binding on all shippers making shipments of combustible liquids by any passenger vessel, and shall apply to owners, charterers, agents, master or other person in charge of a vessel and to other persons, transporting, carrying, conveying, storing, stowing or using combustible liquids, on board passenger vessels subject to R.S. 4472, as amended, and the provisions of the regulations in this subchapter.

146.26–2 Combustible liquids.—A combustible liquid is any liquid which gives off inflammable vapors (as determined by flashpoint Tagliabue's open-cup tester as used for test for burning oils) at or below a temperature of 150° F. and above 80° F.

146.26–3 Application to passenger vessels.—The provisions of R.S. 4472, as amended, require that combustible liquids in barrels, drums, or other packages, when transported, carried, conveyed, stored, stowed, or used on board any passenger vessel shall be regulated to the extent necessary to secure effective provisions against hazards to health, life, limb, or property created by dangerous articles or substances on board such vessels. The provisions of the regulations in this part are not applicable to combustible liquids that are transported, carried, conveyed, stored, or stowed in barrels, drums, or other packages on board cargo vessels.

146.26–4 Stowage on board passenger vessels.—All combustible liquids permitted for transportation on board passenger vessels shall, when taken on board such vessels, be stowed in accordance with the provisions applying to the particular character of vessel as shown in the tables forming § 146.26–100 and with the detailed regulations of stowage set forth herein.

146.26–5 "On deck" stowage.—Combustible liquids, stowage of which is permitted "On deck" by the provisions of the tables forming § 146.26–100, shall be properly secured when so stowed, in a manner satisfactory to the master of the vessel consistent with the following conditions:

(a) Such liquids shall be stowed as to provide safe access to the crew's quarters and to all parts of the deck required to be used in navigation and necessary working of the vessel.

(b) Combustible liquids shall not be stowed within a distance in a horizontal plane of 25 feet from an operating or embarkation point of a lifeboat when such point is at the same deck level as that upon which such liquids are stowed.

(c) Fire plugs, sounding pipes and access to same shall be maintained free and clear of combustible liquid cargo stowed on deck.

(d) Combustible liquid cargo shall be stowed well away from any deck or spaces provided for use of passengers.

146.26–6 "Under deck" stowage.—(a) Stowage of combustible liquid cargo "Under deck" shall be either in ventilated holds or in holds that are gastight.

(b) Combustible liquids stowed in a compartment or hold, a boundary, bulkhead, or deck of which, also forms a boundary to the boiler room or engine room or a coal bunker or galley shall not be stowed within 20 feet of such bulkhead or deck. On vessels having internal combustion motors as a principal means of propulsion, combustible liquids may be stowed in a hold having a boundary bulkhead forming a division from the engine room without compliance with this requirement of stowing cargo 20 feet off such bulkhead.

146.26–7 Potable spirits.—Potable spirits packed in strong, tight barrels, drums, casks, wooden or fiberboard boxes may, when stowed in a compartment not subject to artificial heat, be transported on board any passenger vessel without further restriction.

146.26–100 Table J.—Classification: Combustible liquids

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Acetic acid (*aqueous solution*).	*A clear, colorless liquid.* *Is also corrosive.* *Flash point about 110° F.* *Miscible with water.* Stow separate from oxidizing materials (yellow label) and nitric acid (white label). Outside containers shall be marked either "Acetic acid" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Carboys, glass; boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-5C, 5G) not over 110 gal. cap. or 1,760 lbs. gr. wt. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. or 1,760 lbs. gr. wt. Wooden barrels or kegs (ICC-10A, 10B, 10C) not over 50 gal. cap.; (ICC-11B) WIC of glass, aluminum or stainless steel, not over 350 lbs. gr. wt. Wooden boxes, WIC of glass, aluminum or stainless steel (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes, WIC of glass, aluminum or stainless steel (ICC-12B) (CFC R 41) not over 90 lbs. gr. wt. Wooden boxes, WIC non-specification not over 200 lbs. gr. wt. Fiberboard boxes, cylindrical nonspecification not over 90 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-5C, 5G) not over 110 gal. cap. or 1,760 lbs. gr. wt. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. or 1,760 lbs. gr. wt. Wooden barrels or kegs (ICC-10A, 10B, 10C) not over 50 gal. cap.; (ICC-11B) WIC of glass, aluminum or stainless steel, not over 350 lbs. gr. wt. Wooden boxes, WIC of glass, aluminum or stainless steel (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes, WIC of glass, aluminum or stainless steel (ICC-12B) (CFC R 41) not over 90 lbs. gr. wt. Wooden boxes, WIC non-specification not over 200 lbs. gr. wt. Fiberboard boxes, cylindrical nonspecification not over 90 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-5C, 5G) not over 110 gal. cap. or 1,760 lbs. gr. wt. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. or 1,760 lbs. gr. wt. Wooden barrels or kegs (ICC-10A, 10B, 10C) not over 50 gal. cap.; (ICC-11B) WIC of glass aluminum or stainless steel, not over 350 lbs. gr.wt. Wooden boxes, WIC of glass, aluminum or stainless steel (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes, WIC of glass, aluminum or stainless steel (ICC-12B) (CFC R 41) not over 90 lbs. gr. wt. Wooden boxes, WIC non-specification not over 200 lbs. gr. wt. Fiberboard boxes, cylindrical nonspecification not over 90 lbs. gr. wt. Tank cars (ICC-103C). Aluminum tank cars (non-specification).
Acetic acid, glacial	*A clear, colorless liquid.* *Is also corrosive.* *Flash point about 110° F.* *Crystallizes at about 60° F.* *Miscible with water.* Stow separate from oxidizing materials (yellow label) and nitric acid (white label). Outside containers shall be marked either "Acetic acid, glacial" or "Combustible liquid."	No label required.				
Acetic anhydride	*Colorless liquid having a sharp vinegary odor and an irritating effect upon mucous membrane and the eyes.* *Is also corrosive.* *Flash point about 130° F.* *Decomposes in water forming acetic acid.* Stow separate from oxidizing materials (yellow label) and nitric acid (white label). Outside containers shall be marked either "Acetic anhydride" or "Combustible liquid."	No label required.				

146.26–100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Acetone oils	*Oily liquid, varying in color from water-white to dark orange-yellow. Obtained as a by-product in the distillation of acetone. Penetrating odor.* *Shipped in two grades light and heavy. Light oil: Flashpoint about 90° F. Heavy oil flashpoint about 115° F.* Outside containers shall be marked either "Acetone oils" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the inflammable liquids table, for passenger vessels. *Also:* Carboys, glass; boxed or complete boxed. (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R (41 not over 90 lbs. gr. wt. Wooden boxes, WIC, nonspecification, not over 200 lbs. gr. wt.	Ferry stowage (AA)	Ferry stowage (BB).
					Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the inflammable liquids table, for ferry vessels. *Also:* Carboys, glass; boxed or completely boxed. (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Wooden boxes, WIC, nonspecification, not over 200 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the inflammable liquids table, for car ferries. *Also:* Carboys, glass; boxed or complete boxed. (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Wooden boxes, WIC, nonspecification, not over 200 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Alcohol, amyl (*normal primary*) (*normal secondary*) (*isoamyl*). Alcohol, butyl (*butanol*) (*isobutyl*). Alcohol, N. O. S. (when possessing a flash point at or below 150° F. and above 80° F.).	*Clear colorless liquid, miscible with water:* *Flashpoints:* *Amyl, normal primary 128° F.* *Amyl, normal secondary 105° F.* *Iso Amyl 108° F.* *Butanol 97° F.* *Iso Butyl 82° F.* Outside containers shall be marked either "Alcohol" or "Combustible liquid."	No label required.				
Amyl acetate: Pent-acetate. (When possessing a flash point at or below 150° F. and above 80° F.)	*Colorless liquid, pear or banana-like odor, flashpoint from 70 to 90° F., Immiscible with water.* Outside containers shall be marked either "Amyl acetate." "Pent-acetate" or "Combustible liquid."	No label required.				
Anti-freeze compounds, liquid (when possessing a flash point at or below 150° F. and above 80° F.).	*Products added to the cooling systems (radiators) of automobiles, tractors, and to other mechanical systems to lower the freezing point of water.* *Miscible with water.* Outside containers shall be marked either "Anti-freeze compound, liquid" or "Combustible liquid."	No label required.				

Asphalt, cut-back (When possessing a flash point at or below 150° F. and above 80° F.)	Outside containers shall be marked either "Asphalt cut-back" or "Combustible liquid."	No label required.		Stowages and containers as for "Road asphalt or tar, liquid."		
Asphaltic surfacing material. (When possessing a flash point at or below 150° F. and above 80° F.)	Outisde containers shall be marked either "Asphaltic surfacing material" or "Combustible liquid."	No label required.		Stowages and containers as for "Road asphalt or tar, liquid."		
Benzaldehyde	*Colorless or yellowish, fragrant, volatile oil with an odor resembling oil of bitter almond.* *Vapors about 3½ times heavier than air.* *Flashpoint around 145° F.* *Immiscible with water.* Outside containers shall be marked either "Benzaldehyde" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessles.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels.	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries.
Box toe gum. (When possessing a flash point at or below 150° F. and above 80° F.)	*A liquid, cement-like solution of variable formulae used in the manufacture of shoes.* *Immiscible with water.* Outside containers shall be marked either "Box toe gum" or "Combustible liquid."	No label required.		*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt.	*Also:* Carboys, glass, boxed, or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt.	*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums CFC R 40) not over 110 gal cap. Fiberboard boxes, WIC CFC (R 41) not over 90 lbs. gr. wt.
Bromobenzene (*Bromobenzol*). (*Monobrom benzene*).	*Colorless, oily liquid.* *Vapors about 5 times heavier than air.* *Flashpoint slightly below 150° F.* *Immiscible with water.* Outside containers shall be marked either "Bromobenzene" or "Combustible liquid."	No label required.				
Butyl acetate	*Colorless limpid, liquid with a fruity odor.* *Vapors about 4 times heavier than air.* *Flashpoint about 83° F.* *Slightly miscible with water.* Outside containers shall be marked either "Butyl acetate" or "Combustible liquid."	No label required.			Tank motor vehicle (complying with ICC motor carrier regulations).	Tank motor vehicle (complying with ICC motor carrier regulations).
Butyl ether	*Flashpoint 100° F.* *Ethereal odor.* Outside containers shall be marked either "Butyl ether" or "Combustible liquid."	No label required.				

(6th Amend.—Containers added—July 1941)

146.26-100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Camphor oil	*A colorless liquid produced by the distillation of camphor wood.* *Flashpoint about 125° F.* *Immiscible with water.* Outside containers shall be marked either "Camphor oil" or "Combustible liquid."	No label required.				
Carbon remover, liquid (when possessing a flash point at or below 150° F. and above 80° F.).	*Products usually added to motor fuels to dissolve out deposited carbon in cylinders of gasoline-fired engines.* Outside containers shall be marked either "Carbon remover, liquid" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat."	Ferry stowage (AA).	Ferry stowage (BB).
Cement, leather. Cement, liquid, N. O. S. Cement roofing, liquid. Cement, rubber. (When possessing a flash point at or below 150° F. and above 80° F.)	*These cements are chemical compounds of various ingredients such as: Asphalt with petroleum distillate, etc.* *Flashpoint variable.* Outside containers shall be marked either "Cement liquid" or "Combustible liquid."	No label required.		Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt.	Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Cleaning fluid or liquid (when possessing a flash point at or below 150° F. and above 80° F.).	*Various compounds used in cleaning fabrics, metals, wood, etc.* *Flashpoint variable.* Outside containers shall be marked "Cleaning fluid or liquid" or "Combustible liquid."	No label required.				

Coal tar distillate, N. O. S. (When possessing a flash point at or below 150° F. and above 80° F.)	*Vapors when mixed with air, at a temperature above 80° F., are readily ignitible by spark or open flame and are likely to burn with explosive effect.* *Immiscible with water.* *Flash point variable.* Outside containers shall be marked either "Coal tar distillate, N. O. S." or "Combustible liquid".	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.			
Combustible liquid, N. O. S.	*May be any liquid classifying as a combustible liquid in accordance with the definitions contained in these regulations provided such combustible liquid is not otherwise specified by name herein.* *Flash point variable.* Outside containers shall be marked "Combustible liquid."	No label required.		Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible". Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the inflammable liquids table for passenger vessels. *Also:* Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC-R40) not over 110 gal. cap.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the inflammable liquids table for ferry vessels. *Also:* Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC-R40) not over 110 gal. cap.	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the inflammable liquids table for car ferries. *Also:* Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC-R40) not over 110 gal. cap.

146.26–100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Compounds, cleaning, liquid. (When possessing a flash point at or below 150° F. and above 80° F.)	*Various compounds used in cleaning fabrics, metals, wood, etc.* *Flash point variable.* Outside containers shall be marked "Compounds, liquid" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC–15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC–1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC–17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums, (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC–15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC–1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC–17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums, (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC–15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:* Carboys, glass, boxed or completely boxed (ICC–1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC–17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums, (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Compounds, lacquer paint, or varnish reducing, liquid. Solvent, mineral spirits. Petroleum spirits. (When possessing a flash point at or below 150° F. and above 80° F.)	*Exceptionally slow-drying thinners used with pyroxylin base lacquer or enamels to retard speed of drying.* Outside containers shall be marked either "Compounds, liquid" or "Combustible liquid."	No label required.				
Compounds, lacquer, paint, or varnish removing, liquid. (When possessing a flash point at or below 150° F. and above 80° F.)	*Compounds which through solvent or detergent action remove old paint from surfaces.* Outside containers shall be marked either "Compounds, liquid" or "Combustible liquid."	No label required.				
Compounds, lacquer, paint, or varnish thinning, liquid (when possessing a flash point at or below 150° F. and above 80° F.)	*Clear liquid solvents and diluents for the reduction of primers, surfacers, and enamels to proper working consistencies.* Outside containers shall be marked either "Compounds, liquid" or "Combustible liquid."	No label required.				

Cresol, liquid (*Cresylic Acid*). (When possessing a flash point at or below 150° F. and above 80° F.)	*Yellowish liquid obtained from coal tar distillation.* *Phenol-like odor.* *Is not readily ignited but once heated burns persistently.* *Flashpoint about 110° F.* *Immiscible in water.* *Poisonous.* Outside containers shall be marked either "Cresol, liquid" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck undercover." "Tween decks readily accessible." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels.	Ferry stowage (AA)..... Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids tables for car ferries.
Creosote, coal tar (*creosote oil*) (*dead oil*) (when possessing a flash point at or below 150° F. and above 80° F.).	*Yellowish to dark green-brown oily liquid with characteristic odor.* *The term "creosote" is generally applied to the impure or crude distillate from the "heavy" coal tar oils and is extensively used as a wood preservative.* *Flash point about 120° F. to 180° F.* *Immiscible with water.* *Will contaminate foodstuffs.* Outside containers shall be marked either "Creosote, coal tar" or "Combustible liquid."	No label required.		*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt.	*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Crude oil, petroleum (When possessing a flash point at or below 150° F. and above 80° F.).	*Crude petroleum in its natural state or which has been subject only to natural weathering or settling and not blended with any other product.* *A heavy oily liquid having color varying from green to almost black. It usually has a disagreeable odor and varies in inflammability according to percentage of more volatile ingredients.* *Immiscible with water.* Outside containers shall be marked either "Crude oil, petroleum" or "Combustible liquid."	No label required.				

146.26–100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Decahydronaphthalene (*Decalin*). (When possessing a flash point at or below 150° F. and above 80° F.)	*A non-toxic, clear, water-white colorless liquid.* *Flashpoint 151° F.* *Immiscible with water.* *Vapors about 4½ times heavier than air.* Outside containers shall be marked either "Decahydronaphthalene" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metals barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Dichloropentanes	*Flash point 97° to 100° F.* *Insoluble in water.* Outside containers shall be marked either "Dichloropentane" or "Combustible liquid."	No label required.				
Diisobutyl ketone	*Flash point 140° F.* *Mild odor.* *Not soluble in water.* Outside containers shall be marked either "Diisobutyl ketone" or "Combustible liquid."	No label required.				
Dinitrotoluene, liquid (*dinitrotoluol, liquid*).	*Yellow liquid, flammable but not explosive, immiscible in water, vapors are about 6 times heavier than air, vapors are irritating and in sufficient quantities are suffocating.* Outside containers shall be marked "Dinitrotoluene, liquid" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:*	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:*	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:*

Disinfectant, liquid (when possessing a flash point at or below 150° F. and above 80° F.)	*Liquid compounds for use as disinfectants, flashpoint variable.* Outside containers shall be marked "Disinfectant, liquid" or "combustible liquid."	No label required.		Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums, (ICC-17C, 17E, 17X) STC, not over 55 gal. cap. May be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40), not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41), not over 90 lbs. gr. wt.	Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap. May be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40), not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41), not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap. May be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40), not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41), not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Dressing, leather. (When possessing a flash point at or below 150° F. and above 80° F.)	*Preparations used to treat leather to retard the natural drying up of the oils and greases to revive color, restore softness and pliability and to keep it from becoming hard and brittle, flashpoint variable.* Outside containers shall be marked "Dressing, leather" or "Combustible liquid."	No label required.				
Driers, paint or varnish (when possessing a flash point at or below 150° F. and above 80° F.).	*Materials which hasten the drying period in painting, varnishing, enameling and lacquering operations.* *Flashpoint variable.* Outside containers shall be marked "Driers, paint or varnish" or "Combustible liquid."	No label required.				
Drugs, chemicals, medicines, or cosmetics. A unit substance or a compound classified as a combustible liquid in accordance with the definition contained herein, when prepared, packed and offered to the trade as drugs, chemicals, medicines, or cosmetics. In quantity not exceeding 1 pint or 16 ounces by weight, in glass or earthenware containers, or 1 quart or 32 ounces by weight in inside metal containers.	Outside containers shall be marked either "Drugs" or "Chemicals" or "Medicines" or "Cosmetics" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 90 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 90 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Strong wooden barrels, WIC, not over 400 lbs. gr. wt. Strong wooden boxes, WIC, not over 200 lbs. gr. wt. Fiberboard boxes, WIC, not over 90 lbs. gr. wt.

NOTE: Observe instructions regarding "This side up" stowage when packages are so marked. It is not required that the above containers be ICC or CFC specification containers, although these specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.

146.26–100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Drugs, chemicals, medicines, or cosmetics, N. O. S. A unit substance or a compound classified as a combustible liquid in accordance with the definition contained herein, when prepared, packed, and offered to the trade as drugs, chemicals, medicines, or cosmetics. In containers exceeding 1 qt. capacity or 32 ounces by weight.	Outside containers shall be marked either "Drugs" or "Chemicals" or "Medicines" or "Cosmetics" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table, for passenger vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X), STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (OFC R 40), not over 110 gal. cap. Fiberboard boxes, WIC (OFC R 41), not over 90 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table, for ferry vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X), STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (OFC R 40), not over 110 gal. cap. Fiberboard boxes, WIC (OFC R 41), not over 90 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table, for car ferries. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X), STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (OFC R 40), not over 110 gal. cap. Fiberboard boxes, WIC (OFC R 41), not over 90 lbs. gr. wt.
Eradicators, paint or grease, liquid. (When possessing a flash point at or below 150° F. and above 80° F.)	*Compounds which through solvent or detergent action remove paint, oil, or grease from various surfaces, similar to paint remover, flash point variable.* Outside containers shall be marked either "Eradicators, paint or grease, liquid" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels.	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries.

Ethyl benzene	*Flash point 85° F., insoluble in water.* Outside containers shall be marked either "Ethyl benzene" or "Combustible liquid."	No label required.		*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X), STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R40), not over 110 gal. cap. Fiberboard boxes. WIC (CFC R41) not over 90 lbs. gr. wt.	*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X), STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R40), not over 110 gal. cap. Fiberboard boxes. WIC (CFC R41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X), STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R40), not over 110 gal. cap. Fiberboard boxes. WIC (CFC R41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Ethyl butyl acetate	*Colorless liquid, flash point about 137° F., immiscible with water.* Outside containers shall be marked either "Ethyl butyl acetate" or "Combustible liquid."	No label required.				
Ethyl butyrate	*Colorless liquid with pineapple like odor.* *Flash point below 100° F.* *Immiscible with water.* *Vapors are about 4 times heavier than air.* Outside containers shall be marked either "Ethyl butyrate" or "Combustible liquid."	No label required.				
Ethyl chloroacetate	*A water-white liquid.* *Flash point about 150° F.* *Immiscible with water.* *Vapors about 4 times heavier than air.* Outside containers shall be marked either "Ethyl chloroacetate" or "Combustible liquid."	No label required.				
Ethyl lactate	*Colorless liquid. Used as solvent for cellulose acetate and nitrocellulose.* *Flash point about 115° F.* *Miscible with water with partial decomposition.* Outside containers shall be marked either "Ethyl lactate" or "Combustible liquid."	No label required.				

146.26–100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ethyl silicate	*Flash point 185° F.* *Mild odor.* *Hydrolizes in water to alcohol and silicic acid.* Outside containers shall be marked "Ethyl silicate" or "Combustible liquid."	No label required.	R.S. 4472 not applicable to Combustible Liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat."	Ferry stowage (AA).	Ferry stowage (BB).
Ethylene chlorhydrin	*Flash point 140° F.* *Faint etheral odor.* *Completely soluble in water.* Outside containers shall be marked "Ethylene chlorhydrin" or "Combustible liquid."	No label required.		Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table, for passenger vessels.	Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table, for ferry vessels.	Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table, for car ferries.
Ethylene glycol diethyl ether.	*Flash point 100° F.* *Slight etheral odor.* *Slightly soluble in water.* Outside containers shall be marked "Ethylene glycol diethyl ether" or "Combustible liquid."	No label required.		*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Wooden boxes, WIC, nonspecification, not over 200 lbs. gr. wt.	*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Wooden boxes, WIC, nonspecification, not over 200 lbs. gr. wt. Tank motor vehicle (Complying with ICC motor carrier regulations).	*Also:* Carboys, glass, boxed or completely boxed, (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Wooden boxes, WIC, nonspecification, not over 200 lbs. gr. wt. Tank motor vehicle (Complying with ICC motor carrier regulations).
Ethylene glycol monomethyl ether.	*Flash point 115° F.* *Mild odor.* *Soluble in water.* *Mild odor.* Outside containers shall be marked "Ethylene glycol monomethyl ether" or "Combustible liquid."	No label required.				
Ethylene glycol monoethyl ether.	*Flash point 130° F.* *Mild agreeable odor.* *Soluble in water.* Outside containers shall be marked "Ethylene glycol monoethyl ether" or "Combustible liquid."	No label required.				
Ethylene glycol monomethyl ether acetate.	*Flash point 140° F.* *Slight sweetish odor.* *Soluble in water.* Outside containers shall be marked "Ethylene glycol monoethyl ether acetate" or "Combustible liquid."	No label required.				

Ethylene glycol monoethyl ether acetate.	*Flash point 140° F.* *Mild odor.* *Slightly soluble in water.* Outside containers shall be marked "Ethylene glycol monoethyl ether acetate" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Twen decks readily accessible." "Under deck away from heat."	Ferry stowage (AA).	Ferry stowage (BB).
Ethylhexaldehyde	*Flash point 125° F.* *Mild aldehyde odor.* *Not soluble in water.* Outside containers shall be marked "Ethylhexaldehyde" or "Combustible liquid."	No label required.		Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table, for passenger vessels.	Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table, for ferry vessels.	Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table, for car ferries.
Extracts, liquid flavoring. (When possessing a flash point at or below 150° F. and above 80° F.)	*May consist of aqueous or alcoholic solutions. Flash point variable.* Outside containers shall be marked either "Extracts, liquid flavoring" or "Combustible liquid."	No label required.		*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (OFC R 40), not over 110 gal. cap. Fiberboard boxes. WIC (OFC R 41), not over 90 lbs. gr. wt. Wooden boxes. WIC, nonspecification, not over 200 lbs. gr. wt.	*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (OFC R 40), not over 110 gal. cap. Fiberboard boxes. WIC (OFC R 41), not over 90 lbs. gr. wt. Wooden boxes WIC, nonspecification, not over 200 lbs. gr. wt. Tank motor vehicle (Complying with ICC motor carrier regulations).	*Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C, not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (OFC R 40), not over 110 gal. cap. Fiberboard boxes. WIC (OFC R 41), not over 90 lbs. gr. wt. Wooden boxes. WIC, nonspecification, not over 200 lbs. gr. wt. Tank motor vehicle (Complying with ICC motor carrier regulations).

146.26-100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Formaldehyde (*Formalin*)	*Clear, colorless liquid with suffocating, pungent odor.* *Irritating to mucous membrane, corrosive to the skin.* *Flash point about 90° F.* *Miscible with water.* *Will contaminate foodstuffs.* Stow away from living quarters. Do not stow with corrosive liquids (white label) or with bleaching powder (chloride of lime). Outside containers shall be marked either "Formaldehyde" or "combustible liquid."	No label required.	R. S 4472 not applicable to Combustible Liquids on board-cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-5C, 5G) not over 110 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 350 lbs. gr. wt. Wooden boxes. WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Hardwood barrels, nonspecification, not over 50 gal. cap. Wooden boxes. (WIC) nonspecification, not over 200 lbs. gr. wt. Steel drums (asphalt lined) nonspecification, not over 110 gal. cap.	Ferry stowage (AA). Outside containers: Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-5C, 5G) not over 110 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC not over 350 lbs. gr. wt. Wooden boxes. WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Hardwood barrels, nonspecification, not over 50 gal. cap. Wooden boxes. (WIC) nonspecification, not over 200 lbs. gr. wt. Steel drums (asphalt lined) nonspecification, not over 110 gal. cap.	Ferry stowage (BB). Outside containers: Carboys, glass, boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-5C, 5G) not over 110 gal. cap. Aluminum barrels or drums (ICC-42B, 42C) not over 110 gal. cap. Wooden barrels or kegs: (ICC-10A, 10B, 10C) not over 50 gal. cap. (ICC-11A, 11B) WIC, not over 350 lbs. gr. wt. Wooden boxes. WIC (ICC-15A, 15B, 15C, 16A, 19A) not over 200 lbs. gr. wt. Fiberboard boxes. WIC (ICC-12B) not over 65 lbs. gr. wt. Hardwood barrels, nonspecification, not over 50 gal. cap. Wooden boxes. (WIC) nonspecification, not over 200 lbs. gr. wt. Steel drums (asphalt lined) nonspecification, not over 110 gal. cap. Tank cars, (ICC-103, 104, 104A) (ARA-II, ARA-III, ARA-IV).

Fuel oil, C. S. No. 1	*A distillate oil which may be used as fuel for internal combustion motors or heating or cooking installations.* *Flashpoint, minimum 100° F, Flashpoint, maximum 150° F.* Outside containers shall be marked either "Fuel oil, C. S. No. 1" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to Combustible Liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Metal barrels or drums (OFC R 40) not over 110 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be used and reused.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Metal barrels or drums (OFC R 40) not over 110 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be used and reused. Tank motor vehicle (complying with ICC motor carrier regulations).	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:* Metal barrels or drums (OFC R 40) not over 110 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be used and reused. Tank motor vehicle (complying with ICC motor carrier regulations).
Fuel oil, C. S. No. 2 Fuel oil, C. S. No. 3. (When possessing a flash point at or below 150° F. and above 80° F.)	*A distillate oil which may be used as fuel for internal combustion motors for heating or cooking installations.* *Flashpoint minimum 110° F.* Outside containers shall be marked "Fuel oil, C. S. No. 2" or "Fuel oil, C. S. No. 3" or "Combustible liquid."	No label required.				
Fuel oil Gas oil. Range oil. (When possessing a flash point at or below 150° F. and above 80° F.)	*Distillates other than C. S. Nos. 1, 2, or 3 which may be used as fuel for internal combustion motors or heating or cooking installations.* Outside containers shall be marked "Fuel oil", "Gas oil", "Range oil" or "Combustible liquid."	No label required.				
Furfural	*Colorless, mobile liquid. Changes to reddish-brown upon exposure to light and air.* *Penetrating obnoxious odor.* *Flash point 130° F. to 145° F.* *Vapors are about 3 times heavier than air.* Outside containers shall be marked either "Furfural" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Carboys, glass; boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E 17X), STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Carboys, glass; boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E 17X), STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids.	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:* Carboys, glass; boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids.
Fusel oil	*A volatile, poisonous, oily compound consisting largely of amyl alcohols.* *Disagreeable odor.* *Flash point about 105° F.* *Miscible with water.* Outside containers shall be marked either "Fusel oil" or "Combustible liquid."	No label required.				

146.26–100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required.	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Hexaldehyde	*Flash point 90° F.* *Sweet aldehyde odor.* *Not soluble in water.* Outside containers shall be marked either "Hexaldehyde" or "Combustible liquid."	No label required.	(See foregoing.)	(See foregoing.) Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt.	(See foregoing.) Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	(See foregoing) Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Ink (when possessing a flash point at or below 150° F. and above 80° F.).	*Colored liquids of various bases with added ingredients and solvents such as acetone, alcohol, etc.* *Flash point variable.* Outside containers shall be marked either "Ink" or "Combustible liquid."	No label required.				
Insecticide, liquid (*vermin exterminator*).	*Insecticides frequently contain petroleum or coal tar distillates.* *Flash point variable.* Outside containers shall be marked either "Insecticide liquid" or "Combustible liquid."	No label required.				
Kerosine Synonyms: Coal oil. Paraffin. Kerozene. Water white. Refined oil. Refined petroleum. Long time burning oil. (When possessing a flash point at or below 150° F. and above 80° F.)	*A petroleum distillate commonly used for lighting purposes. Also known as burning oil, coal oil, lamp oil, illuminating oil.* *Flash point ranges between 81° F. and 140° F.* *Immiscible with water.* Outside containers shall bear name of product or its synonym as shown or shall be marked "Combustible liquid."	No label required.				

Lacquer (when possessing a flash point at or below 150° F. and above 80° F.).	*Lacquer is a viscous liquid of varying fluidity. It may be clear, pigmented or colored.* *Flashpoint variable.* *Immiscible with water.* Outside containers shall be marked either "Lacquer" or "Combustible liquid".	No label required.	R. S. 4472 not applicable to Combustible Liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Carboys, glass; boxed or completely boxed, (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40), not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41), not over 90 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Carboys, glass; boxed or completely boxed, ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40), not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41), not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also.* Carboys, glass; boxed or completely boxed, (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40), not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41), not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Lacquer base, liquid (when possessing a flash point at or below 150° F. and above 80° F.)	*A viscous solution of nitrocellulose or synthetic resins with a plasticizer.* *May be clear, pigmented or colored.* *Flashpoint variable.* *Immiscible with water.* Outside containers shall be marked either "Lacquer base, liquid" or "Combustible liquid".	No label required.				
Mesityl oxide	*Flashpoint 90° F.* *Sharp pungent odor.* *Not soluble in water.* Outside containers shall be marked either "Mesityl oxide" or "Combustible liquid".	No label required.				
Methyl amyl acetate	*Water-white, liquid, fragrant odor.* *Flashpoint 115° F.* *Slightly miscible with water.* *Vapors are about 3 times heavier than air.* Outside containers shall be marked either "Methyl amyl acetate" or "Combustible liquid".	No label required.				
Methyl amyl ketone	*Flashpoint 120° F.* *Mild agreeable odor.* *Not soluble in water.* Outside containers shall be marked "Methyl amyl ketone" or "Combustible liquid".	No label required.				
Monochlorbenzene (*Chlorbenzene.*) (*Chlorbenzol.*)	*A clear, colorless liquid.* *Flashpoint between 81° F. and 120° F.* *Vapors are about 4 times heavier than air.* *Immiscible with water.* Outside containers shall be marked either "Monochlorbenzene" or "Combustible liquid".	No label required.				

146.26–100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required.	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Motor fuel, N. O. S. (when possessing a flash point at or below 150° F. and above 80° F.)	*Any fuel for internal combustion engines not otherwise specified by name in these regulations.* *Flashpoint variable.* *Immiscible with water.* Outside containers shall be marked either "Motor fuel, N. O. S." or "Combustible liquid."	No label required.	R. S. 4472 not applicable to Combustible Liquids on cargo vessels.	"Stowage: On deck in open." "On deck under cover." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Metal barrels or drums (CFC R 40) not over 110 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap, may be reused for shipment of these combustible liquids.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Metal barrels or drums (CFC R 40) not over 110 gal. cap. Tank motor vehicle (Complying with ICC motor carrier regulations). Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap, may be reused for shipment of these combustible liquids.	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:* Metal barrels or drums (CFC R 40) not over 110 gal. cap. Tank motor vehicle (Complying with ICC Motor carrier regulations). Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap, may be reused for shipment of these combustible liquids.
Petroleum distillate, N. O. S. (when possessing a flash point at or below 150° F. and above 80° F.) Petroleum naphtha (when possessing a flashpoint at or below 150° F. and above 80° F.)	*Vapors when mixed with air, at a temperature above 80° F., are readily ignitable by spark or open flame and are likely to burn with explosive effect.* *Flashpoint variable.* *Immiscible with water.* Outside containers shall be marked either "Petroleum distillate, N. O. S." or "Petroleum naphtha", or "Combustible liquid."	No label required.				
Paint, aluminum, bronzing, or gold (when possessing a flash point at or below 150° F. and above 80° F.)	*Formulated with the metallic powder or paste of aluminum, bronze, or gold together with pyroxylin or soluble cotton dissolved in volatile solvents.* *Flashpoint variable.* *Immiscible with water.* Outside containers shall be marked either "Paint" or "Combustible liquid".	No label required.	R. S. 4472 not applicable to Combustible liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Carboys, glass; boxed or completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Carboys, glass; boxedor completely boxed (ICC-1A, 1C), not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids.	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:* Carboys, glass; boxed or completely boxed (ICC-1A, 1C), not over 13 gal cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids.
Paint, liquid (when possessing a flash point at or below 150° F. and above 80° F.)	*Paint is a mixture of pigment with vehicle and is intended to be spread in thin coats for decoration or protection, or both.* *Flashpoint variable.* *Immiscible water with.* Outside containers shall be marked either "Paint" or "Combustible liquid".	No label required.				

Paraldehyde	*Colorless liquid, pleasant odor.* *Flash point about 100° F.* *Congeals at a temperature of about 50° F.* *Miscible with water.* *Vapors about 4½ times heavier than air.* Outside containers shall be marked either "Paraldehyde" or "Combustible fluid"	No label required.		Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes. WIC (CFC R 41), not over 90 lbs. gr. wt. Wooden boxes. WIC nonspecification, not over 200 lbs. gr. wt.	Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes. WIC (CFC R 41), not over 90 lbs. gr. wt. Wooden boxes. WIC, nonspecification, not over 200 lbs. gr. wt. Tank motor vehicle (Complying with ICC motor carrier regulations).	Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes. WIC (CFC R 41), not over 90 lbs. gr. wt. Wooden boxes. WIC, nonspecification, not over 200 lbs. gr. wt. Tank motor vehicle (Complying with ICC motor carrier regulations).
Pine oil (when possessing a flash point at or below 150° F. and above 80° F.)	*A colorless or pale yellow or greenish-yellow tinted oil with a characteristic penetrating agreeable odor.* *Flashpoint usually over 135° F.* *Immiscible with water.* *Capable of causing spontaneous heating in contact with organic substances.* Outside containers shall be marked either "Pine oil" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to Combustible Liquids on board cargo vessels.	Stowage: "On deck in open." "On deck under cover." "Twen decks readily accessible." "Under deck away from heat." Outside containers: Any ICC Specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes. WIC (CFC R 41) not over 90 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes. WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal cap., may be reused for shipment of these combustible liquids Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes. WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).
Polishing compounds, liquid (when possessing a flash point at or below 150° F. and above 80° F.)	*Liquid polishing compounds may contain an abrasive material held in suspension by a volatile liquid.* *Flashpoint variable.* Outside containers shall be marked either "Polishing compounds, liquid" or "Combustible liquid."	No label required.				
Road asphalt or tar, liquid (when possessing a flash point at or below 150° F. and above 80° F.	*Substances prepared by the fluxing of asphalt with petroleum distillate.* *Pungent, penetrating odor.* *Immiscible with water.* Outside containers shall be marked either "Road asphalt or tar, liquid" or "Combustible liquid."	No label required.				
Road oil (when possessing a flash point at or below 150° F. and above 80° F.).	*Asphaltum or coal tar liquids prepared for use as binders or dressings for road surfaces.* *Flashpoint variable.* *Immiscible with water.* Outside containers shall be marked either "Road oil" or "Combustible liquid."	No label required.				

146.26–100 Table J.—Classification: Combustible liquids—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Rust preventive coating *Asphaltum, coal tar or pitch base*) (when possessing a flash point at or below 150° F. and above 80° F.).	*Liquid coatings of varying consistency.* *Flashpoint variable.* Outside containers shall be marked "Rust preventive coating" or "Combustible liquid".	No label required.	(See foregoing.)	(See foregoing.)	(See foregoing.)	(See foregoing.)
Thinners for rust preventive coating (when possessing a flash point at or below 150° F. and above 80° F.).	*Liquid thinners or solvent used for working rust preventive coatings.* *The type classifying as a combustible liquid will possess a flash point between 110° and 120° F.* Outside containers shall be marked either "Thinners for rust preventive coating" or "Combustible liquid."	No label required.				
Solvents, N. O. S. (when possessing a flash point at or below 150° F. and above 80° F.).	*May be any solvent classifying as a combustible liquid in accordance with the definitions contained in these regulations which is not otherwise specified by name herein.* *Flash point variable.* Outside containers shall be marked either "Solvents, N. O. S." or "Combustible liquid."	No label required.				
Stoddard solvent (when possessing a flash point at or below 150° F. and above 80° F.).	*Petroleum distillate used in dry cleaning.* *Flash point not lower than 100° F.* Outside containers shall be marked either "Stoddard solvent" or "Combustible liquid."	No label required.				

Turpentine	*A mixture of resin and volatile oil.* *Flashpoint 90° F. to 115° F.* *Imiscible with water.* *Capable of causing spontaneous heating in contact with organic substances.* Outside containers shall be marked either "Turpentine" or "Combustible liquid."	No label required.	R. S. 4472 not applicable to combustible liquids on board cargo vessels.	Stowage "On deck in open." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for passenger vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for ferry vessels. *Also:* Carboys, glass, boxed or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations).	Ferry stowage (BB). Outside containers: Any ICC specification container (except wooden box ICC-15X unless specifically authorized) as shown in the Inflammable liquids table for car ferries. *Also:* Carboys, glass, boxes or completely boxed (ICC-1A, 1C) not over 13 gal. cap. Steel barrels or drums (ICC-17C, 17E, 17X) STC, not over 55 gal. cap., may be reused for shipment of these combustible liquids. Metal barrels or drums (CFC R 40) not over 110 gal. cap. Fiberboard boxes, WIC (CFC R 41) not over 90 lbs. gr. wt. Tank motor vehicle (complying with ICC motor carrier regulations.)
Turpentine substitutes (when possessing a flash point at or below 150° F. and above 80° F.).	*Special fractions of petroleum oils used in the place of turpentine as a paint thinner, etc.* *Flash point variable.* *Imiscible with water.* Outside containers shall be marked either "Turpentine substitutes" or "Combustible liquid."	No label required.				
Varnish (when possessing a flash point at or below 150° F. and above 80° F.).	*A solution of natural or artificial resins, etc. in volatile solvents. Linseed oil varnishes are capable of causing spontaneous heating in contact with organic substances.* Outside containers shall be marked either "Varnish" or "Combustible liquid".	No label required.				
Waxes, liquid (when possessing a flash point at or below 150° F. and above 80° F.).	*Liquid wax preparations.* *Flash point variable.* *Immiscible with water.* Outside containers shall be marked either "Waxes, liquid" or "Combustible liquid."	No label required.				
Wood filler, liquid (when possessing a flash point at or below 150° F. and above 80° F.).	*Powder dissolved in a volatile liquid forming a solution used for filling the cellular spaces and sealing wood surfaces to make them smooth.* Outside containers shall be marked either "Wood filler, liquid" or "Combustible liquid."	No label required.				
Wood stain liquid (when possessing a flash point at or below 150° F. and above 80° F.).	*A liquid product consisting of basic colors in powdered form mixed with a solvent.* Outside containers shall be marked either "Wood stain, liquid" or "Combustible liquid."	No label required.				

DETAILED REGULATIONS GOVERNING HAZARDOUS ARTICLES

146.27-1 Definition of hazardous articles.—Hazardous articles are defined by these regulations as set forth in § 146.27-2 and such definition is binding upon all shippers making shipments of hazardous articles by any vessel and shall apply to owners, charterers, agents, master or other person in charge of a vessel, and to other persons, transporting, carrying, conveying, storing, stowing or using hazardous articles on board vessels subject to R. S. 4472, as amended, and the provisions of the regulations in this subchapter.

146.27-2 Hazardous article.—For the purpose of the regulations in this part Hazardous Articles are defined as:

(a) Any article or substance (other than an explosive, inflammable liquid, inflammable solid, oxidizing material, corrosive liquid, compressed gas, poisonous article, or combustible liquid) which is liable when subjected to test for three continuous hours in a Mackey apparatus at or below a temperature of 212° F. to spontaneous heating in excess of 10° F. or which at or below a temperature of 300° F. may liberate vapor susceptible to ignition by spark or open flame.

(b) Any other article or substance which is specifically named in these regulations as hazardous.

146.27-3 Stowage on board vessels.—All hazardous articles permitted for transportation on board vessels shall, when taken on board a vessel, be stowed in accordance with the provisions applying to the particular character of vessel as shown in the tables forming § 146.27-100 and with the general stowage requirements shown herein.

146.27-4—General stowage requirement.—Hazardous articles shall not be stowed in any compartment or hold in which explosives are stowed.

146.27-5 Liquids exempt.—Liquids which liberate vapor susceptible to ignition at a temperature above 150° F. and which possess no other characteristics which would classify such liquids as dangerous under any other definition in this subchapter, when packed in drums, barrels, or other closed containers and offered for transportation on board vessels as cargo, are not subject to the regulations in this part.

146.27-6 Protection for "on deck" stowage.—Hazardous articles that are permitted stowage "on deck in open" or "on deck protected" may be protected by the use of structural erections, awnings, or tarpaulins.

146.27–100 Table K.—Classification: Hazardous articles

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Acid carboys, empty			See: "Carboys, empty."			
Aluminum powder, uncoated.	*Aluminum in the form of finely divided powder.* *In contact with acids, alkalies or water possesses the property of evolving hydrogen gas which may form explosive mixtures in air.* Keep dry. Do not stow with acids (white label,) inflammable solids or oxidizing materials (yellow label) nor with caustic soda or potash. *In event of breakage of containers the dust of aluminum powder is easily ignitible.* Outside containers shall be marked either "Aluminum powder, uncoated" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." Outside containers: Steel barrels or drums, not over 500 lbs. gr. wt. Wooden barrels or kegs, not over 350 lbs. gr. wt. Wooden boxes, not over 125 lbs. gr. wt. Moisture proofed (siftproof) bags. Not over 55 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums, not over 500 lbs. gr. wt. Wooden barrels or kegs, not over 350 lbs. gr. wt. Wooden boxes, not over 125 lbs. gr. wt. Moisture proofed (siftproof) bags. Not over 55 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums, not over 500 lbs. gr. wt. Wooden barrels or kegs, not over 350 lbs. gr. wt. Wooden boxes, not over 125 lbs. gr. wt. Moisture proofed (siftproof) bags. Not over 55 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums, not over 500 lbs. gr. wt. Wooden barrels or kegs, not over 350 lbs. gr. wt. Wooden boxes, not over 125 lbs. gr. wt. Moisture proofed (siftproof) bags. Not over 55 lbs. gr. wt.
Aniline oil drums, empty.	Drums formerly having contained aniline oil will, before being accepted for shipment, be thoroughly drained.	Returnable package notice shellacked to head of drum near consignee's name and address.	Stowage: "On deck in open." "On deck under cover." "Tween decks."	Stowage: "On deck in open." "On deck under cover."	Ferry stowage (AA).	Ferry stowage (BB).
			Do not accept unless returnable package notice is on drum. Notice shall be legible. Bungs with gaskets shall be throughly tightened in place. If necessary, new gaskets may be required before accepting. Also require that all aniline oil stains on the outside of drums be washed off with water, or preferably, weak acetic acid.			
Asphalt Road asphalt or tar (*when heated to or above its flash point*).	Applicable only to road binders or top dressings laden in tank vehicles and subjected to heating.	No label required	Stowage: "On deck in open."	Not permitted	Ferry stowage (AA)	Ferry stowage (BB).
			Accepted without restriction provided the substance within the tank is not heated to or above its flash point when offered for transportation. No fire or residue thereof shall be present in the furnace heating the substance while the vehicle is on board the vessel.			

146.27–100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Automobiles, motorcycles, tractors, or other self-propelled vehicles, *new or used, within boxes or crates, when shipped as cargo, and containing no lubricating oil, gasoline, or other motor fuel within the motor or fuel tank.*	Completely assembled, partly assembled, or "knocked down" and enclosed within boxes or crates. No marking required.	No label required.	May be accepted without restriction on any character of vessel: Within each crate there may be placed: (A) A container of retouching enamel, not exceeding 1 pint (fluid) capacity. The container for this enamel shall be of metal with securely closed friction cap, or hermetically sealed. (B) One tire repair kit containing a tube of cement of not more than 4 ounces capacity, completely enclosed in an outer metal or fiberboard container. (C) A charged electric storage battery may be shipped in position within the battery holder, provided the battery cable terminals are disconnected and protected against short circuit. When shipped outside of the battery holder, the battery shall be secured within the automobile or within the crate or box to prevent any movement of same. When shipped having a battery within the shipping box or crate, "This side up" marking shall be required on the outside of the shipping box or crate. Inflammable brake fluid, other than the amount actually contained in the car brake mechanism, shall not be packed within the automobile, or within the box or crate containing the automobile.			
Automobiles, motorcycles, tractors, or other self-propelled vehicles, *new or used, when offered for transportation without boxing or crating and containing no gasoline or other motor fuel within the fuel tank.*	Motor vehicles assembled in substantially normal road operating condition, but without gasoline, or other motor fuel, within the fuel tank. No marking required.	No label required.	May be accepted without restriction on any character of vessel: Within each vehicle there may be placed: (A) A container of retouching enamel, not exceeding 1 pint (fluid) capacity. The container for this enamel shall be of metal with securely closed friction cap, or hermetically sealed. (B) One tire repair kit containing a tube of cement of not more than 4 ounces capacity, completely enclosed in an outer metal or fiberboard container. (C) A charged electric storage battery may be shipped in position within the battery holder. When shipped outside of the battery holder, the battery shall be secured within the automobile to prevent any movement of same. Inflammable brake fluid, other than the amount actually contained in the car brake mechanism, shall not be packed within the automobile.			

Automobiles, motorcycles, tractors, or other self-propelled vehicles, *new or used, when offered for transportation without boxing or crating and containing gasoline, or other motor fuel within the fuel tank.* NOTE: Description given here does not include motor vehicles having on board dangerous articles. For regulations governing transportation of such vehicles see § §146.08-1 to 146.08-9.	Motor vehicles in normal road operating condition when offered for transportation as cargo or "passenger's baggage" and loaded, or unloaded, by a member of the crew or an agent of the vessel; or when offered as in ferry service and driven on and/or off the vessel by the owner or operator of of the vehicle. No marking required.	No label required.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck."	Stowage: "On deck in open" or if the vessel is provided with a compartment fitted with an overhead sprinkler system, inert gas or steam smothering system in any of the following locations such compartments may be utilized: "On deck under cover." "Tween decks." "Under deck."	Ferry stowage: In the vehicle gangways.	Ferry stowage: "On deck in open" or in the covered vehicle gangways on board car ferries having an overhead sprinkler system in such spaces.
			The person driving a motor vehicle on board a vessel shall observe the following rules: (i) Drive the vehicle to the location indicated by the vessel's representative. (ii) Securely set the brakes of the vehicle to prevent movement. (iii) Shut off the motor and do not restart same until the vessel has completed its voyage and docked. (iv) Shut off all vehicle lights and do not relight same until the vessel has completed its voyage. (v) Make no repairs or adjustments to the vehicle while on board the vessel. (vi) Observe any instructions given by the vessel's representative during the voyage or during drive-on or drive-off operations. Smoking by any person within the vehicle, while on board the vessel, is prohibited.			
Barrels, empty			See: "Drums, empty."			
Battery parts (*Plates, grids, etc., unwashed, exhausted*).	Consists of scrap parts of batteries and battery plates. Outside containers shall be marked either "Battery parts" or "Hazardous article."	No label required.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Metal or wooden barrels, packed with sufficient sawdust or similar material to absorb any liquid present in the scrap.	Not permitted.	Ferry stowage (AA). Outside containers: Metal or wooden barrels, packed with sufficient sawdust or similar material to absorb any liquid present in the scrap.	Ferry stowage (BB). Outside containers: Metal or wooden barrels, packed with sufficient sawdust or similar material to absorb any liquid present in the scrap.

146.27-100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Bleaching Powder, dry, containing less than 8.80% available oxygen (39% available chlorine). Chlorinated lime (*chloride of lime*). (For calcium hypochlorite compounds, dry, containing more than 8.80% available oxygen (39% available chlorine) refer to "Calcium hypochlorite compounds, dry" in § 146.22-100.)	*Decomposed by moisture or may decompose spontaneously causing evolution of heat and gases and rupture of the container. Gives off corrosive, pungent vapors (chlorine), keep dry. May destroy textiles.* Do not stow in the same compartment with corrosive liquids (white label), nor with turpentine. Stow well away from foodstuffs, living quarters, and all sources of artificial heat. *Increased temperature may cause pressure within the containers.* Outside containers shall be marked either "Bleaching powder," "Chlorinated lime" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck away from heat." Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC. Fiberboard boxes, WIC.	Stowage: "On deck under cover." "Tween decks." "Under deck away from heat." Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC. Fiberboard boxes, WIC.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC. Fiberboard boxes, WIC.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Tight wooden barrelor kegs. Wooden boxes, WIC. Fiberboard boxes, WIC.
Bone, chipped (*heat treated*). The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that the material was thoroughly cooled before shipment.	Shall not be accepted for transportation while hot. Outside containers shall be marked either "Bone, chipped" or "Hazardous article."	No label required	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Bulk.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes.	Ferry stowage AA). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Bulk in highway vehicles.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Bulk in highway or railroad vehicles.
Bottles, *acid or other corrosive liquid*. Empty. Bottles of any capacity previously used for acids or other corrosive liquids (white label). The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that the bottles have been thoroughly (completely) drained.	*The hazard connected with the shipment of empty bottles that previously contained any corrosive liquid lies in the possible presence of residue contents in the bottle.* No marking required.	No label required.	Stowage: No restrictions Outside containers: Wooden barrels or kegs. Fiberboard boxes.	Stowage: No restrictions. Outside containers: Wooden barrels or kegs. Fiberboard boxes.	Ferry stowage (AA)..... Outside containers: Wooden barrels or kegs. Fiberboard boxes.	Ferry stowage (BB). Outside containers: Wooden barrels or kegs. Fiberboard boxes.

Box toe board (*nitrocellulose base*).	*Box toe board usually consists of felt or fabric impregnated with a nitrocellulose composition forming a highly inflammable solid.* *Outside sources of heat may cause decomposition to occur at relatively low temperatures. If inhaled, these products of decomposition are irritating and poisonous even in small concentrations.* Provide cool stowage in a compartment having a temperature of not exceeding 130° F. and well away from any sources of heat and in position to protect or move, even to jettisoning, in event of fire. Do not stow in same compartment with explosives, inflammable liquids (red label), inflammable solids or oxidizing materials (yellow label) or corrosive liquids (white label). Outside containers shall be marked either "Box toe board" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes, not over 350 lbs. gr. wt. Fiber tubes, not over 25 lbs. gr. wt. Fiber drums, not over 200 lbs. gr. wt. Fiberboard boxes, not over 90 lbs. gr. wt. Drumpak fiberboard boxes, not over 250 lbs. gr. wt.	Stowage: "On deck under cover." "Cargo hatch trunkway." "Tween decks readily accessible." Outside containers: Wooden boxes, not over 350 lbs. gr. wt. Fiber tubes, not over 25 lbs. gr. wt. Fiber drums, not over 200 lbs. gr. wt. Fiberboard boxes, not over 90 lbs. gr. wt. Drumpak fiberboard boxes, not over 250 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Wooden boxes, not over 350 lbs. gr. wt. Fiber tubes, not over 25 lbs. gr. wt. Fiber drums, not over 200 lbs. gr. wt. Fiberboard boxes, not over 90 lbs. gr. wt. Drumpak fiberboard boxes, not over 250 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Wooden boxes, not over 350 lbs. gr. wt. Fiber tubes, not over 25 lbs. gr. wt. Fiber drums, not over 200 lbs. gr. wt. Fiberboard boxes, not over 90 lbs. gr. wt. Drumpak fiberboard boxes, not over 250 lbs. gr. wt.
Burlap cloth. (*Hessian.*) Burlap bags, new. Burlap bags, used and washed. The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that the bags have been thoroughly washed and the residue of the previous lading removed therefrom.	*Coarse cloth, bagging or bags woven from the fibers of jute, hemp, flax, manila, sisal or similar organic fibers.* Great care must be exercised to prevent sparks or flame coming in contact with this material. Stow well away from vegetable and animal oils. Keep reasonably dry. No marking required.	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck." Outside containers: Bales.	Stowage: "On deck under cover." "Tween decks." "Cargo hatch trunkway." "Under deck." Outside containers: Bales.	Ferry stowage (AA). Outside containers: Bales.	Ferry stowage (BB). Outside containers: Bales.
	Bales shall be compressed reasonably tight and bound with wire, metal hoops, rope, rattan or withes. Unbaled consignments shall not be accepted for transportation unless packed in outside containers such as: Wooden barrels or boxes, bundles. Burlap bags in bundles shall be bound reasonably tight with rope, wire or other securing means.					
Burlap bags, used and unwashed. Note: See also "Bags, nitrate of soda, empty and unwashed" in the inflammable solids table.	Burlap bags which formerly contained any organic or mineral matter and which are offered for transportation without washing or otherwise cleaning all traces of the former lading. Stow away from all sources of artificial heat. Observe at regular intervals for signs of spontaneous heating. No marking required.	No label required.	Stowage: "On deck under cover." Outside containers: Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rope, rattan or withes.	Not permitted.	Ferry stowage (AA). Outside containers: Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rope, rattan or withes.	Ferry stowage (BB). Outside containers: Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rope, rattan or withes.

146.27-100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Calcium carbide	*A grayish-black irregular lump substance. Will absorb moisture from air and in the presence of moisture or water will generate acetylene gas, which forms dangerous mixtures in air.* Keep dry. Examine containers carefully and refuse defective ones. Do not stow with explosives, inflammable liquids (red label), inflammable compressed gases (red label), oxidizing materials (yellow label) or corrosive liquids (white label. Outside containers shall be marked either "Calcium carbide" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums, hermetically sealed, not over 425 lbs. gr. wt., with or without slatted crates. Wooden barrels, WIMC, not over 250 lbs. gr. wt. Wooden boxes, WIMC, not over 100 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums, hermetically sealed, not over 425 lbs. gr. wt., with or without slatted crates. Wooden barrels, WIMC, not over 250 lbs. gr. wt. Wooden boxes, WIMC, not over 100 lbs. gr. wt.	Ferry stowage (AA) Outside containers: Steel barrels or drums, hermetically sealed, not over 425 lbs. gr. wt., with or without slatted crates. Wooden barrels, WIMC, not over 250 lbs. gr. wt. Wooden boxes, WIMC, not over 100 lbs. gr. wt.	Ferry stowage (BB) Outside containers: Steel barrels or drums, hermetically sealed, not over 425 lbs. gr. wt. Wooden barrels, WIMC, not over 250 lbs. gr. wt. Wooden boxes, WIMC, not over 100 lbs. gr. wt.
Calcium cyanamide, not hydrated. (*Lime-Nitrogen.*)	*A grayish-black powder made by the treatment of calcium carbide by nitrogen in an electric furnace. In contact with moisture will give off acetylene and ammonia.* Keep dry. Do not stow with explosives, inflammable liquids (red label), inflammable compressed gases (red label), or corrosive liquids (white label). Do not overstow. Outside containers shall be marked either "Calcium cyanamide, not hydrated" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck" Outside containers: Tight steel barrels or drums. Tight wooden barrels or kegs.	Not permitted	Not permitted	Not permitted.
Calcium hypochlorite			See "Bleaching powder."			

Camephne..... NOTE: See also "Naphthalene."	*Colorless crystals having a strong camphor-like odor. Gives off heavy, dense smoke when burned and will add materially to a fire.* *Insoluble in water.* *Melting point about 122° F.* *Will evolve inflammable vapors at or below its melting point.* Stow away from foodstuffs, living quarters and explosives. Outside containers shall be be marked either "Camphene" or "Hazardous article."	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck"(in a cool, dry, well ventilated hold). Outside containers: Wooden barrels or kegs. Wooden boxes.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden barrels or kegs. Wooden boxes.	Ferry stowage (AA). Outside containers: Wooden barrels or kegs. Wooden boxes	Ferry stowage (BB). Outside containers: Wooden barrels or kegs. Wooden boxes.
Camphor (*Crude, refined or synthetic*).	*Crude camphor is in the form of a yellowish or brownish gum. Refined camphor is usually in the form of a white translucent gum. Synthetic camphor is a manufactured product of pine oil.* *Readily combustible.* *Strong penetrating odor.* Keep cool and dry. *Melting point 347° F.* Stow away from living quarters, foodstuffs and in a well ventilated compartment. Outside containers shall be marked either "Camphor" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck away from heat." Outside containers: Wooden barrels or kegs. Wooden boxes.	Stowage: "On deck under cover." "Tween decks." "Under deck away from heat." Outside containers: Wooden barrels or kegs. Wooden boxes.	Ferry stowage (AA). Outside containers: Wooden barrels or kegs. Wooden boxes.	Ferry stowage (BB). Outside containers: Wooden barrels or kegs. Wooden boxes.
Carboys, empty..... Carboys previously used for an inflammable or corrosive liquid. The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that the carboys have been thoroughly (completely) drained.	*The hazard connected with the shipment of empty carboys that previously contained an inflammable or corrosive liquid lies in the possible presence of residue contents in the carboy.* No marking required.	No label required.	Stowage: No restrictions. Outside containers: Wooden boxes. Wooden barrels or kegs.	Stowage: No restrictions. Outside containers: Wooden boxes. Wooden barrels or kegs.	Ferry stowage (AA). Outside containers: Wooden boxes. Wooden barrels or kegs.	Ferry stowage (BB). Outside containers: Wooden boxes. Wooden barrels or kegs.

146.27–100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Caustic potash, solid Caustic soda, solid. Potassium hydroxide. Sodium hydroxide. *Lye.*	*A solid in the form of white flakes, powder or lumps.* Keep dry. *In contact with moisture gives off corrosive pungent vapors and evolves heat.* *Caustic to the skin.* *May destroy organic materials.* Do not stow with explosives, corrosive liquids (white label) or with metals or alloys such as brass, copper, tin, zinc, aluminum, solder or lead. Outside containers should be marked either "Caustic potash, solid" or "Caustic soda, solid" or "Potassium hydroxide" or "Sodium hydroxide" or "Hazardous article".	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums, not over 750 lbs. net wt. Wooden barrels or kegs, not over 300 lbs. net wt. Wooden boxes, WIC, not over 200 lbs. net wt. Fiberboard boxes, WIC, not over 90 lbs. gr. wt.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums, not over 750 lbs. net wt. Wooden barrels or kegs, not over 300 lbs. net wt. Wooden boxes, WIC, not over 200 lbs. net wt. Fiberboard boxes, WIC, not over 90 lbs. gr. wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums, not over 750 lbs. net wt. Wooden barrels or kegs, not over 300 lbs. net wt. Wooden boxes, WIC, not over 200 lbs. net wt. Fiberboard boxes, WIC, not over 90 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums, not over 750 lbs. net wt. Wooden barrels or kegs, not over 300 lbs. net wt. Wooden boxes, WIC, not over 200 lbs. net wt. Fiberboard boxes, WIC, not over 90 lbs. gr. wt.
Chloride of lime			See: "Bleaching powder."			
Coal briquets, hot Coke, hot.			Not permitted	Not permitted	Not permitted	Not permitted.
Containers, empty			See: "Bottles, empty," "Carboys, empty," "Cylinders, empty," "Drums, empty."			

Copra	*The dried kernel of the cocoanut. The hazard in this cargo consists of its susceptibility to fire from sparks or open flame.* *Possesses a penetrating, rank odor. A heavy concentration of copra fumes in a confined area is dangerous to life.* Reject copra when wet or when packed in wet or damp bags. No marking required.	No label required	Stowage: "On deck under cover." "Under deck." "Tween decks." Outside containers: Burlap bags. Bulk. Bulk in railroad freight cars.	Stowage: "On deck under cover." "Under deck." "Tween decks." Outside containers: Burlap bags. Bulk.	Ferry stowage (AA). Outside containers: Burlap bags. Bulk in highway vehicles.	Ferry stowage (B Outside containers: Burlap bags. Bulk in railroad freight cars.
Cork, granulated Cork, ground.	*Packing, cushioning, and insulating material made from cork.* Protect from sparks or open flame. Stow separate from vegetable and animal oils, paints, and similar substances. Stow away from all sources of artificial heat. Reject wet or insecurely packed consignments. Barrels, kegs and boxes shall be marked either "Cork, granulated" or "Cork, ground" or "Hazardous article."	No label required	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Bales, securely wrapped and strapped. Tight railroad freight cars.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Bales, securely wrapped and strapped.	Ferry stowage (AA). Outside containers: Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Bales, securely wrapped and strapped.	Ferry stowage (BB). Outside containers: Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Bales, securely wrapped and strapped. Tight railroad freight cars.

146.27-100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Cotton Note: Unginned sea-island cotton contained in jute bags and compressed, may be transported under the same regulations as for "Cotton." For "Burnt cotton" and "Cotton, wet" see the Inflammable solids table.	*The fiber of the cotton plant.* *Readily combustible.* No marking required.	No label required.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Bales.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Bales.	Ferry stowage (AA). Outside containers: Bales.	Ferry stowage (BB). Outside containers Bales.

In the loading and transporting of Cotton, the following conditions shall be complied with:

(A) The hold fire detection (where fitted) and the fire extinguishing systems shall be checked to assure they are in good working condition.

(B) In ports where local regulations require, spark arresters shall be fitted to funnels.

(C) The vessel, the dock, and lighters alongside shall be checked and any source of spark or any naked lights shall be eliminated. Fires likely to produce sparks and which can not be eliminated may be permitted under such conditons as in the judgment of the master or officer in charge of the vessel will serve to protect against fire to the cotton.

(D) Fire hose shall be connected. Fire pumps put in operation ready for instant use. Portable fire extinguishers shall be so placed as to be readily available. Such fire hose, fire pumps and fire extinguishers may be the vessel's equipment or shore equipment.

(E) "No Smoking" signs conspicuously displayed and the officer in charge of loading shall se they are observed.

(F) The hold shall be clear of all debris and swept broom clean.

(G) Conditions of acceptance and stowage:

All cotton shall be securely baled and bound and covered with bagging on at least three-fourths of its surface, including both ends of the bale. Poorly compressed bales shall not be accepted. Bales having damaged bindings shall not be accepted. Loose cotton shall not be accepted for transporation on board any vessel.

Bales that are actually wet shall not be accepted.

"Burnt cotton" shall only be accepted for transportation under regulations as set forth in the inflammable solids table.

Bales showing contact with oil or grease shall not be accepted.

Cotton shall not be stowed in a hold lately used for oil cargo unless such hold has been steamed or otherwise cleaned so as to completely remove all traces of oil residue. Particular care shall be exercised if the recent cargo contained any vegetable or animal oils. Holds which have been recently painted shall not be utilized for cotton stowage unless thoroughly dry.

Upon completion of stowage, hatch openings shall be completely closed, tarpaulins where required shall be fitted and secured in place to provide a tight hold. Missing hatch cover sections shall not be permitted.

Ventilator cowls feeding into holds containing cotton, shall have spark screens fitted to prevent ingress of sparks.

Cotton may be stowed in a hold having a division bulkhead which also forms a boundary of a boiler room, engine room, coal bunker or galley provided that the cotton stowed in such hold is adequately dunnaged off the bulkhead. For a boiler room bulkhead such dunnaging shall provide at least a 6" space between the bulkhead and the cotton. For an engine room bulkhead such dunnaging shall provide at least a 2" space between the bulkhead and the cotton. This provision shall be observed when cotton is stowed under such conditions on board cargo vessels or passanger vessels.

Tween deck hatches in holds in which cotton is stowed shall be closed off with hatch covers and tarpaulins. "Flush" type tween deck hatches shall when closed be covered with asbestos board of at least ¼ inch thickness and of such width as will provide staggered butts thus assuring full coverage for all joints occuring in the hatch covers.

(H) The following regulations shall govern the stowage of cotton with other dangerous articles as defined herein, when stowed and transprted on board cargo vessels:

Explosives: The engine and boiler spaces or one complete hold in a horizontal plane shall intervene.

Inflammable liquids, inflammable compressed gases, inflammable solids or oxidizing materials: These substances shall not be stowed in the same hold with cotton. When possible the stowage of inflammable liquids, inflammable compressed gases, inflammable solids, or oxidizing materials should be arranged to provide a separation of at least one hold space between these substances and the cotton. When it is impossible to provide such a separation these substances may be stowed in holds adjacent to the cotton, provided that the holds are separated by a tight steel bulkhead or deck and provided further that the inflammable liquids, inflammable compressed gases, inflammable solids or oxidizing materials are packed in metal containers.

Corrosive liquids: Corrosive liquids shall not be stowed in a hold over one in which cotton is stowed unless the Tween Deck is of steel and the hatch is fitted with a tight coaming and the deck itself is tight against leakage.

Poisonous articles: Extremely dangerous poison—Class A, or Tear gases or irritating substances—Class C, shall not be stowed in the same hold with cotton.

Cotton with sulfur in bulk: (a) Cotton may be stowed in the same hold over sulfur provided the sulfur has been trimmed and leveled and the hold thoroughly cleaned of sulfur dust. A tight floor of two 1" crossed clean dunnage boards shall be laid on the sulfur before cotton is stowed.

(b) These substances may be stowed alongside each other in the same hold provided they are separated by a tight wood bulkhead constructed dustproof.

(c) When bulk sulfur is loaded in a lower hold, cotton shall not be stowed in a Tween Deck hold until such hold has been thoroughly cleaned of all sulfur dust and the Tween deck hatches are in place, and covered with either a tarpaulin or asbestos board.

Cotton with rosin or pitch: When practicable these commodities should be stowed in separate holds. When such stowage is not possible cotton may be stowed in the same hold with these substances provided the substances and the cotton are separated by clean dunnage or other cargo of a non-combustible nature. When such stowage within the same hold involves considerable amounts of these substances the rosin or pitch shall after stowage be floored off with at least two layers of 1" dunnaging and the cotton stowed above.

Cotton with vegetable oils, animal oils, turpentine or rosin oil: Cotton shall not be stowed in the same hold in which fish oils, whale oil, vegetable oils, animal oils, turpentine or rosin oil are stowed. Cotton shall not be stowed in a hold below one in which these substances are stowed, unless the tween deck hatch is fitted with a tight coaming and the deck is of steel and tight against leakage.

Cotton with coal: Cotton and coal shall not be stowed in the same hold. Cotton may be stowed in a hold adjacent to one in which coal is stowed provided that the holds are separated by a tight steel bulkhead or deck and the cotton is dunnaged 2" off such division bulkhead. Cotton may be stowed in a compartment over or under one in which coal is stowed provided the tween deck is of steel and hatches are closed off with hatch covers and tarpaulins or asbestos board.

Cotton with synthetic nitrate of soda: These substances may be transported when stowed in adjacent holds, provided the holds are separated by a tight steel bulkhead or deck and the hatch covers are in place and covered with a tarpaulin or asbestos board.

(J) The following regulations shall govern the stowage of cotton with other dangerous articles as defined herein when stowed and transported on board passenger vessels:

Explosives: The engine and boiler spaces or one complete hold in a horizontal plane shall intervene.

Inflammable liquids, inflammable compressed gases, inflammable solids or oxidizing materials: These substances shall not be stowed in the same hold with cotton. The stowage of these substances and the cotton shall be so arranged as to provide a separation of at least one hold space.

Corrosive liquids: Corrosive liquids shall not be stowed in a hold over one in which cotton is stowed, unless the tween deck is of steel and the hatch is fitted with a tight coaming and the deck itself is tight against leakage.

Poisonous articles: Extremely dangerous poison—Class A, or Tear gases or irritating substances—Class C, shall not be stowed in the same hold with cotton.

Cotton with sulfur in bulk: (a) Cotton shall not be stowed in the same hold with sulfur in bulk.

(b) When bulk sulfur is loaded in a lower hold cotton shall not be stowed in a Tween deck hold until such hold has been thoroughly cleaned of all sulfur dust and the tween deck hatches are in place, and covered with either a tarpaulin or asbestos board.

Cotton with rosin or pitch: When practicable these commodities should be stowed in separate holds. When such stowage is not possible cotton may be stowed in the same hold with these substances provided the substances and the cotton are separated by clean dunnage or other cargo of a non-combustible nature. When such stowage within the same hold involves considerable amounts of these substances the rosin or pitch shall after stowage be floored off with at least two layers of one inch dunnaging and the cotton stowed above.

Cotton with vegetable oils, animal oils, turpentine or rosin oil: Cotton shall not be stowed in the same hold in which fish oils, whale oil, vegetable oils, animal oils, turpentine or rosin oil are stowed. Cotton shall not be stowed in a hold below one in which these substances are stowed unless the tween deck hatch is fitted with a tight coaming and the deck is of steel and tight against leakage.

Cotton with coal: Cotton and coal shall not be stowed in the same hold. Cotton shall not be stowed in a hold adjacent to one in which coal (as cargo) is stowed.

146.27-100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Cotton batting Cotton batting dross. Cotton wadding. Cotton seed hull fiber or shavings, pulp or cut linters.	*A product of cotton used principally for upholstery. Very susceptible to fire from sparks and also subject to spontaneous heating and possible ignition when wet or in contact with animal or vegetable oil or grease.* Barrels or boxes shall be marked with the shipping name of the product as given herein or "Hazardous Article."	No label required.	Stowage: "Tween decks." "Under deck." Outside containers: Bales—which shall be covered with bagging on at least three-fourths of their surface including both ends of the table. Wooden barrels or boxes. Burlap bags compressed reasonably tight. NOTE: Shall not be accepted for transportation unless securely baled or in tight containers. Reject wet or oil-stained bales. Observe same conditions of stowage with other dangerous articles as required for "Cotton."	Stowage: "Tween decks." "Under deck." Outside containers: Bales—which shall be covered with bagging on at least three-fourths of their surface including both ends of the bale. Wooden barrels or boxes. Burlap bags compressed reasonably tight. NOTE: Shall not be accepted for transportation unless securely baled or in tight containers. Reject wet or oil-stained bales. Observe same conditions of stowage with other dangerous articles as required for "Cotton."	Ferry stowage (AA). Outside containers: Bales—which shall be covered with bagging on at least three-fourths of their surface including both ends of the bale. Wooden barrels or boxes. Burlap bags compressed reasonably tight. NOTE: Shall not be accepted for transportation unless securely baled or in tight containers. Reject wet or oil-stained bales. Observe same conditions of stowage with other dangerous articles as required for "Cotton."	Ferry stowage (BB). Outside containers: Bales—which shall be covered with bagging on at least three-fourths of their surface including both ends of the bale. Wooden barrels or boxes. Burlap bags compressed reasonably tight. NOTE: Shall not be accepted for transportation unless securely baled or in tight containers. Reject wet or oil-stained bales. Reserve same conditions of stowage with other dangerous articles as required for "Cotton."
Cotton waste Cotton sweepings. Felt waste. Textile waste. Wool waste. The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that the waste or sweepings are dry, clean and do not contain more than 5% of animal or vegetable oils.	*Generally refers to the short fiber material of cotton, wool or other textiles.* No marking required.	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Bales—which shall be covered with bagging on at least ¾ of their surface including both ends of the bale. Burlap bags compressed reasonably tight. NOTE: Observe same conditions of stowage with other dangerous articles as required for "Cotton."	Stowage: "On deck under cover." "Tween decks readily accessible." "Cargo hatch trunkway." Outside containers: Bales—which shall be covered with bagging on at least ¾ of their surface including both ends of the bale. Burlap bags compressed reasonably tight. NOTE: Observe same conditions of stowage with other dangerous articles as required for "Cotton."	Ferry stowage (AA). Outside containers: Bales—which shall be covered with bagging on at least ¾ of their surface including both ends of the bale. Burlap bags compressed reasonably tight.	Ferry stowage (BB). Outside containers: Bales—which shall be covered with bagging on at least ¾ of their surface including both ends of the bale. Burlap bags compressed reasonably tight.

Cylinders, empty (including ton tanks). Cylinders previously used for a compressed gas, inflammable or corrosive liquid or poison. The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that the contents of the cylinders have been emptied within the meaning implied by trade practices.	*It is likely that all "empty" cylinders will contain a residue of the former lading. With valves tightly closed and proteced this condition presents no considerable hazard due to lack of pressure.* No marking required.	No label required..	May be accepted without restriction on any character of vessel, provided: (1) The cylinders shall have their valves seated tightly and when fitted with valve protection caps such caps shall be in place. (2) Empty cylinders have unprotected valves shall not be accepted for transportation unless boxed.—Dished head cylinders having valves below the chime are considered protected valves.			
Drums, empty. Drums or barrels previously used for any dangerous article as defined within these regulations. NOTE: Also see "*Aniline oil* drums, empty".	*The hazard connected with the shipment of empty drums or barrels that previously contained any dangerous article lies in the possible presence of residue contents in the drum or barrel.* No marking required.	No label required..	May be accepted without restriction on any character of vessel, provided: (1) The drums or barrels are completely drained. (2) Bungs shall be securely in place. (3) Open head type barrels or drums shall have the head securely in place.			
Excelsior (*shredded wood*) when dry, clean and free from oil.	*Packing and cushioning material made from wood or cellulose.* Protect from sparks or open flame. Reject wet or insecurely packed consignments. Do not stow in proximity to vegetable or animal oils, paints, corrosive liquids (white label) or oxidizing materials (yellow label). No marking required.	No label required..	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Bales—compressed reasonably tight and bound with wire or metal hoops.	Stowage: "On deck under cover.' "Tween decks." "Under deck." Outside containers: Bales—compressed reasonably tight and bound with wire or metal hoops.	Ferry stowage (AA). Outside containers: Bales—compressed reasonably tight and bound with wire or metal hops.	Ferry stowage (BB). Outside containers Bales—compressed reasonably tight and bound with wire or metal hoops.

146.27-100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Feed, wet, mixed	*Prepared animal feeds which usually consist of mixtures of molasses with ground alfalfa hay. Some may contain grains such as cracked corn and oats, others contain finely divided products such as cottonseed meal, linseed meal, middlings, bran, etc.* *Moisture if permitted to contact this material may cause spontaneous heating and possible ignition.* Stow in cool, dry and well ventilated compartment. Do not stow bags over ten tiers high without flooring off. Do not overstow. Outside containers shall be marked either "Feed, wet, mixed" or "Hazardous article."	No label required	Stowage: "Tween decks readily accessible." "Under deck away from heat." Outside containers: Burlap (jute) bags. Railroad freight cars.	Stowage: "Tween decks readily accessible." Outside containers: Burlap (jute) bags.	Ferry stowage (AA). Outside containers: Burlap (jute) bags.	Ferry stowage (BB). Outside containers: Burlap (jute) bags. Railroad freight cars.
Ferrophosphorus	*Alloys of iron and phosphorus.* *May evolve poisonous gas in contact with moisture.* Stow well away from living quarters. Keep dry. Outside containers shall be marked either "Ferrophosphorus" or "Hazardous article".	No label required	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC. Tight railroad freight cars. Bulk.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC. Tight railroad freight cars. Bulk.
Ferrophosphorus briquets	*A mixture of ferrophosphorus with water and a binder such as cement and molded into briquets. This premixing with water eliminates possibility of harmful amounts of gases being liberated should briquets subsequently come in contact with water or moisture.*	No label required	No restrictions	No restrictions	No restrictions	No restrictions.

Ferrosilicon Ferrosilicon that has been made in a furnace previously used for making calcium carbide or ferrophosphorus shall not be offered or accepted for transportation unless the furnace has been entirely relined previous to the manufacture of the ferrosilicon.	*Alloys of iron and silicon. May evolve poisonous gas in contact with moisture.*		Ferrosilicon of such silicon content as is permitted for transportation on board vessels as set forth in these regulations shall be stowed in a dry compartment having ventilating means so located that any escaping gases can not reach the quarters of the crew or passengers. Such stowage shall furnish complete protection from bilge water, deck drainage, spray or other moisture. Stow well away from strong or moderately strong alkaline substances such as caustic lye, caustic potash, and soda ash.			
Ferrosilicon, *containing between 48% and 65% silicon.* The originating bill of lading or other shipping paper shall bear the shipper's certifying statement as to silicon content.	Outside containers shall be marked either "Ferrosilicon" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt. Tight box cars.	Not permitted	Ferry stowage (AA). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt. Tight box cars.
Ferrosilicon *containing between 45% and 48% or containing between 65% and 70% silicon.* The originating bill of lading or other shipping paper shall bear the shipper's certifying statement as to silicon content and when offered for transportation on board passenger vessels shall also certify as complying with the special conditions for ferrosilicon of this content.	Outside containers shall be marked either "Ferrosilicon" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt. Tight box cars.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt. Note: Transportation of ferrosilicon of this content on board passenger vessels shall be in accordance with the provisions as indicated by the asterisk (*) below:	Ferry stowage (AA). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt. Tight box cars.

(A) When a certificate of analysis as to silicon content, satisfactory to the carrier is supplied and the shipper satisfies the carrier that the material has been stored in the size in which it is packed and shipped for a period of at least one month.

(B) Lump ferrosilicon shall have been stored in piles not higher than 3 feet. It need not be turned over during storage.

(C) Crushed ferrosilicon (material crushed to pass a 2 inch or finer meshed screen) shall be stored in piles not higher than 18 inches and the piles shall have been turned over so as to bring the material at the bottom of the pile into free contact with the air at least once during the period of storage. At least a week shall have elapsed between a turning over of the pile and its packing for shipment.

(D) This ferrosilicon shall not be coated with oil, paraffin or other foreign substance.

(E) If after one month's storage any odor of phosphine is noted or if the lumps of ferrosilicon can be crumbled in the hand, carrier shall refuse shipment of such portions of the pile as are affected if they can readily be separated from unaffected portions or, in his discretion, may refuse shipment of the whole pile.

146.27–100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ferrosilicon, *containing less than 45% or more than 70% silicon.* May be accepted for transportation as ordinary cargo provided the originating bill of lading or other shipping paper bears the shipper's certifying statement as to silicon content.	Outside containers shall be marked either "Ferrosilicon" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt. Burlap bags, not over 300 lbs. net wt. Tight box cars. Bulk.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt. Burlap bags, not over 300 lbs. net wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt. Burlap bags, not over 300 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes, not over 500 lbs. gr. wt. Burlap bags, not over 300 lbs. net wt. Tight box cars.
Ferrosilicon briquets	*A mixture of ferrosilicon with water and a binder such as cement molded into briquets. This premixing with water eliminates possibility of harmful amounts of gases being liberated should briquets subsequently come in contact with water or moisture.*	No label required.	No restrictions	No restrictions	No restrictions	No restrictions.
Fibers (*jute, hemp, flax, sisal, coir, kapok, and similar vegetable fibers*).	*Fibers of vegetable origin, other than cotton, offered in commercial transportation.* Great care must be exercised to prevent sparks from coming in contact with this material. Keep dry and cool. Stow well away from vegetable or animal oils and all sources of artificial heat. No marking required.	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck away from heat." Outside containers: Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rope, rattan or withes. Unbaled consignments shall not be accepted.	Stowage: "On deck under cover." "Tween decks." "Under deck away from heat." "Cargo hatch trunkway." Outside containers: Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rope, rattan or withes. Unbaled consignments shall not be accepted.	Ferry stowage (AA). Outside containers: Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rope, rattan or withes. Unbaled consignments shall not be accepted.	Ferry stowage (BB). Outside containers: Bales. Bales shall be compressed reasonably tight and boun dwith wire, metal hoops, rope, rattan or withes. Unbaled consignments shall not be accepted.

Fish oils	*Various oils as rendered from fish. Usually possess high flashpoints.* *The hazard consists in these oils escaping from their containers and coming in contact with sawdust, vegetable fibers or other organic material. Under such conditions they will likely cause spontaneous heating with possible ignition.* Reject leaking containers. Do not stow over organic material or finely divided metallic powders. Outside containers shall be marked either "Fish oils" or "Hazardous article."	No label required.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck away from heat." Outside containers: Tight steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC. Tank cars.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck away from heat." Outside containers: Tight steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC.	Ferry stowage (AA). Outside containers: Tight steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC.	Ferry stowage (BB). Outside containers: Tight steel barrels or drums. Tight wooden barrels or kegs. Wooden boxes, WIC. Tank cars.
Fish scrap, or fish meal (*Containing at least 6% and not more than 12 percent moisture*). The original bill of lading or other shipping papers shall bear the shipper's certifying statement as to the moisture content of the shipment and also state the temperature of the material when shipment originated which temperature shall be less than 120° F.	*Fish scrap or fish meal consists of ground and dried fish residue. Is subject to spontaneous heating and ignition* *Offensive odor. Will contaminate foodstuffs.* Check temperature of material before loading on board vessel. Reject if temperature exceeds 120° F. Observe temperatures during voyage for signs of heating. Outside containers shall be marked "Fish scrap" or "Fish meal" or "Hazardous article."	No label required.	Stowage* "On deck under cover." "Tween decks readily accessible." "Under deck." Outside containers: Burlap (jute) bags. Double-walled paper bags. Railroad freight cars.	Stowage:* "On deck under cover." "Tween decks readily accessible." Outside containers: Burlap (jute) bags. Double-walled paper bags.	Ferry stowage (AA). Outside containers: Burlap (jute) bags. Double-walled paper bags.	Ferry stowage (BB). Outside containers: Burlap (jute) bags. Double-walled paper bags. Railroad freight cars.
			(A) In stowing fish meal in deep holds dunnage should be plentifully laid to prevent contact with tank top or frames, thus avoiding moisture contacting the meal, and also between every third tier up, the dunnaging to be placed to provide free ventilation. No fillers allowed between overhead beams. The entire stowage to be so arranged as to permit free ventilation. (B) Stowage in the Tween Deck shall be accomplished in the same manner to provide for circulation of air to and from ventilators. (C) Do not overstow this cargo. (D) Fish meal or scrap shall not be stowed nearer than 4 feet to any bulkhead subject to artificial heat. (E) Protect shipments from bilge water, deck drainage or spray.			
Fish scrap, wet acidulated. Having a moisture content of more than 40%. The originating bill of lading or other shipping paper shall bear the shipper's certifying statement as to the moisture content of the shipment.	No marking required.	No label required.	No restrictions	No restrictions	No restrictions	No restrictions.

146.27–100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Garbage tankage(*containing 8% or more of moisture.*			See: "*Tankages.*"			
Hay Straw. (When pressed into bales and well bound and secured).	Is readily ignited by external sparks. Protect from open flame and fire. Keep dry. Enforce "No smoking" regulations. Reject bales with broken bindings. Stow away from oils and all oxidizing (yellow label) materials. Do not stow in same hold with corrosive (white label) or inflammable (red label) liquids. When stowing quantities in one hold provide vent flues through the stowage to give free circulation of air. No marking required.	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Bales.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck." Outside containers: Bales.	Ferry stowage (AA). Outside containers: Bales.	Ferry stowage (BB). Outside containers: Bales.
Hay Straw. (*Loose, wet or damp.*)			Not permitted	Not permitted	Not permitted	Not permitted.
Hemp			See: "Fibers."			
Insulation tape (*varnished cloth type*).			See: "Oiled textiles."			
Iron sponge (*iron oxide*)	*Iron oxide in the form of dense, dark red, powder or lumps used to remove sulfur from coal gas.* Stow separate from inflammable liquids (red label), inflammable solids and oxidizing materials (yellow label). No marking required.	No label required.	Stowage: "On deck in open." "On deck under cover." "Tween deck sreadily accessible." Outside containers: Steel barrels or drums, not over 1760 lbs. gr. wt.	Not permitted	Ferry stowage (AA) Outside containers: Steel barrels or drums, not over 1760 lbs. gr. wt.	Ferry stowage (BB). Outside containers: Steel, barrels or drums, not over 1760 lbs. gr. wt.

Iron sponge, spent	*The iron sponge or mass after saturation with sulfur when used in gas purification. This spent material is liable to spontaneous heating and ignition if stowed in deep piles.* No marking required.	No label required.	Iron sponge, spent, after exposure to air for a period of not less than ten days may be accepted for transportation by water in bulk in all steel barges having open holds.	Not permitted	Not permitted	Not permitted.
Jute			See: "Fibers."			
Lead dross Lead scrap.	*Consists of the scrap, dross, or waste from sulfuric acid tanks. Is a mixture of metallic lead, lead sulfate and free sulfuric acid.* Reject containers showing signs of leakage. Outside containers shall be marked either "Lead dross" or "Lead scrap" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under decks." Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Tight wooden boxes.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Tight wooden boxes.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Tight wooden barrels or kegs. Tight wooden boxes.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Tight wooden barrel or kegs. Tight wooden boxes.
Lead-type dross	*Consists of the scrap and dross from the molten lead used in making type.* This material, when cold, is entirely non-hazardous and is described here only to indicate the difference between lead dross (scrap) and lead type dross.	No label required.	No restrictions	No restrictions	No restrictions	No restrictions.

146.27-100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Lime, unslaked..... Quicklime.	*Unslaked Lime (Quicklime) is shipped in the form of white, hard lumps or pebbles or crushed or pulverized. It is obtained by burning limestone, dolomite or oyster shells.* *Unslacked lime combines with water to form calcium hydroxide or hydrated lime. This reaction develops heat, which in the absence of enough water and under confined conditions may be sufficient to cause ignition in contact with combustible substances.* *Unslaked lime absorbs moisture from the air when exposed.* Stow away from foodstuffs, organic materials, acids and explosives. Keep dry. Outside containers shall be marked either "Lime, Unslaked" or "Quicklime" or "Hazardous Article."	No label required .	Stowage:* "On deck under cover." "Tween decks readily accessible." "Under deck." Outside containers: Steel barrels or drums. Siftproof wooden barrels or kegs. Siftproof wooden boxes. Moistureproofed multiwall paper bags (MIN-W10) not over 100 lbs. net wt. Moistureproofed paper-lined burlap bags (MIN-W11) not over 100 lbs. net wt. Siftproof railroad freight cars.	Stowage:* "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums. Siftproof wooden barrels or kegs. Siftproof wooden boxes. Moistureproofed multiwall paper bags (MIN-W10) not over 100 lbs. net wt. Moistureproofed paper-lined burlap bags (MIN-W11) not over 100 lbs. net wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Siftproof wooden barrels or kegs. Siftproof wooden boxes. Moistureproofed multiwall paper bags (MIN-W10) not over 100 lbs. net wt. Moistureproofed paper-lined burlap bags (MIN-W11) not over 100 lbs. net wt. Vehicles with lime in nonspecification bags may be transported provided the loading shows no sign of sifting of the lime.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Siftproof wooden barrels or kegs. Siftproof wooden boxes. Moistureproofed multiwall paper bags (MIN-W10) not over 100 lbs. net wt. Moistureproofed paper-lined burlap bags (MIN-W11) not over 100 lbs. net wt. Siftproof railroad freight cars.

It is not required that the above barrels, drums, kegs or boxes be ICC or CFC specification containers, although these specification containers are acceptable, but the officer in charge of loading the vessel shall satisfy himself they are sufficient in all respects for the purpose intended. He shall refuse any containers showing damage, leakage or an inability to properly contain the substance.

*Stowage of unslaked lime: All Unslaked Lime shall be stowed in cool, dry, ventilated compartments in position to permit jettisoning in an emergency and in conformity with the following conditions:

(a) Stowages shall be completely protected from water or other liquids, including spray, rain, exhaust steam or drainage.

(b) Lime in moistureproofed multiwall paper bags or moistureproofed paper-lined burlap bags shall not be stowed resting on deck.

(c) Dry wood dunnaging shall be provided in way of decks, bulkheads, ship's side and frames to prevent drainage, sweat or other moisture contacting the bags. Dunnaging on deck shall be so laid as to provide drainage channels to scuppers, sumps or drain wells.

(d) Lime may be stowed on skips, skids or portable trucks.

(e) Lime in paper or burlap bags stowed without benefit of skips, skids or other trucks shall not be stowed more than ten tiers high and no stowage shall be solid between two bulkheads nor from shell to shell.

Manganese dioxide	*In the form of crystals, lumps or powder. General oxidizing agent.* *Insoluble in water.* Do not stow with corrosive liquids (white label). Outside containers shall be marked either "Manganese Dioxide" or "Hazardous Article."	No label required.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs, WIC. Wooden boxes, WIC. Fiberboard boxes, WIC.	Stowage: "On deck in open." "On deck under cover." "Tween decks readily accessible." Outside containers: Steel barrels or drums. Wooden barrels or kegs, WIC. Wooden boxes, WIC. Fiberboard boxes, WIC.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Wooden barrels or kegs, WIC. Wooden boxes, WIC. Fiberboard boxes, WIC.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Wooden barrels or kegs, WIC. Wooden boxes, WIC. Fiberboard boxes, WIC.
Napthalene Naphthalin. (Crude or refined.)	*White, crystalline, volatile flakes or powder with a strong coal tar odor. Readily ignited by sparks. Gives off heavy, dense smoke when burning and will add materially to a fire. Gives off strong penetrating odor similar to camphor.* *Melting point about 175° F. Will evolve inflammable vapors at or below its melting point.* *Insoluble in water.* *Shipped in the form of flakes, balls, crushed, blocks, grains, tablets.* Stow away from foodstuffs, living quarters and explosives. Outside containers shall be marked either "Naphthalene" or "Naphthalin" or "Hazardous article."	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck (in a cool, dry, well-ventilated hold)." Outside containers: Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. *Authorized for Naphthalene having a melting point not lower than 167° F.* Burlap (jute) bags, not over 224 lbs. net wt.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. *Authorized for Naphthalene having a melting point not lower than 167° F.* Burlap (jute) bags, not over 224 lbs. net wt.	Ferry stowage (AA). Outside containers: Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. *Authorized for Naphthalene having a melting point not lower than 167° F.* Burlap (jute) bags, not over 224 lbs. net wt., when transported within closed body vehicles.	Ferry stowage (BB). Outside containers: Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. *Authorized for Naphthalene having a melting point not lower than 167° F.* Burlap (jute) bags, not over 224 lbs. net wt., when transported within closed railroad freight cars.
Oakum Twisted jute packing (rope) (treated or untreated).	*Oakum is the fiber of hemp or mixtures of hemp with other fibers and impregnated with pine tar or pitch or other similar substances. Marine oakum is usually made from long, soft pure fiber twisted and is the least hazardous of the various grades of oakum. Plumber's oakum is a mixture of hemp, tow and other fibers.* *Principal risk of these fibers in an oiled condition is their ready ignition by sparks.* Do not stow against bulkheads subject to heat or on deck in open in the rays of the sun. Stow bales in a manner to provide circulation of air and thus reduce chances of heating. Boxes shall be marked either "Oakum" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." Outside containers: Wooden boxes. Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rattan, rope or withes. Unbaled or unboxed consignments shall not be accepted.	Stowage: "On deck under cover." "Tween decks." Outside containers: Wooden boxes. Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rattan, rope or withes. Unbaled or unboxed consignments shall not be accepted.	Ferry stowage (AA). Outside containers: Wooden boxes. Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rattan, rope or withes. Unbaled or unboxed consignments shall not be accepted.	Fery stowage (BB). Outside containers: Wooden boxes. Bales. Bales shall be compressed reasonably tight and bound with wire, metal hoops, rattan, rope or withes. Unbaled or unboxed consignments shall not be accepted.

146.27-100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Oiled clothing Oiled paper. Oiled textiles. Treated paper. Treated textiles. *(Manufactured articles properly dried to prevent spontaneous heating.)* NOTE: For regulations governing shipment of oiled or treated paper or textiles not manufactured into finished articles see: "Fibers or fabrics with animal or vegetable oil" in the Inflammable solids table.	*Paper or fabric materials which have been treated with preparations containing linseed or other oxidizing oil and then properly dried.* *May include painted, oiled, waterproofed or varnished cloth or canvas or paper, etc. manufactured into finished articles.* *If not completely and properly dried the material is liable to spontaneous heating and ignition.* Keep cool. Stow away from all sources of artificial heat. Stow as to permit checking in order to observe any spontaneous heating. Outside containers shall be marked either "Oiled clothing" or "Oiled paper" or "Oiled textiles" or "Treated paper" or "Treated textiles" or "Hazardous article."	No label required	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden boxes. Fiberboard boxes. Tight rolls—wrapped and sealed with heavy paper.	Stowage: "On deck protected." "On deck under cover." "Tween decks readily accessible." Outside containers: Wooden boxes. Fiberboard boxes. Tight rolls—wrapped and sealed with heavy paper.	Ferry stowage (AA). Outside containers: Wooden boxes. Fiberboard boxes. Tight rolls—wrapped and sealed with heavy paper.	Ferry stowage (BB). Outside containers: Wooden boxes. Fiberboard boxes. Tight rolls—wrapped and sealed with heavy paper.
Paper scrap Fiberboard scrap. Paper waste. *(When dry, clean and free from oil.)*	*Scrap paper of all descriptions.* *The hazard of this type of cargo lies in its susceptibility to fire from open flame or sparks.* Do not stow in any compartment with corrosive liquids (white label) or oxidizing materials (yellow label). No marking required.	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Tight bales. Unbaled consignments shall not be accepted.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Tight bales. Unbaled consignments shall not be accepted.	Ferry stowage (AA). Outside containers: Tight bales. Unbaled consignments shall not be accepted.	Ferry stowage (BB). Outside containers: Tight bales. Unbaled consignments shall not be accepted.

Photographic flash lamps (*capable, upon breakage, of igniting inflammable vapors or finely divided combustible substances*). These lamps shall not be shipped described as "Incandescent lamps." The originating bill of lading or other shipping paper shall describe the shipment as "Hazardous."	*A bulb similar in appearance and shape to an incandescent electric bulb, but containing a priming element, flash illuminating substance and gas, energized electrically for the purpose of producing a brilliant instantaneous light.* Do not stow in the same compartment with explosives, compressed gases, inflammable or combustible liquids or inflammable solids or oxidizing materials. Outside containers shall be marked either "Photographic flash lamps" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Fiberboard boxes (IC-C-12B) (CFC R 41). Not exceeding 100 lamps in any one outside container. Lamps shall be in individual carton sleeves, and when packed in tiers, each tier within the container shall be separated with a fiberboard partition.	Stowage: "On deck under cover." Outside containers: Fiberboard boxes (IC-C-12B) (CFC R 41). Not exceeding 100 lamps in any one outside container. Lamps shall be in individual carton sleeves, and when packed in tiers, each tier within the container shall be separated with a fiberboard partition.	Ferry stowage (AA). Outside containers: Fiberboard boxes (IC-C-12B) (CFC R 41). Not exceeding 100 lamps in any one outside container. Lamps shall be in individual carton sleeves, and when packed in tiers, each tier within the container shall be separated with a fiberboard partition.	Ferry stowage (BB). Outside containers: Fiberboard boxes (IC-C-12B) (CFC R 41). Not exceeding 100 lamps in any one outside container. Lamps shall be in individual carton sleeves, and when packed in tiers, each tier within the container shall be separated with a fiberboard partition.
Photographic flash lamps (*that will not, upon breakage, ignite inflammable vapors or finely divided combustible substances*).	No marking required	No label required.	No restrictions	No restrictions	No restrictions	No restrictions.
Potassium hydroxide			See: "Caustic potash, solid."			
Quicklime			See: "Lime, unslaked."			
Rags, scrap (*when dry, clean, and free from excess oil*). The originating bill of lading or other shipping paper shall bear the shipper's certifying statement that the rags are dried, clean, and do not contain more than 5% of animal or vegetable oils. Note: For regulations governing shipments of oily or wet rags see "Rags, oily," "Rags, wet" in the inflammable solids table.	*Scraps of textile fabrics.* Do not stow with vegetable or animal oils, turpentine, paints, or other oxidizing materials. *The hazard in this type of cargo lies in its susceptibility to fire from open flame or sparks.* No markings required.	No label required.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." Outside containers: Wooden barrels or kegs. Wooden boxes. Bags. Tight bales—bound with wire or metal bands. Shipments of loose scrap rags shall not be accepted.	Stowage: "On deck under cover." "Tween decks readily accessible." "Under deck away from heat." "Cargo hatch trunkway." Outside containers: Wooden barrels or kegs. Wooden boxes. Bags. Tight bales—bound with wire or metal bands. Shipments of loose scrap rags shall not be accepted.	Ferry stowage (AA). Outside containers: Wooden barrels or kegs. Wooden boxes. Bags. Tight bales—bound with wire or metal bands. Shipments of loose scrap rags shall not be accepted.	Ferry stowage (BB). Outside containers: Wooden barrels or kegs. Wooden boxes. Bags. Tight bales—bound with wire or metal bands. Shipments of loose scrap rags shall not be accepted.

146.27-100 Table K.—Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Resin Rosin (*Colophony*).	*Any of various solid or semi-solid organic substances.* *Chiefly of vegetable origin.* *Rosin is a term applied to the hard resin, commonly amber colored, left after distilling off the volatile oil of turpentine.* *Insoluble in water.* *Readily combustible.* Outside containers shall be marked either "Resin" or "Rosin" or "Hazardous article."	No label required.	Stowage: "On deck in open." "On deck protected." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Fiber drums. Burlap bags, paper lined, not over 100 lbs. net wt. (at least 7½ oz. burlap with waterproofed paper lining). Multiwall paper bags, 6 ply, (not over 100 lbs. net wt.) 4 ply (not over 50 lbs. net wt.); CFC. Rule 40-4 ply paper bags (not over 100 lbs. net wt.	Stowage: "On deck in open." "On deck protected." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Fiber drums. Burlap bags, paper lined, not over 100 lbs. net wt. (at least 7½ oz. burlap with waterproofed paper lining). Multiwall paper bags, 6 ply, (not over 100 lbs. not wt.) 4 ply (not over 50 lbs. net wt.); CFC. Rule 40-4 ply paper bags (not over 100 lbs. not wt.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Fiber drums. Burlap bags, paper lined, not over 100 lbs. net wt. (at least 7½ oz. burlap with waterproofed paper lining). Multiwall paper bags, 6 ply, (not over 100 lbs. not wt.) 4 ply (not over 50 lbs. net wt.); CFC. Rule 40-4 ply paper bags (not over 100 lbs. net wt.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Fiber drums. Burlap bags, paper lined, not over 100 lbs. net wt. (at least 7½ oz. burlap with waterproofed paper lining). Multiwall paper bags, 6 ply, (not over 100 lbs. not wt.) 4 ply (not over 50 lbs. net wt.); CFC. Rule 40-4 ply paper bags (not over 100 lbs. net wt.
Road asphalt or tar			See: "Asphalt."			
Rough ammoniate tankages (containing 7% or more of moisture).			See: "Tankages."			
Sawdust Wood shavings. (*When dry, clean, and free from oil.*)	*Small fragments or dust or long fine, curled wood shavings.* *The hazard in this type of cargo lies in its susceptibility to fire from open flame or sparks.* Do not stow in proximity to vegetable or animal oils, paints, corrosive liquids (white label) or oxidizing materials (yellow label). Keep dry. Reject wet or insecurely packed consignments. Outside containers shall be marked either "Sawdust" or "Wood shavings" or "Hazardous article." Bales not required to be marked.	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Bags. Bales—slatted and compactly bound with wire or metal bands. Bulk in "EB" type barge.	Stowage: "On deck under cover." "Tween decks." "Under deck." "Cargo hatch trunkway." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Bags. Bales—slatted and compactly bound with wire or metal bands.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Bags. Bales—slatted and compactly bound with wire or metal bands.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Bags. Bales—slatted and compactly bound with wire or metal bands.

Shellac, raw Stick lac. NOTE: For solutions of shellac in a solvent, see: "Shellac, liquid".	*A resin gum. The crude is commonly called stick lac. The refined form is in thin, irregular-shaped flakes and is commonly called raw shellac.* Readily combustible. Stow well away from all sources of artificial heat. Keep cool. *Insoluble in water.* Outside containers shall be marked either "Shellac, raw" or "Stick lac" or "Hazardous article".	No label required.	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Burlap bags. Cotton liner bags.	Stowage: "On deck protected." "On deck under cover." "Tween decks." "Under deck." "Cargo hatch trunkway." Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Burlap bags. Cotton liner bags.	Ferry stowage (AA). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Burlap bags. Cotton liner bags.	Ferry stowage (BB). Outside containers: Steel barrels or drums. Wooden barrels or kegs. Wooden boxes. Fiberboard boxes. Burlap bags. Cotton liner bags.
Sodium hydroxide			See: "Caustic soda, solid."			
Straw			See: "Hay."			
Sulfur Flowers of sulfur. Sulfur flower. Brimstone.	*A mineral substance in the form of hard lumps or amorphous powder.* *Insoluble in water.* *Crude sulfur in bulk is dangerously inflammable and readily fusible by heat. Will ignite by friction. When burning gives off sulfur dioxide, a suffocating gas.* *Sulfur dust given off in loading crude sulfur in proper proportions with air forms an explosive mixture and may be ignited by static electricity, open flame or spark.* Do not stow sulfur with carbon, charcoal, lampblack, fats, oils, chlorates, phosphates, phosphorus, or other carriers of oxygen. In the presence of carbon, charcoal, lampblack, and other carbonaceous substances, fats and oils may produce spontaneous heating and ignition; while with chlorates, phosphates, phosphorus and other oxygen carriers it may produce explosive mixtures. Outside barrels, boxes or bags shall be marked with the shipping name of the product as shown herein or "Hazardous Article".	No label required.	Stowage: "On deck in open." "On deck under cover." "Tween decks." "Under decks." Outside containers: Barrels. Boxes. Bags. Tight siftproof railroad freight cars. Bulk.	Stowage: "On deck under cover." "Tween decks." Outside containers: Barrels. Boxes. Bags.	Ferry stowage (AA). Outside containers: Barrels. Boxes. Bags. Vehicles loaded with sulfur in bulk may be transported provided the loading shows no sign of sifting of the sulfur.	Ferry stowage (BB). Outside containers: Barrels. Boxes. Bags. Tight siftproof railroad freight cars. Vehicles loaded with sulfur in bulk may be transported provided the loading shows no sign of sifting of the sulfur.

In the loading or unloading of sulfur in bulk the following conditions shall be complied with:

(a) When sulfur in bulk is loaded in a deep hold with general cargo in the Tween Deck hold above the sulfur a dust proof wooden bulkhead enclosure shall be built in the hatchways from the over deck of the lower hold to the weather deck forming a tight enclosure to prevent sulfur dust entering the Tween Decks during loading.

(b) Holds shall be cleaned of all debris.

(c) Ceiling shall be made tight to prevent sulfur dust finding its way into the bilges; any chinking necessary in the way of tank tops or bilges shall be with non-combustible material.

(d) In order to minimize the movement of fine sulfur dust during the loading, cowl ventilators serving the hold into which the sulfur is being loaded shall be blanked off to prevent circulation of air.

(e) "NO SMOKING" signs shall be conspicuously displayed, and the officer in charge of loading shall see that they are observed.

(f) An oxygen breathing apparatus, or proper gas mask, shall be made readily available.

(g) A fire hose, supplied with fresh water from a shore supply source, shall be available at each hatch through which the sulfur is being loaded.

(h) Upon completion of loading, the sulfur shall be leveled off and the sulfur dust deposited during the process of loading, being extremely inflammable, shall be cared for by sweeping or washing it down. This applies to the decks and to the overhead structure within the holds.

(j) After unloading, all residue of sulfur or sulfur dust shall be thoroughly cleaned out of cargo holds before loading other cargo therein.

(k) When sulfur is loaded by metal chute method, provision shall be made for proper grounding of the chute, using flexible cable to prevent static discharge.

146.27-100 Table K. Classification: Hazardous articles—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Tank cars, empty..... Tank cars previously containing an inflammable liquid; inflammable solid or oxidizing material; acids or corrosive liquids; Poisonous liquids or solids, Class B; compressed inflammable gas; compressed non-inflammable gas.	*The hazard connected with the shipment of empty tank cars that previously contained any dangerous substance lies in the possible presence of residue contents in the tank car.* No marking required.	Dangerous—empty.	Stowage: "On deck in open." "Under deck." "Tween decks."	Not permitted.....	Not permitted.....	Ferry stowage (BB).
			May be accepted upon permitted vessels under the following conditions: (A) Provided dome covers are securely fastened in place. (B) Provided discharge pipe cap is securely in place. (C) Provided there is no leakage from discharge pipe cap or any other portion of the tank. (D) Provided no excess residue of a former lading is adhering to any part of the tank or car. (E) The vessel's officer assigned to supervise the receipt of such tank cars on board the vessel shall personally check each requirement and make an entry in a record book specifically provided for such purpose stating all conditions are found to be satisfactory and give the car initials and number. (F) Tank cars found not to be satisfactory shall be refused transportation and an entry made in the record book noting such rejection and reason, together with identification of the car. Rejection reports shall be forwarded to the Officer in Charge, Marine Inspection, of the district.			
Tank trucks, empty..... Tank trucks previously containing an inflammable liquid, corrosive liquid, compressed gas or a poison Class B.	*The hazard connected with the shipment of empty tank trucks that previously contained any dangerous substance lies in the possible presence of residue contents in the tank car.* Shall be marked in such manner as will identify previous lading of the tank.	No label required.	Stowage: "On deck in open."	Not permitted.....	Ferry stowage (AA).....	Ferry stowage (BB).
			May be accepted upon permitted vessels under the following conditions: (A) Provided that the driver of the vehicle furnishes a signed statement setting forth the name of the lading last contained within the cargo tank of the vehicle, and its flashpoint, if an inflammable liquid. The statement shall also show the name and business address of the owner of the vehicle and the identity of the particular vehicle by number or registration. (B) Provided dome covers are securely fastened in place. (C) Provided all valves in piping to tank are tightly closed. (D) Provided there is no leakage from pipe lines or any other part of tank. (E) Provided no excess residue of a former lading is adhering to any part of the tank or vehicle. (F) The person assigned to supervise the receipt of such tank vehicles on board the vessel shall personally check each requirement. (G) Vehicles found not to be satisfactory shall be refused transportation and an entry made in the record book noting such rejection and reason, together with an identification of the vehicle. Rejection reports shall be forwarded to the Officer in Charge, Marine Inspection, of the district.			

Tankages: Garbage tankage (*containing 8 percent or more of moisture*). Rough ammoniate tankages (*containing 7 percent or more of moisture*). Tankage fertilizers (*containing 8 percent or more of moisture*). The originating bill of lading or other shipping paper shall bear the shipper's certifying statement as to the moisture content of the shipment and also state the temperature of the material when shipment originated which temperature shall be less than 100° F.	*A dried and ground product of garbage. Consists principally of vegetable fibers. Offensive odor.* *Is subject to spontaneous heating with possible ignition.* Check temperature of material before loading on board vessel. Reject if temperature exceeds 100° F. Observe temperature during voyage for signs of heating. Outside containers shall be marked either "Garbage tankage" "Rough ammoniate tankages" or "Tankage fertilizers" or "Hazardous article."	No label required.	Stowage: "On deck under cover." "Tween decks." "Under deck but not overstowed." Outside containers: Burlap (jute) bags. Railroad freight cars. Bulk.	Stowage: "On deck under cover." "Tween decks readily accessible." Outside containers: Burlap (jute) bags.	Ferry stowage (AA) Outside containers: Burlap (jute) bags.	Ferry stowage (BB). Outside containers: Burlap (jute) bags. Railroad freight cars.

NOTE.—For temporary amendments to regulations in part 146 effective for the duration of the present war see page N-383.

PART 147—REGULATIONS GOVERNING USE OF DANGEROUS ARTICLES AS SHIPS' STORES AND SUPPLIES ON BOARD VESSELS

GENERAL REGULATIONS

147.01–1 Scope of regulations.—The acceptance, handling, stowage or use of explosives or other dangerous articles or substances and combustible liquids as ships' stores and supplies of a dangerous nature that are permitted for such use on board domestic vessels shall be in accordance with the provisions of the regulations and table comprising Part 147.

147.01–2 Application.—Any explosive or other dangerous article or substance and combustible liquids as ships' stores and supplies, defined as dangerous in accordance with the definition in §§ 147.02–1 and 147.02–2 herein shall not be used on board any domestic vessel subject to these regulations unless specific permission for such use is given in the table, § 147.05–100, or certification for such use, where so required by said table, has been issued by the Commandant of the Coast Guard.

147.01–3 Compliance.—Applicable provisions of these regulations shall be osberved by:

(a) All manufacturers, shippers, vendors or other persons offering explosives or other dangerous articles or substances, and combustible liquids as ships' stores and supplies of a dangerous nature for use on board domestic vessels subject to the regulations in this subchapter.

(b) Domestic vessels subject to the regulations in this subchapter, their owners, charterers, or agents and the master and personnel thereof.

147.01–4 Certificated articles of ships' stores.—(a) On and after April 1, 1943, articles of ships' stores and supplies of a dangerous nature that are required by the provisions of § 147.05–100 to be certified for use on board domestic vessels shall not be offered for such use or used on board domestic vessels subject to the regulations in this part unless so certified.

(b) Certifications issued under authority of the regulations in this part shall become effective immediately upon issue. Articles so certified and bearing the certificate number and legend in accordance with the provisions of § 147.03–6 may then be offered for use and used on board domestic vessels.

147.01–5 Existing rulings re explosives and other dangerous articles or substances by true name.—(a) All rulings in existence on the effective date of the regulations in this subchapter applying to the use of explosives or other dangerous articles or substances on board domestic vessels (except ships' signal and emergency equipment) when such articles or substances are described by name in the list, § 146.04–5, are superseded by the regulation in this part.

147.01–6 Existing rulings re ships' stores and supplies by trade name.—(a) All rulings in existence on the effective date of the regulations in this subchapter applying to the use of ships' signal and emergency equipment as promulgated by the Board of Supervising Inspectors and also all rulings applying to the use of articles of ships' stores and supplies of a dangerous nature on board domestic vessels subject to the regulations in this subchapter as promulgated under their trade name by the office of the Director of the Bureau of Marine Inspection and Navigation are affirmed and adopted and form part of the regulations in this part, effective until and including March 31, 1943.

(b) Application may be made at any time for certification covering use of articles of ships' stores and supplies of a dangerous nature by trade name or trade mark. Such application shall not be made or accepted for articles or substances that are described by name in the list of explosives and other dangerous articles and combustible liquids, § 146.04–5.

147.01–7 Foreign vessels.—The acceptance, handling, stowage or use of explosives or other dangerous articles or substances and combustible liquids as ships' stores and supplies of a dangerous nature that are permitted for such use on board foreign vessels, shall be in accordance with the provisions of the regulations and table comprising Part 147, or in accordance with the law and regulations of the country whose flag the vessel flies.

DEFINITION OF SHIPS' STORES AND SUPPLIES OF A DANGEROUS NATURE

147.02–1 Ships' stores and supplies.—For the purposes of the regulations in this part ships' stores and supplies are defined as any article or substance which is used on board a vessel subject to the regulations in this subchapter, for the upkeep and maintenance of the vessel; or for the safety or comfort of the vessel, its passengers or crew; or for the operation or navigation of the vessel (except fuel for its own machinery).

147.02–2 Ships' stores and supplies of a dangerous nature defined.—For the purpose of the regulations in this part ships' stores and supplies possessing such characteristic properties as will cause the substance to properly classify as either an explosive, inflammable liquid, inflammable solid, oxidizing material, corrosive liquid, compressed gas, poisonous

(11th Amend.—§§ 147.01-4 and 147.01-6 amended—March 1942)

article, hazardous article or combustible liquid in accordance with the definition for such substances as contained in the regulations in this subchapter are defined as ships' stores and supplies of a dangerous nature. This definition shall be binding upon all manufacturers, shippers, vendors or other persons offering any such articles for use on board domestic vessels. Acceptance and use on board domestic vessels subject to the regulations in this subchapter shall be in accordance with the provisions of §§ 147.01–1—147.01–6; §§ 147.03–1—147.03–11; §§ 147.04–1—147.04–4; and §§ 147.05–100.

DETAILED REGULATIONS GOVERNING CERTIFICATION OF SHIPS' STORES AND SUPPLIES

147.03–1 Products requiring certification.—Ships' stores and supplies of a dangerous nature, as defined in §§ 147.02–1 and 147.02–2, shall not be used on board vessels subject to these regulations unless certified for such use by the Commandant of the Coast Guard: *Provided, however,* That explosives or other dangerous articles or substances, and combustible liquids to be used as stores that are described by name in the list, § 146.04–5, are not required to be so certified when permitted for such use by provisions of the table comprising § 147.05–100. This proviso shall not extend to compounds, mixtures or other substances that are described by generic names. Examples of such substances are polishes, waxes, insecticides, fumigants, disinfectants, cleaning compounds, removing compounds, and distillates.

147.03–2 Source of application for certification.—The manufacturer of an article or substance may make application for certification for use of his product as an article of ships' stores and supplies.

147.03–3 Procedure to obtain certification.—A manufacturer desiring to secure certification of his product for use as an article of ships' stores or supplies on board domestic vessels shall submit to the Commandant of the Coast Guard a statement setting forth all essential information with regard to the product. The statement shall be sworn to, or affirmed by an owner, partner, president or secretary of the company, partnership, corporation or association submitting the statement. Such oath or affirmation shall attest to the truth and accuracy of the statement.

147.03–4 Information required in statement.—The statement accompanying the application for certification of a product shall contain such of the following information as may be applicable.

(a) Name and address of the manufacturer.

(b) Trade name under which the product will be marketed.

(c) When properly described by a true chemical name, give such name.

(d) If a compound, state the true chemical names of the various ingredients.

(e) A complete description of the individual container or containers in which the product is marketed.

(f) Describe any outside container in which two or more individual containers are shipped and give the gross and net weight of the package.

(g) If possessing flash and fire points state the points in degrees Fahrenheit and the method used in determining same. (If the product is not susceptible to fire and flashpoint determination, so state.)

(h) State whether the product gives off explosive, inflammable, corrosive, or toxic vapors within a temperature range up to 150° F.

(i) State what reaction, if any, accompanies the addition of water to the substance or article.

(j) What is the form of the product, liquid, semi-liquid, solid or semi-solid.

(k) If of a solid or semi-solid form, what is the melting point of the substance.

(l) If an article is composed in part of an explosive ingredient, state the percentage of the explosive ingredient present.

(m) If an article is composed in part of a gas, state the maximum pressure possible at a temperature of 130° F.

(n) If an article is composed in part of poisonous ingredients, state the percentage of each kind of poison present.

(o) State if the product is or is not subject to spontaneous heating.

(p) If an article depends upon a factor of force or the addition of another product for its operation, state the method of application or use.

(q) Furnish a copy or facsimile reproduction of the label under which the substance will be marketed.

147.03–5 Samples for test.—The Commandant of the Coast Guard may require that an amount of the product, or a number of the articles sufficient for purposes of test, shall be submitted, or it may purchase in the open market a sufficient quantity of the products, or number of the articles for such test.

147.03–6 Certification identification.—When a product is certified for use as an article of ships' stores or supplies on board vessels, it will be assigned a certification number by the Commandant of the Coast Guard. Before offering a product for use on board vessels, the manufacturer shall cause the certificate number and the following legend, in the form shown to be applied to each container of the product.

No. xxx Date _____

Certificated for use as an article of stores on board vessels.
This certification only covers hazard in the use of this product.
The efficiency of this product is not passed upon.

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The "x" marks to be replaced by the official number as awarded by the Commandant of the Coast Guard.

This legend may be incorporated as part of the label, or affixed as a separate label, or be etched or stamped in the container or the material of each unit. No other form or statement regarding the Commandant of the Coast Guard's certification shall be made upon any label, container or advertising matter descriptive of the certified product.

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147.03–7 Certification of changes.—A certified product, its name, its form or design, the container of such product or the label appearing on the container shall not be altered and again marked without first securing certification in the same manner as required by §§ 147.03–3 and 147.03–4.

147.03–8 Refusal to certify.—The Commandant of the Coast Guard may, for cause, withhold the certification of a product or an article; and reserves the right to require, before a certification is issued, that the trade name under which the article will be marked, be altered to avoid error, duplication or to provide clarity.

147.03–9 Renewal of certification.—The manufacturer of each approved product or article shall, during the month of January in every year, submit a statement sworn to or affirmed that the characteristics of the approved product or article have not been altered or changed in any respect and it is the intention to continue to market the product. Upon receipt of such statement the records of the Commandant of the Coast Guard will be endorsed, indicating the certification continues active and in force. Failure to receive such statement shall automatically serve to cancel a certification, and the U. S. Coast Guard's "Proceedings of the Merchant Marine Council" shall note the cancelation of the certificate.

147.03–10 False statement.—(a) The manufacturer or duly authorized agent submitting an application for certification of any product or article, who sets forth or causes to be set forth therein any false statement for the purpose of securing certification, shall be deemed to be in violation of the regulations in this part.

(b) Any manufacturer or agent, or any sales agent, of any product or article, who sets forth or causes to be set forth, a false statement regarding certification, shall be deemed to be in violation of the regulations in this part.

147.03–11 Non-certified articles on board vessels.—Owner, charterer, agent, master or person in charge of a vessel, or other persons, knowingly taking or causing to be taken on board any domestic vessel, or using on board any such vessel, any ships' stores or supplies of a dangerous nature, as defined in §§ 147.02–1 and 147.02–2, that are not certified as required by the regulations in this part for such use by the Commandant of the Coast Guard, shall be deemed to be in violation of the regulations in this part: *Provided*, That in an emergency a domestic vessel in a foreign port or a port of the Canal Zone may replenish any article of ships' stores or supplies of a dangerous nature in such amount and under such condition as the judgment of the master may dictate as being necessary for the safety of the vessel.

DETAILED REGULATIONS GOVERNING USE OF SHIP'S STORES AND SUPPLIES

147.04–1 Cylinder requirements.—Cylinders containing a compressed gas for use as an article of stores on board any domestic vessel subject to the regulations in this subchapter shall conform to the following conditions:

(a) All cylinders shall be constructed, tested and marked in accordance with the Interstate Commerce Commission specifications in effect upon the date of manufacture and test.

(b) Cylinders shall bear upon the shoulder thereof a test date marking indicating such cylinder has been tested within a period of five years. A cylinder continuously installed in

place on board a vessel as part of the vessel's equipment for a period of time exceeding five years, shall, after twelve (12) years have elapsed from the date of previous test and marking, be removed from the vessel, its contents discharged, the cylinder retested and remarked.

(c) Any cylinder, the contents of which have been discharged or which for any cause has been removed from a vessel subsequent to five years from the last test, as indicated by the marking, shall be retested and remarked.

(d) Retesting, remarking, or recharging shall be in accordance with the regulations of the Interstate Commerce Commission in effect at the time the operation takes place.

(e) Cylinders forming part of a system installed on board a domestic vessel shall not be removed from said installation and placed on board any other vessel (except in an emergency) when the test date marking indicates that more than five years have elapsed since the cylinder was last tested.

(f) Cylinders marked showing a test date within the preceding five years but which show dents or other evidence of rough usage or corrosion to such extent as to indicate possible weakness or that have lost more than 5% of their official tare weight or that have been involved in a fire shall not be used or continued in use as a container of any compressed gas as an article of stores on board a vessel until retested and re-marked in accordance with the Interstate Commerce Commission regulations. A cylinder reclaimed from a previous installation and showing a test date marking exceeding a period of five years shall not be used as a container of compressed gas on board a vessel unless the residue of gas within the cylinder has been discharged and the cylinder retested and re-marked in accordance with requirements of the Interstate Commerce Commission regulations for the particular gas and cylinder involved. Cylinders retested under any of the above conditions shall have new or renewed valve and safety relief devices of the proper design installed in the cylinder.

147.04–2 Cylinders of foreign manufacture forming part of a fire extinguishing system.—Cylinders of foreign manufacture forming part of a fire extinguishing system on board a foreign vessel and removed from such vessel for purposes of recharging and replaced on board said vessel or other vessel of the same nationality are not subject to the provisions of § 147.04–1, *Provided*, The cylinders are charged and otherwise comply with the Interstate Commerce Commission regulations governing foreign cylinders.

147.04–3 Stowage and care of cylinders.—All cylinders serving as containers of a compressed gas used as an article of stores on board vessels shall be stowed in accordance with the requirements shown in the table, § 147.05–100. When not in use, cylinders shall be secured in a rack provided for this purpose. Cylinders shall be protected from all sources of heat and shall not be dropped, rolled or dragged on the deck. Cylinders shall not be used as a roller to transfer weighty objects. Heat from an open flame shall never be applied to a cylinder in an attempt to exhaust the contents thereof.

147.04–4 Culinary supplies, potable spirits, cosmetics.—Flavoring extracts and other culinary supplies and potable spirits in containers as furnished by the trade are not subject to the regulations in this part. Cosmetics and toilet articles in containers not exceeding 1 quart capacity are not subject to the regulations in this part.

147.05–100 Table S.—Classification: Ships' stores and supplies of a dangerous nature

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Acetylene (for use as burning or welding equipment).	Cylinders shall conform to ICC specifications and bear the mark ICC-8 and shall be fitted with valve protection cap. Guard against leaks as this gas is inflammable and explosive over a wide range of mixtures with air (3 to 75% for pure acetylene). *Cylinders have been known to explode from shock, such as dropping.* Acetylene gas is slightly lighter than air. Oil or other lubricant shall not be used on a valve or other fitting connecting to cylinders.	Red gas	Stowage: In a cool ventilated location selected and supervised by the Chief Engineer with the knowledge and approval of the Master. (Protected from temperatures exceeding 100° F.). Stow upright, secured in a rack, with valve protection cap in place on cylinder when of a type requiring such cap. Cylinders shall be stowed in rack at all times, except when actually in use. Quantity limitations: Cargo vessels shall not have on board as stores more than 600 cu. ft. of acetylene at any time.	Stowage: In a cool ventilated location selected and supervised by the Chief Engineer with the knowledge and approval of the Master. (Protected from temperatures exceeding 100° F.). Stow upright, secured in a rack, with valve protection cap in place on cylinder when of a type requiring such cap. Cylinders shall be stowed in rack at all times, except when actually in use. Quantity limitations: Passenger vessels navigating inland or coastwise waters shall not have on board as stores more than 300 cu. ft. of acetylene at any time. Passenger vessels going foreign or intercoastal shall not have on board as stores more than 600 cu. ft. of acetylene at any time.	Not permitted	Stowage: In a cool ventilated location selected and supervised by the Chief Engineer with the knowledge and approval of the Master. (Protected from temperatures exceeding 100° F.). Stow upright, secured in arack, with valve protection cap in place on cylinder when of a type requiring such cap. Cylinders shall be stowed in rack at all times, except when actually in use. Quantity limitations: Railroad car ferries shall not have on board as stores more than 300 cu. ft. of acetylene.
Ammunition for small arms.	Ammunition for small arms includes all fixed ammunition such as is used in pistols, revolvers, rifles, shotguns and similar firearms, with nonexplosive bullets and consists usually of a paper or metallic cartridge case, the component parts necessary for one firing being all in one assembly.	No label required.	A vessel may carry such ammunition for small arms as the master deems indispensable for the preservation of discipline on board the vessel. No person shall bring or have in his possession or use on board a vessel any ammunition for small arms except by express permission of the master or other person in charge of the vessel.		This prohibition shall not apply to pleasure type automobiles on board ferry vessels having ammunition for small arms within the automobile when in accordance with the provisions of § 146.09–9 of these regulations.	

Anesthetics: Carbon dioxide. Cyclopropane. Ethylene. Nitrous oxide. Oxygen. (When contained in cylinders.)	When prepared and offered for use for anesthesia purposes, cylinders of these gases may be used on board vessels as medical supplies. *Excessive quantities of these gases in enclosed spaces are suffocating.* *Carbon Dioxide, Nitrous Oxide and Oxygen are non-inflammable gases.* *Cyclopropane and Ethylene are inflammable gases. These gases in the following proportions with air form explosive mixtures:* *Cyclopropane about 2% to 10%.* *Ethylene about 3% to 28%.* Oil or other lubricant shall not be used on any valve or other fitting connecting to cylinders.	---------- Green gas. Red gas.	Stowage: In place in holders designed for use, such holding device forming part of the sick bay equipment; or; In wooden boxes stored in a cool well ventilated compartment away from living quarters. Containers: ICC specification cylinders completely enclosed in stout wooden boxes. When shipped without boxing, the cylinders shall be fitted with valve protection caps.	Stowage: In place in holders designed for use, such holding device forming part of the sick bay equipment; or; In wooden boxes stored in a cool well ventilated compartment away from living quarters. Containers: ICC specification cylinders completely enclosed in stout wooden boxes. When shipped without boxing, the cylinders shall be fitted with valve protection caps.	Anesthetics are not likely to be furnished as ships' stores and supplies on this character of vessel.	Anesthetics are not likely to be furnished as ships' stores and supplies on this character of vessel.
Carbon dioxide	When in cylinders installed for use on board a domestic vessel as a fire extinguishing agent. *Excessive quantities of carbon dioxide in enclosed spaces are suffocating.*	Green gas.	Permitted for use on board any character of vessel as a fire extinguishing agent when contained in cylinders meeting the requirements of § 147.04-1.			
Compounds: Cleaning compounds. Disinfectants. Insecticides. Polishes. Waxes. Fumigants. Certification for use as an article of ships' stores and supplies on board passenger vessels is required.	*May be liquids, pastes, or solids:* Shall not be offered for use on board any passenger vessel subject to these regulations unless the article is certified for such use by the Commandant of the Coast Guard. See §§ 147.03-1 to 147.03-11, incl. Cloths used to apply these substances shall be stowed in tight metal containers with self-closing covers.	No label required	----------	Stowage: In boatswain's stores. In steward's stores. In engineer's stores. Containers: In the containers as furnished by the trade, tightly closed or capped.	Stowage: In boatswain's stores. In steward's stores. In engineer's stores. Containers: In the containers as furnished by the trade, tightly closed or capped.	Stowage: In boatswain's stores. In steward's stores. In engineer's stores. Containers: In the containers as furnished by the trade, tightly closed or capped.

147.05–100 Table S.—Classification: Ships' stores and supplies of a dangerous nature—Continued

Descriptive name of article	Characteristic properties precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Verry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Cleaning oil, certification for use as an article of ships' stores and supplies on board passenger vessels is required.	*Oil used for cleaning purposes in engine department.* May be of any type oil possessing a flashpoint above 115° F. A crude or refined oil of a flash point at or below 115° F. to which has been added a foreign substance for the purpose of having the oil attain the permissible flashpoint shall not be accepted for purpose of cleaning oil.	No label required		Stowage: In engine room, amount limited to 110 gallons. Containers: Metal tanks. Not more than 110 gallons capacity (plus 5 percent outage). Tank to be constructed of steel not less than ⅛" thick. Seams may be welded or riveted oiltight. Reinforcing bosses shall be welded to tank in way of all fittings. Petcock air vent may be fitted at top of tank Closure for filling opening shall be screw-thread type having at least 5 complete threads and gasket. Liquid level indicator gauges shall not be permitted.	Stowage: In engine room, amount limited to 10 gallons. Containers: Tight metal cans with screw type closing means as furnished by the trade.	Stowage: In engine room, amount limited to 10 gallons. Containers: Tight metal cans with screw type closing means as furnished by the trade.
Drugs and medicines (prepard and packed as Drugs or Medicines as normally offered in trade).	Ether, Chloroform, Alcohol, Carbolic Acid and other Drugs, Medicines, and Pharmaceutical Preparations are permitted. Vessels constructed after the effective date of these regulations shall be equipped with a medicine chest at least equivalent to the specifications of the U. S. Public Health Service. Specifications may be obtained by addressing that service at Washington, D. C. Existing vessels replacing a medicine chest shall be required to provide a chest conforming to the health service specifications. The use of drugs or medicines for any other purpose on board a vessel, except in an amergency, is prohibited.	No label required	Stowage: Within ship's medicine chest in sick bay or other location designated by the master.	Stowage: Within ship's medicine chest in sick bay or other location designated by the master.	Stowage: Within ship's medicine chest in sick bay or other location designated by the master.	Stowage: Within ship's medicine chest in sick bay or other location designated by the master.

Fireworks. (As defined in §146.20-3 (b).	----------	----------	No person shall bring, except as permitted cargo, or have in his possession on board a vessel, fireworks of any description, except such fireworks as are permitted by these regulations for use in the navigation and safety of the vessel. This prohibition shall not apply to pleasure type automobiles having fireworks within the automobiles when in accordance with the provisions of § 146.03-9 of these regulations. The ignition, discharge or display of fireworks on board any vessel is prohibited. This prohibition does not apply to ship's signals and emergency equipment. These regulations shall not apply to pyrotechnic displays on unmanned, moored vessels under the direction or permit of municipal or state authorities.			
Fuel for safety lamp. Vessels without safety lamp equipment shall not carry this fuel.	Straight run distillate without the addition of any other substance, and conforming with lamp manufacturers' recommendations. Highly inflammable Keep lights and fire away.	No label required.	Safety lamps not carried as emergency equipment on cargo vessels.	Stowage: Alongside safety lamp. Container: In safety containers furnished by the lamp manufacturer.	Safety lamps not carried as emergency equipment on ferry vessels.	When required. Stowage: Alongside safety lamp. Container: In safety containers furnished by the lamp manufacturer.
Fuel for heating, cooking, lighting. Alcohol, solid or fluid.	----------	No label required.	Alcohol, solid or fluid, permitted. Containers of solidified alcohol shall be properly secured on a fixed base. Fluid alcohol burners where wet priming is used shall have catch pan not less than ¾" deep secured inside the frame of the stove or the metal protection under the stove flanged up ¾" to form a pan.	Alcohol, solid, permitted. Alcohol, fluid, not permitted. Containers of solidified alcohol shall be properly secured on a fixed base.	Alcohol, solid, permitted. Alcohol, fluid, not permitted. Containers of solidified alcohol shall be properly secured on a fixed base.	Alcohol, solid, permitted. Alcohol, fluid, not permitted. Containers of solidified alcohol shall be properly secured on a fixed base.
Inflammable liquid not otherwise described by name in this table as fuel for heating, cooking, or lighting.	Liquids giving off inflammable vapors at or below a temperature of 80° F.		Not permitted	Not permitted	Not permitted	Not permitted.
Combustible liquid not otherwise described by name in this table as fuel for heating, cooking or lighting.	Liquids giving off inflammable vapors at or below a temperature of 150° F. and above 80° F.			Not permitted	Not permitted	Not permitted.
Kerosene or fuel oil (when possessing a flash point of not lower than 110° F.).	Kerosene or commercial standard fuel oil No. 1, No. 2 or No. 3.	No label required.		Permitted	Permitted	Permitted.
				(i) Where wet priming is used, a catch pan not less than ¾" deep shall be secured inside the frame of the stove or metal protection under the stove flanged up ¾" to form a pan. (ii) An inflammable liquid shall not be used for priming. (iii) Fuel tanks for fixed stoves shall be separate therefrom, mounted in a location open to the atmosphere or if mounted inside a compartment such tanks shall be fitted with outside fill and vent. (iv) Pressure or gravity jet feed is permissible. Bubble feed or any system which may be affected by list or roll of the vessel shall not be used. On gravity or siphon tanks an easily accessible shut off valve shall be fitted in the fuel line at the tank, and if the tank is outside the compartment, a shut off valve shall also be fitted at the stove.			

147.05–100 Table S.—Classification: Ships' stores and supplies of a dangerous nature—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Fuel for heating, cooking, lighting, (Cont.)						
Liquefied or nonliquefied gas.	Systems using a liquefied or a nonliquefied gas, including regulating and safety equipment, exclusive of the cylinder or container, shall be of a design approved by the Commandant of the Coast Guard for such use. *Vapors from petroleum gases are heavier than air and with air form explosive mixtures over wide ranges. Acetylene, methane, and coal gas are lighter than air.*	Red gas label required on cylinders and red inflammable liquid label required on drums.	Permitted. Cylinders and drums shall be ICC specification containers. The cylinders shall bear a test date marking indicating test within the preceding 5 years.	Not permitted.	Not permitted.	Not permitted.
			Cylinders or drums shall be located in a metal locker or housing on or above the weather deck in such position that any escaping vapor cannot reach living quarters or enclosed compartments on board the vessel. Lockers or housings shall be vented to the open air near the bottom for gases evolving vapors heavier than air and near the top of the enclosure for gases evolving vapors lighter than air. Cylinders or drums shall be protected from climatic extremes.			

Illuminating oil—Certification for use as an article of ships' stores and supplies s required.	A distillate oil used as fuel for oil lamps. Shall possess a flashpoint above 250° F.	No label required..	Stowage: Vessel's lamp locker amount limited to 55 gallons. Containers: For quantities in excess of 10 gallons: Metal barrels or drums. Metal tanks: Not more than 55 gals. capacity (plus 2 percent outage). Tank to be not less than No. 14 U. S. S. gauge steel. Seams may be welded or riveted oil tight. Reinforcing bosses shall be fitted in way of filling and draw-off opening. Closure for filling opening shall be of screw-thread type having at least 3 complete threads and gasket. Liquid level indicator gauges shall not be permitted. Quantities up to 10 gallons may be carried in the metal containers as furnished by the trade, provided no single container exceeds 5 gallons capacity.	Stowage: Vessel's lamp locker amount limited to 55 gallons. Containers: For quantities in excess of 10 gallons: Metal barrels or drums. Metal tanks: Not more than 55 gals. capacity (plus 2 percent outage). Tank to be not less than No. 14 U. S. S. gauge steel. Seams may be welded or riveted oil tight. Reinforcing bosses shall be fitted in way of filling and draw-off opening. Closure for filling opening shall be of screw-thread type having at least 3 complete threads and gasket. Liquid level indicator gauges shall not be permitted. Quantities up to 10 gallons may be carried in the metal containers as furnished by the trade, provided no single container exceeds 5 gallons capacity.	Stowage: Vessel's lamp locker amount limited to 2 gallons. Containers: Tight metal containers as furnished by the trade.	Stowage: Vessel's lamp locker amount limited to 2 gallons. Containers: Tight metal containers as furnished by the trade.
Helium	Cylinders shall conform to the Interstate Commerce Commission specifications and bear the specification marking, date of test and be fitted with valve-protection cap. *A noninflammable gas.*	Green gas	Stowage, in a cool, ventilated location.	Stowage, in a cool, ventilated location.	Stowage, in a cool, ventilated location.	Stowage, in a cool, ventilated location.
Motion picture film	Film of either the inflammable (nitrocellulose) or the slow burning (cellulose acetate) type; used in providing entertainment for the passengers or crew.	No label required..	Permitted Stowage: All films on board shall at all times be kept within the operating booths. They shall be contained in individual metal boxes, except for the film in the machine and the film immediately before it is placed in or immediately after removal from the machine. Where not over five 5-pound reels are present in the booth they may be placed on incombustible shelves, suitably secured against displacement by the motions of the boat. Where more than five reels but not more than 10 reels are present, they shall be kept in closed shelves or cabinets similar in construction to that of the walls of the booth. Where more than ten 5-pound reels are present, they are to be stored in an insulated film cabinet.	Permitted	Permitted	Permitted.

147.05-100 Table S.—Classification: Ships' stores and supplies of a dangerous nature—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Oxygen (for use as burning or welding equipment.)	Cylinders shall conform to ICC specifications and bear the mark ICC-3A2000 and shall be fitted with valve protection cap. *Oxygen is a strong supporter of combustion and greatly accelerates fire. Oxygen under pressure may cause grease, oil and other readily combustible and finely divided substances to ignite.* *Colorless, odorless and tasteless.* *Slightly heavier than air.* Oil or other lubricant shall not be used on a valve or other fitting connecting to cylinders.	Green gas.	Stowage: In a cool ventilated location selected and supervised by the Chief Engineer with the knowledge and approval of the Master. (Protected from temperatures exceeding 100° F.) Stow upright, secured in a rack, with valve protection cap in place on cylinder. Cylinders shall be stowed in rack at all times, except when actually in use. Quantity limitations: Cargo vessels shall not have on board as ships' stores more than 3,000 cu. ft. of oxygen at any time.	Stowage: In a cool ventilated location selected and supervised by the Chief Engineer with the knowledge and approval of the Master. (Protected from temperatures exceeding 100° F.) Stow upright, secured in a rack, with valve protection cap in place on cylinder. Cylinders shall be stowed in rack at all times, except when actually in use. Quantity limitations: Passenger vessels navigating inland or coastwise waters shall not have on board as ships' stores more than 1,500 cu. ft. of oxygen at any time. Passenger vessels going foreign of intercoastal shall not have on board more than 3,000 cu. ft. of oxygen at any time.	Not permitted.	Stowage: In a cool ventilated location selected and supervised by the Chief Engineer with the knowledge and approval of the Master. (Protected from temperatures exceeding 100° F.) Stow upright, secured in a rack, with valve protection cap in place on cylinder. Quantity limitations: R. R. car ferries shall not have on board as ship's stores, more than 1,500 cu. ft. of oxygen at any time.
Paint and paint products						
Paint. Varnish. Lacquers. Enamel. *When possessing a flash point at or below 80° F.*			Ready mixed paints, varnish, or enamel possessing a flashpoint at or below 80° F. shall not be permitted as articles of ships' stores on board vessels subject to these regulations. Compounds of nitrocellulose with or without plasticizer, pigment, solvent or thinners; known as "lacquer", possessing a flashpoint at or below 80° F., shall not be permitted for use on board vessels subject to these regulations.			

Paint reducing or thinning compounds. Paint mixing oils and driers. Bronzing liquids. Liquid shellac. Solvents for paint or shellac. *When possessing a flash point at or below 80° F.*	-------------------------	-------------------------	These compounds, and compounds possessing similar characteristics, used in mixing, filling, thinning or applying paints when possessing a flashpoint at or below 80° F., shall not be permitted as articles of ships' stores on board vessels subject to these regulations.			
Paint and varnish removing compounds (*when possessing a flash point at or below 150° F.*).	-------------------------	No label required.	These compounds, when possessing a flashpoint at or below 150° F. shall not be permitted as articles of ships' stores on board passenger vessels subject to these regulations.			
Paint and paint products						
Paint (*when possessing a flashpoint above 80° F.*)	Ready mixed paints..........	No label required.	-------------------------	Stowage: In vessels' paint room and paint lockers. Containers: Metal containers as furnished by the trade. All containers when not in actual use shall be tightly closed.	Stowage: In vessels' paint room and paint lockers. Containers: Metal containers as furnished by the trade. All containers when not in actual use shall be tightly closed.	Stowage: In vessels' paint room and paint lockers. Containers: Metal containers as furnished by the trade. All containers when not in actual use shall be tightly closed.
Paint mixing oils (*when possessing a flash point above 80° F.*)	Vehicle oils: Turpentine, Linseed oil, soya bean oil. tung oil, fish oil, turpentine substitute, flatting oil.	No label required.				
Driers (*when possessing a flashpoint above 80° F.*)	Compounds used to accelerate the drying of paint.	No label required.				
Reducing or thinning compound (*when possessing a flashpoint above 80° F.*)	Solvents and dilutents used for the purpose of reducing the viscosity or consistency of finishes.	No label required.				
Stains (*when possessing a flash point above 80° F.*)	Used to intensify or produce grain effect or to produce imitation woodgrain effects.	No label required.				
Paint and varnish removing compounds (*when possessing a flashpoint above 150° F.*) Certification for use as an Article of Ships' Stores and Supplies on board passenger vessels is required.	Liquid preparations with solvent properties to soften up paint or varnish, thus permitting ready removal.	No label required.	-------------------------	Stowage: In vessels' paint room and paint lockers. Containers: Metal containers as furnished by the trade. All containers when not in actual use shall be tightly closed.	Stowage: In vessels' paint room and paint lockers. Containers: Metal containers as furnished by the trade. All containers when not in actual use shall be rightly closed.	Stowage: In vessels' paint room and paint lockers. ers Containers: Metal containers as furnished by the trade. All containers when not in actual use shall be tightly closed.
Liquefied petroleum gas Non-liquefied petroleum gas.	-------------------------	Red gas label on Cylinders.	The use of liquefied or non-liquefied petroleum gas for any purpose on board vessels subject to these regulations shall be in accordance with regulations set forth under "*Fuel for Heating, Cooking, Lighting.*"	The use of liquefied or non-liquefied petroleum gas for any purpose on board vessels subject to these regulations shall be in accordance with regulations set forth under "*Fuel for Heating, Cooking, Lighting.*"	The use of liquefied or non-liquefied petroleum gas for any purpose on board vessels subject to these regulations shall be in accordance with regulations set forth under "*Fuel for Heating, Cooking, Lighting.*"	The use of liquefied or non-liquefied petroleum gas for any purpose on board vessels subject to these regulations shall be in accordance with regulations set forth under "*Fuel for Heating, Cooking, Lighting.*"

147.05-100 Table S.—Classification: Ships' stores and supplies of a dangerous nature—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Refrigerants (a substance used to produce refrigeration by its expansion or vaporization).	The refrigerants listed in Groups "A" and "B" are approved for use in refrigerating equipment on board vessels. The refrigerants listed in Group "A" except Carbon Dioxide are approved for use in air conditioning systems designed and used for human comfort.		*Refrigerating Systems* are divided into classes, descriptive of the method employed for extracting heat as follows: *Direct System* is one in which the evaporator is in direct contact with the material or space refrigerated or is located in air circulating passages communicating with such spaces. *Indirect System* is one in which a liquid, such as brine or water, cooled by the refrigerant, is circulated to the material or space refrigerated or is used to cool air so circulated. *Unit System* is one which has been assembled and tested prior to its installation and which is installed with refrigerant containing parts completely assembled.			
GROUP "A"						
Air		None.	The service, system and refrigerant permitted for various type vessels is as follows: General refrigeration service: Direct system. Indirect system. Any of the approved refrigerants in Group "A" and "B."	The service, system and refrigerant permitted for various type vessels is as follows: General refrigeration service: Direct system. Indirect system. Any of the approved refrigerants in Group "A" and "B."	The service, system and refrigerant permitted for various type vessels is as follows: General refrigeration service: Direct system. Indirect system. Any of the approved refrigerants in Group "A" and "B."	The service, system and refrigerant permitted for various type vessels is as follows: General refrigeration service: Direct system. Indirect system. Any of the approved refrigerants in Group "A" and "B."
Water		None.				
Carbon dioxide		Green gas.				
Dichlorodifluoromethane		Green gas.				
Dichloromonofluoromethane.		None.				
Dichlorotetrafluoroethane.		None.				
Trichloromonofluoromethane.		None.	Air conditioning service: Direct system. Unit system. Any of the approved refrigerants in Group "A" except Carbon Dioxide.	Air conditioning service: Direct system. Unit system. Any of the approved refrigerants in Group "A" except Carbon Dioxide.	Air conditioning service: Direct system. Unit system. Any of the approved refrigerants in Group "A" except Carbon Dioxide.	Air conditioning service: Direct system. Unit system. Any of the approved refrigerants in Group "A" except Carbon Dioxide.
Trichlorotrifluoroethane		None.				
GROUP "B"						
Ammonia		Green gas.	Unit refrigeration service: Indirect system. Any of the approved refrigerants in Group "A" and "B."	Unit refrigeration service: Indirect system. Any of the approved refrigerants in Group "A" and "B."	Unit refrigeration service: Indirect system. Any of the approved refrigerants in Group "A" and "B."	Unit refrigeration service: Indirect system. Any of the approved refrigerants in Group "A" and "B."
			Reserve supply of refrigerant may be stowed in any cool, isolated location (excepting a cargo hold, or passenger or crew spaces) on board the vessel. Racks shall be provided and the containers secured therein. Valve protection caps shall be in place on cylinders.			

Direct and indirect systems.					
Ammonia. *Weakly inflammable explosive with about 16% to 25% in air.* *Vapors lighter than air.* *Poisonous, even in small quantities less than 1%.* *Irritating odor gives warning of presence.* *Pressure about 315 lbs. at 130° F.* Accept in ICC cylinders only.	Green gas	Permitted	Permitted	Permitted	Permitted.
Carbon dioxide *Non-inflammable.* *Vapors heavier than air.* *Will cause suffocation if breathed in excessive quantities.* *Odorless.* *Pressure may be as high as 2,280 lbs. per square inch at 130° F.* Accept in ICC cylinders only.	Green gas	Permitted	Permitted	Permitted	Permitted.
Dichlorodifluoromethane *Vapors very much heavier than air.* *Non-Poisonous. Non-Inflammable.* *Excessive quantities in an enclosed space may cause suffocation.* *Odorless.* *Decomposes when passed through flames evolving hydrochloric and hydrofluoric acid fumes which are toxic.* *Pressure about 180 lbs. at 130° F.* Accept in ICC cylinders only.	Green gas	Permitted	Permitted	Permitted	Permitted.

147.05-100 Table S.—Classification: Ships' stores and supplies of a dangerous nature—Continued

Descriptive name of article	Characteristic properties precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Refrigerants—Continued.	Dichlorotetrafluoroethane.. *Vapors very much heavier than air.* *Non-Poisonous. Non-inflammable.* *Excessive quantities in an enclosed space may cause suffocation.* *Odorless.* *Decomposes when passed through flames evolving hydrochloric and hydrofluoric acid fumes which are toxic.* *Pressure about 18.8 lbs. at 70° F.* *Pressure about 57 lbs. at 130° F.* Accept in ICC cylinders only.	No label required..	Permitted	Permitted	Permitted	Permitted.
	Dichloromonofluoromethane. *Practically non-inflammable.* *Vapors very much heavier than air.* *Toxic in concentrations above 2.5% upon exposure for more than 2 hours.* *Odorless.* *Decomposes when passed through flames evolving hydrochloric and hydrofluoric acid fumes which are toxic.* *Pressure about 8.5 lbs. at 70° F.* *Pressure about 50 lbs. at 130° F.* Accept in ICC cylinders only.	No label required..	Permitted	Permitted	Permitted	Permitted

	Trichloromonofluoromethane. *Non-inflammable.* *Vapors very much heavier than air.* *Excessive quantities in an enclosed space may cause suffocation.* *Odorless.* *Decomposes when passed through flames evolving hydrochloric and hydrofluoric acid fumes which are toxic.* *Pressure minus 1.3 lbs. gauge at 70° F.* *Pressure about 24 lbs. at 130° F.* Accept in ICC 5A Drums only.	No label required.	Permitted.	Permitted.	Permitted.	Permitted.
	Trichlorotrifluoroethane. *Non-inflammable.* *Vapors very much heavier than air.* *Excessive quantities in an enclosed space may cause suffocation.* *Odorless.* *Decomposes.* *Pressure minus 8 lbs. gage at 80° F.* *Pressure about 4 lbs. at 130° F.* Accept in ICC 5A Drums only.	No label required.	Permitted.	Permitted.	Permitted.	Permitted.
Ships' signal and emergency equipment.						
Cartridges for line-throwing gun (shoulder type).	A metallic case containing primer and powder in one unit and discharged by percussion. *The hazard of such cartridges is nil.* Protect from fire.	No label required	Stowage: Within the box containing the line gun and its equipment, and stowed at the discretion of the master.	Stowage: Within the box containing the line gun and its equipment, and stowed at the discretion of the master.	Not carried as emergency equipment on ferry vessels.	Not carried as emergency equipment on car ferries
Distress signal rockets.	Rockets or shells throwing stars of any color or description.	No label required.	Stowage: Vessel's magazine chest. Container: A watertight metal case constructed of copper of not less than No. 22 B. W. G. thickness, seams lock-jointed and soldered. The cover or top may be of cast brass not less than 1/8" thickness, or of reinforced copper, and shall have a fitted gasket together with threaded means, clamps or dogs to provide a W. T. seal (Bayonet type closing means not permitted). The cover shall be easily removable without recourse to tools. The case shall have a capacity of not less than 6 rockets.	Stowage: Vessel's magazine chest.	Not carried as emergency equipment on ferry vessels.	Not carried as emergency equipment on car ferries.

147.05–100 Table S.—Classification: Ships' stores and supplies of a dangerous nature—Continued

Descriptive name of article	Characteristic properties, precautions required, markings required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessel	Ferry vessel, passenger or vehicle	R. R. car ferry, passenger or vehicle
Ships' signal and emergency equipment—Con.						
Friction primers for line-throwing gun (mounted-type gun).	A copper tube primer with friction means for ignition. Protect from heat and shock. Keep enclosed in separate container and packed in sawdust or similar shock-absorbing material.	No label required.	Stowage: Vessel's magazine chest. Container: Metal tin with hinged friction cover.	Stowage: Vessel's magazine chest. Container: Metal tin with hinged friction cover.	Not carried as emergency equipment on ferry vessels.	Not carried as emergency equipment on car ferries.
Powder charges for line-throwing gun (mounted-type gun).	Powder charges used in propelling lifeline, consisting of not more than five ounces of powder enclosed in a fabric bag.	No label required.	Stowage: Vessel's magazine chest. Container: Metal cans having friction top closing means.	Stowage: Vessel's magazine chest. Container: Metal cans having friction top closing means.	Not carried as emergency equipment on ferry vessels.	Not carried as emergency equipment on car ferries.
Self-igniting pilot lights (blue flares).	A flare signal light used for signaling for a pilot.	No label required.	Stowage: Vessel's magazine chest. Containers: The container shall be constructed of 18-ounce, or No. 22 B. W. G. copper, or equal noncorrodible metal, lock-jointed and soldered, the bottom to be rolled in and soldered. The cover or top of cast brass not less than ⅛-inch in thickness and 5 inches in diameter shall be so constructed as to be easily removed, and made watertight by a fitted rubber gasket.	Stowage: Vessel's magazine chest. Containers: The container shall be constructed of 18-ounce, or No. 22 B. W. G. copper, or equal noncorrodible metal, lock-jointed and soldered, the bottom to be rolled in and soldered. The cover or top of cast brass not less than ⅛-inch in thickness and 5 inches in diameter shall be so constructed as to be easily removed, and made watertight by a fitted rubber gasket.	Not carried as emergency equipment on ferry vessels.	Not carried as emergency equipment on car ferries.

Self-igniting red lights. Distress lights. Distress signals.	Signal lights furnished as equipment in lifeboats, life rafts and in pilot house or navigating bridge.	No label required.	Stowage: In place within the lifeboat or life raft or buoyant apparatus. Additional lights may be stowed in the pilot house or navigating bridge. Container: The container shall be constructed of 18-ounce, or No. 22 B. W. G. copper, or equal noncorrodible metal, lock-jointed and soldered, the bottom to be rolled in and soldered. The cover or top of cast brass not less than ⅛-inch in thickness and 5 inches in diameter shall be so constructed as to be easily removed, and made watertight by a fitted rubber gasket.	Stowage: In place within the lifeboat or life raft or buoyant apparatus. Additional lights may be stowed in the pilot house or navigating bridge. Container: The container shall be constructed of 18-ounce, or No. 22 B. W. G. copper, or equal noncorrodible metal, lock-jointed and soldered, the bottom to be rolled in and soldered. The cover or top of cast brass not less than ⅛-inch in thickness and 5 inches in diameter shall be so constructed as to be easily removed, and made watertight by a fitted rubber gasket.	Not carried as emergency equipment on ferry vessels.	Stowage: In place within the lifeboat, life raft and pilot house. Container: The container shall be constructed of 18-ounce, or No. 22 B. W. G. copper, or equal noncorrodible metal, lock-jointed and soldered, the bottom to be rolled in and soldered. The cover or top of cast brass not less than ⅛-inch in thickness and 5 inches diameter shall be so constructed as to be easily removed, and made watertight by a fitted rubber gasket.
Signal pistol cartridges	An approved signal pistol outfit consisting of an approved pistol with lanyard attached and 12 approved parachute signal cartridges, both contained in an approved portable water-tight metal case.	No label required.	Stowage: In place in the emergency and motor lifeboats. Additional flares may be stowed in a location discretionary with the master.	Stowage: In place in the emergency and motor lifeboats. Additional flares may be stowed in a location discretionary with the master.	Not carried as emergency equipment on ferry vessels.	Not carried as emergency equipment on ferry vessels.
Water lights. Ring buoy flares. Life raft flares.	A cylinder constructed in accordance with the regulations of the Commandant of the Coast Guard loaded with a composition of calcium carbide and calcium phosphide designed to produce a brilliant light, without explosion, when in contact with water.	No label required.	Stowage: In place attached to ring buoys, life rafts, and buoyant apparatus as required by Commandant of the Coast Guard. Spares shall be stowed in vessel's magazine chest. Containers: Copper cylinders to specifications of, and approved by Commandant of the Coast Guard.	Stowage: In place attached to ring buoys, life rafts, and buoyant apparatus as required by Commandant of the Coast Guard. Spares shall be stowed in vessel's magazine chest. Containers: Copper cylinders to specifications of, and approved by Commandant of the Coast Guard.	Stowage: In place attached to ring buoys, life rafts, as required by Commandant of the Coast Guard. Spares shall be stowed in vessel's magazine chest. Containers: Copper cylinders to specifications of, and approved by Commandant of the Coast Guard.	Stowage: In place attached to ring buoys, life rafts, as required by Commandant of the Coast Guard. Spares shall be stowed in vessel's magazine chest. Containers: Copper cylinders to specifications of, and approved by Commandant of the Coast Guard.

ARMING OF UNITED STATES MERCHANT CARGO VESSELS

147.06–1 Authorization.—Armed cargo vessels of the United States may accept, transport, carry, convey, store, stow or use such high explosives as are necessary for such armament when said high explosives are accepted, transported, carried, conveyed, stored, stowed, or used in accordance with the provisions of §§ 147.02–2 to 147.06–5, inclusive.

147.06–2 Storage of high explosives.—Magazines shall be provided on board the vessel for the storage of high explosive ammunition (either fixed or separate loaded). Magazines may be located in an upper tween deck or a shelter deck cargo space, or in any other compartment below the weather deck, and adjacent to the gun mount, provided such magazines are not located over, under or adjacent to passenger spaces. The maximum separation possible shall be maintained between any magazine and any space allotted to the use of passengers or crew. Magazines shall not be constructed in bearing with the collision bulkhead nor with a bulkhead forming a boiler room, engine room, coal bunker or galley boundary. If it is necessary to construct such magazines in proximity to these bulkheads, a cofferdam space of at least 4 feet shall be provided between the bulkhead and the magazine side. Consistent with the above restrictions magazines shall be constructed in locations selected by the Navy Department. A "ready" supply of shells may be stowed in "ready boxes" on deck adjacent to the gun mount. These "ready boxes" shall be as provided by, or constructed to a design furnished by, the Bureau of Ships, Navy Department.

147.06–3 Storage of small-arms ammunition.—Small-arms ammunition having all the component parts necessary for one firing, all in one assembly, may be stowed in boxes or lockers in a location adjacent to the gun mounts, such location to be selected by the Navy Department. Boxes or lockers for the stowage of small-arms ammunition shall be as provided by, or constructed to a design furnished by, the Bureau of Ships, Navy Department.

147.06–4 Care of ammunition.—The loading, stowage, handling and use of all ammunition intended for the guns mounted on the vessel shall be under the control of the commander of the armed guard or other representative of the Navy Department.

147.06–5 Construction of magazines.—Magazines shall be constructed in accordance with specifications furnished by, or approved by the Bureau of Ships, Navy Department.

[Order No. 167]

Order Exempting Armed Merchant Passenger-Carrying Vessels of the United States From Certain Provisions of Subsection (4) of R. S. 4472 as Amended

Pursuant to the authority vested in the Secretary of Commerce by section 4472 of the Revised Statutes, as amended, the following findings relative to the acceptance, transportation, carriage, conveyance, storage, stowage or use on board armed merchant passenger-carrying vessels of the United States of high explosives and an exemption of such vessels from certain of the provisions of subsection (4) of R. S. 4472, as amended, are hereby promulgated.

Acting upon representations made to the Department, I have caused an investigation to be made and as a result thereof I find that in the interest of our national defense, and notwithstanding the provisions of subsection (4) of R. S. 4472, as amended, it is essential to the safety of merchant passenger-carrying vessels of the United States that such vessels as are armed be authorized to accept, transport, carry, convey,

store, stow, or use on board in connection with such arming certain high explosives. I further find that such explosives may be accepted, transported, carried, conveyed, stored, stowed or used on board these vessels with safety, provided such acceptance, transportation, carriage conveyance, storage, stowage, or use is carried out in accordance with the provisions contained in §§ 147.06–2 to 147.06–5, inclusive, of the regulations governing explosives or other dangerous articles on board vessels. Because of the existing situation with regard to the national emergency, I also find it essential to take action to make this authorization effective immediately.

Therefore, it is ordered, That under the authority contained in subsection (11), and under the emergency provisions of said subsection of R. S. 4472, as amended (46 U. S. C.; Sup. 170), that armed merchant passenger-carrying vessels of the United States shall be exempt from the application of the provisions of subsection (4) of R. S. 4472, as amended; to the extent that such vessels may accept, transport, carry, convoy, store, stow, or use on board such high explosives as are necessary for such armament when said high explosives are accepted, transported, carried, conveyed, stored, stowed, or used in accordance with the provisions of §§ 147.06–2 to 147.06–5, inclusive, of the regulations governing explosives or other dangerous articles on board vessels.

APPENDIX

[PUBLIC—NO. 809—76TH CONGRESS]

[CHAPTER 777—3D SESSION]

[H. R. 7357]

AN ACT

To amend section 4472 of the Revised Statutes (U. S. C., 1934 edition, title 46, sec. 465) to provide for the safe carriage of explosives or other dangerous or semidangerous articles or substances on board vessels; to make more effective the provisions of the International Convention for Safety of Life at Sea, 1929, relating to the carriage of dangerous goods; and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 4472 of title 52 of the Revised Statutes, as amended (U. S. C., 1934 edition, title 46, sec. 465), is hereby amended to read as follows:

"SEC. 4472. (1) The word 'vessel' as used in this section shall include every vessel, domestic or foreign, regardless of character, tonnage, size, service, and whether self-propelled or not, on the navigable waters of the United States, including its Territories and possessions, but not including the Panama Canal Zone and the Philippine Islands, whether arriving or departing, or under way, moored, anchored, aground, or while in drydock; it shall not include any public vessel which is not engaged in commercial service, nor any vessel subject to the provisions of section 4417a of the Revised Statutes, as amended, which is constructed or converted for the principal purpose of carrying inflammable or combustible liquid cargo in bulk in its own tanks: *Provided*, That the provisions of subsection (3) of this section shall apply to every such vessel subject to the provisions of section 4417a of the Revised Statutes, as amended, which is constructed or converted for the principal purpose of carrying inflammable or combustible liquid cargo in bulk in its own tanks.

"(2) The phrase 'passenger-carrying vessel' as used in this section, when applied to a vessel subject to any provision of the International Convention for Safety of Life at Sea, 1929, means a vessel which carries or is authorized to carry more than twelve passengers.

"(3) It shall be unlawful knowingly to transport, carry, convey, store, stow, or use on board any vessel fulminates or other detonating compounds in bulk in dry condition, or explosive compositions that ignite spontaneously or undergo marked decomposition when subjected for forty-eight consecutive hours to a temperature of one hundred and sixty-seven degrees Fahrenheit, or compositions containing an ammonium salt and a chlorate, or other like explosives.

"(4) It shall be unlawful knowingly to transport, carry, convey, store, stow, or use on board any passenger-carrying vessel any high explosives such as, and including, liquid nitroglycerin, dynamite, trinitrotoluene, picrates, detonating fuzes, fireworks that can be exploded en masse, or other explosives susceptible to detonation by a blasting cap or detonating fuze, except ships' signal and emergency equipment, and samples of such explosives (but not including liquid nitroglycerin) for laboratory or sales purposes in restricted quantities as may be permitted by regulations of the Secretary of Commerce established hereunder.

"(5) It shall be unlawful knowingly to transport, carry, convey, store, stow, or use on board any vessel other than a passenger-carrying vessel, any high explosive referred to in subsection (4) hereof except as permitted by the regulations of the Secretary of Commerce established hereunder.

"(6) (a) It shall be unlawful knowingly to transport, carry, convey, store, stow, or use (except as fuel for its own machinery) on board any vessel, except one specifically exempted by paragraph (b) of this subsection, any other explosives or other dangerous articles or substances, including inflammable liquids, inflammable solids, oxidizing materials, corrosive liquids, compressed gases, poisonous articles or substances, hazardous articles, and ships' stores and supplies of a dangerous nature, except as permitted by the regulations of the Secretary of Commerce established hereunder: *Provided*, That all of the provisions of this subsection relating to the transportation, carrying, conveying, storing, stowing, or use of explosives or other dangerous articles or substances shall apply to the transportation, carrying, conveying, storing, stowing, or using on board any passenger vessel of any barrels, drums, or other packages of any combustible liquid which gives off inflammable vapors (as determined by flash-point in open cup tester as used for test of burning oil) at or below a temperature of one hundred and fifty degrees Fahrenheit and above eighty degrees Fahrenheit.

"(b) This subsection shall not apply to—

"(i) vessels not exceeding fifteen gross tons when not engaged in carrying passengers for hire;

"(ii) vessels used exclusively for pleasure;

"(iii) vessels not exceeding five hundred gross tons while engaged in the fisheries;

"(iv) tugs or towing vessels: *Provided, however*, That any such vessel, when engaged in towing any vessel that has explosives, inflammable liquids, or inflammable compressed gases on board on deck, shall be required to make such provisions to guard against and extinguish fire as shall be prescribed by the Board of Supervising Inspectors and approved by the Secretary of Commerce;

"(v) cable vessels, dredges, elevator vessels, fireboats, icebreakers, pile drivers, pilot boats, welding vessels, salvage and wrecking vessels;

"(vi) inflammable or combustible liquid cargo in bulk: *Provided, however*, That the handling and stowage of any inflammable or combustible liquid cargo in bulk shall be subject to the provisions of section 4417a of the Revised Statutes, as amended.

"(7) In order to secure effective provisions against the hazards of health, life, limb, or property created by explosives or other dangerous articles or substances to which subsection (3), (4), (5), or (6) of this section apply—

"(a) The Secretary of Commerce shall by regulations define, describe, name, and classify all explosives or other dangerous articles or substances, and shall establish such regulations as may be necessary to make effective the provisions of this section with respect to the descriptive names, packing, marking, labeling, and certification of such explosives or other dangerous articles or substances; with respect to the specifications of containers for explosives or other dangerous articles or substances; with respect to the marking and labeling of said containers; and shall accept and adopt for the purposes above mentioned in this subsection such definitions, descriptions, descriptive names, classifications, specifications of containers, packing, marking, labeling, and certification of explosives or other dangerous articles or substances to the extent as are or may be established from time to time by the Interstate Commerce Commission insofar as they apply to shippers by common carriers engaged in interstate or foreign commerce by water. The Secretary of Commerce shall also establish regulations with respect to the marking, handling, storage, stowage, and use of explosives or other dangerous articles or substances on board such vessels; with respect to the disposition of any explosives or other dangerous articles or substances found to be in an unsafe condition; with respect to the necessary shipping papers, manifests, cargo-stowage plans, and the description and descriptive names of explosives or other dangerous articles or substances to be entered in such shipping documents; also any other regulations for the safe transportation, carriage, conveyance, storage, stowage, or use of explosives or other dangerous articles or substances on board such vessels as the Secretary of

Commerce shall deem necessary; and with respect to the inspection of all the foregoing mentioned in this paragraph. The Secretary of Commerce may utilize the services of the Bureau for the Safe Transportation of Explosives and Other Dangerous Articles, and of such other organizations whose services he may deem to be helpful.

"(b) The transportation, carriage, conveyance, storage, stowage, or use of such explosives or other dangerous articles or substances shall be in accordance with the regulations so established, which shall, insofar as applicable to them, respectively, be binding upon shippers and the owners, charterers, agents, masters, or persons in charge of such vessels, and upon all other persons transporting, carrying, conveying, storing, stowing, or using on board any such vessels any explosives or other dangerous articles or substances: *Provided*, That this section shall not be construed to prevent the transportation of military or naval forces with their accompanying munitions of war and stores.

"(c) Nothing contained in this section shall be construed to relieve any vessel subject to the provisions of this section from any other of the requirements of title 52 (secs. 4399 to 4500, inclusive) of the Revised Statutes or Acts amendatory or supplementary thereto and regulations thereunder applicable to such vessel, which are not inconsistent herewith.

"(d) Nothing contained in this section shall be construed as preventing the enforcement of reasonable local regulations now in effect or hereafter adopted, which are not inconsistent or in conflict with this section or the regulations of the Secretary of Commerce established hereunder.

"(8) Any master, owner, charterer, or agent shall refuse to transport any explosives or other dangerous articles or substances in violation of any provisions of this section and the regulations established thereunder, and may require that any container or package which he has reason to believe contains explosives or other dangerous articles or substances be opened to ascertain the facts.

"(9) Before any regulations or any additions, alterations, amendments, or repeals thereof are made under the provisions of this section, except in an emergency, such proposed regulations shall be published and public hearings with respect thereto shall be held on such notice as the Secretary of Commerce deems advisable under the circumstances. Any additions, alterations, amendments, or repeals of such regulations shall, unless a shorter time is authorized by the Secretary of Commerce, take effect ninety days after their promulgation.

"(10) It shall be unlawful knowingly to deliver or cause to be delivered, or tender for shipment to any vessel subject to this section any explosives or any other dangerous articles or substances defined in the regulations of the Secretary of Commerce established hereunder under any false or deceptive descriptive name, marking, invoice, shipping paper, or other declaration and without informing the agent of such vessel in writing of the true character thereof at or before the time such delivery or transportation is made. It shall be unlawful for any person to tender for shipment, or ship on any vessel to which this section applies, any explosives or other dangerous articles or substances, the transportation, carriage, conveyance, storage, stowage, or use of which on board vessels is prohibited by this section.

"(11) The Secretary of Commerce may exempt any vessel or class of vessels from any of the provisions of this section or any regulations or parts thereof established hereunder upon a finding by him that the vessel, route, area of operations, conditions of the voyage, or other circumstances are such as to render the application of this section or any of the regulations established hereunder unnecessary for the purposes of safety: *Provided*, That except in an emergency such exception shall be made for any vessel or class of vessels only after a public hearing.

"(12) The provisions of this section and the regulations established hereunder shall be enforced primarily by the Bureau of Marine Inspection and Navigation of theDepartment of Commerce and the Coast Guard of the Department of the Treasury; and the Secretary of Commerce, with the consent of the head of any executive department, independent establishment, or other agency of the Government, may avail himself of the use of information, advice, services, facilities, officers, and employees thereof (including the

field service) in carrying out the provisions of this section: *Provided*, That no officer or employee of the United States shall receive any additional compensation for such services, except as permitted by law.

"(13) Any collector of customs may, upon his own knowledge, or upon the sworn information of any reputable citizen of the United States, that any vessel subject to this section is violating any of the provisions of this section or of the regulations established hereunder, by written order served on the master, person in charge of such vessel, or the owner or charterer thereof, or the agent of the owner or charterer, detain such vessel until such time as the provisions of this section and of the regulations established hereunder have been complied with. If the vessel be ordered detained, the master, person in charge, or owner or charterer, or the agent of the owner or charterer thereof, may within five days appeal to the Secretary of Commerce, who may, after investigation, affirm, set aside, or modify the order of such collector. If any reputable citizen of the United States furnishes sworn information to any collector of customs that any vessel, subject to this section, is violating any of the provisions of this section or of the regulations established hereunder, and such information is knowingly false, the person so falsely swearing shall be deemed guilty of perjury.

"(14) Whoever shall knowingly violate any of the provisions of this section or of any regulations established under this section shall be subject to a penalty of not more than $2,000 for each violation. In the case of any such violation on the part of the owner, charterer, agent, master, or person in charge of the vessel, such vessel shall be liable for the penalty and may be seized and proceeded against by way of libel in the district court of the United States in any district in which such vessel may be found.

"(15) When the death or bodily injury of any person results from the violation of this section or any regulations made in pursuance thereof, the person or persons who shall have knowingly violated or caused to be violated such provisions or regulations shall be fined not more than $10,000 or imprisoned not more than ten years, or both.

"(16) The transportation by vessels of gasoline or any other inflammable or combustible liquid or inflammable gas when carried by motor vehicles using the same as a source of their own motive power, or motive power for driving auxiliaries forming a part of the vehicle, shall be lawful under the conditions as set forth in the regulations established by the Secretary of Commerce under this section: *Provided, however*, That the motor or motors in any vehicle be stopped immediately after entering the said vessel, and that the same be not restarted until immediately before said vehicle shall leave the vessel after said vessel has been made fast to the wharf or ferry bridge at which she lands. All other fire, if any, in such vehicle shall be extinguished before entering the said vessel and the same shall not relighted until after said vehicle shall leave the vessel: *Provided further*, That the Secretary of Commerce, may, by regulation, permit the operation on board vessels of motive power for driving auxiliaries forming a part of motor vehicles, under such conditions as he may deem proper: *Provided further*, That any owner, charterer, agent, master, or other person having charge of a vessel shall have the right to refuse to transport motor vehicles the fuel tanks of which contain gasoline or other inflammable or combustible liquid or inflammable gas used as a source of power for the vehicle or its auxiliaries: *Provided further*, That the owner, motor carrier, and operator of any such vehicle in which all fires have not been extinguished or the motor or motors stopped as required by this subsection or regulations established thereunder, and the owner, charterer, agent, master, or person in charge of the vessel on which such vehicle is transported, shall each be liable to a penalty of not more than $500, for which the motor vehicle and vessel, respectively, shall be liable: *And provided further*, That a violation of this subsection shall not subject any person to the penalty provided in subsection (14) or (15) hereof."

SEC. 2. (a) Such provision to guard against and extinguish fire shall be made on every vessel which is subject to the provisions of subsection (4), (5), or (6) of Section 1 of this Act, or of any other section of title 52 of the Revised Statutes, as amended (sections 4399 to 4500, inclusive), or Acts amendatory or supplementary thereto, as shall be prescribed by the Board of Supervising Inspectors and approved by the Secretary of Commerce.

(b) Nothing herein contained shall prohibit the use by any vessel of motorboats, launches, or lifeboats equipped with engines using an inflammable or combustible fuel, nor shall anything herein contained prohibit such motorboats, launches, or lifeboats from carrying such inflammable or combustible fuel in their tanks: *Provided*, That no such inflammable or combustible fuel for the engines of such motorboats, launches, or lifeboats shall be carried except as may be prescribed by regulations of the Board of Supervising Inspectors with the approval of the Secretary of Commerce: *Provided further*, That the use of such lifeboats shall be under such regulations as shall be prescribed by the Board of Supervising Inspectors with the approval of the Secretary of Commerce.

SEC. 3. Section 4417a of the Revised Statutes (U. S. C., 1934 edition, title 46, Sup. V, sec. 391a) is hereby amended by deleting from paragraph 2 thereof the following proviso: "Provided: That the provisions of this section shall not apply to common carriers engaged in interstate or foreign commerce which transport such liquid cargo by water insofar only as such common carriers are subject to the regulations formulated by the Interstate Commerce Commission under the provisions of section 233 of the Act of March 4, 1909 (ch. 321, 35 Stat. 1135), as amended (18 U. S. C. 383)"; and by amending the second proviso in paragraph 4 thereof to read as follows: "*And provided further*, That no permit shall be issued under the provisions of this section authorizing the presence on board any vessel of any of the materials expressly prohibited from being thereon by subsection (3) of section 4472 of the Revised Statutes, as amended".

SEC. 4. Section 4424 of the Revised Statutes, as amended (U. S. C., 1934 edition, title 46, sec. 402), is amended by deleting the words "or whenever any passenger steam vessel receives or carries any gunpowder on board, not having a certificate authorizing the same, placed and kept as required, or shall carry any gunpowder at a place or in a manner not authorized by such certificate".

SEC. 5. Section 4457 of the Revised Statutes (U. S. C., 1934 edition, title 46, sec. 414) is amended by deleting the words "certificates authorizing gunpowder to be carried as freight by any steamer carrying passengers, and of".

SEC. 6. Sections 232, 233, 234, and 235 of the Criminal Code, as amended (U. S. C., 1934 edition, title 18, secs. 382 to 385, inclusive), are amended:

(a) By striking out "vessel" and "vessels" wherever appearing in sections 232, 234, and 235;

(b) By striking out "or water" where first appearing in section 233; and

(c) By striking out "or water" where last appearing in section 235.

SEC. 7. Sections 4278, 4279, and 4280 of the Revised Statutes (U. S. C., 1934 edition, title 46, secs. 172, 173, 174); section 4288 of the Revised Statutes, as amended (U. S. C., 1934 edition, title 46, sec. 175); the Act of August 26, 1935 (U. S. C., 1934 edition, title 46, Supp. V, secs. 178, 179); sections 4422, as amended, 4473, 4475, and 4476 of the Revised Statutes (U. S. C., 1934 edition, title 46, secs. 401, 466, 468, and 469) are hereby repealed.

SEC. 8. There are hereby authorized to be appropriated such sums of money as may be necessary to carry out the provisions of this Act.

SEC. 9. This Act shall become effective six months after the date of approval, except as to subsection (7) of section 1 hereof, which subsection shall become effective on the date of approval. Such initial regulations as may be necessary to make the Act effective shall be promulgated within ninety days from the date of approval hereof: *Provided, however*, That during any national emergency proclaimed by the President, he may, in his discretion, accelerate any or all provisions of this section.

SEC. 10. If any provision of this Act, or the application thereof to any person or circumstance is held invalid, the remainder of the Act, and the application of the provisions thereof, shall not be affected thereby.

Approved, October 9, 1940.

SEC. 385. (Criminal Code, section 235, amended.) Every package containing explosives or other dangerous articles when presented to a common carrier for shipment shall have plainly marked on the outside thereof the contents thereof; and it shall be unlawful for any person to deliver, or cause to be delivered, to any common carrier engaged in interstate or foreign commerce by land or water, or to carry upon any car, or vehicle operated by any common carrier engaged in interstate or foreign commerce by land any explosive, or other dangerous article, as specified in section 383 of this title, under any false or deceptive marking, description, invoice, shipping order, or other declaration, or without informing the agent of such carrier in writing of the true character thereof, at or before the time such delivery or carriage is made. Whoever shall knowingly violate, or cause to be violated, any provision of this section, or of sections 382 to 384 of this title, or any regulation made by the Interstate Commerce Commission in pursuance thereof, shall be fined not more than $2,000 or imprisoned not more than eighteen months, or both. (R. S. Sec. 5355; May 30, 1908, c. 234, sections 4, 5, 35 Stat. 555; Mar. 4, 1909, c. 321, sec. 235, 35 Stat. 1135; Mar. 4, 1921, c. 172, 41 Stat. 1445; Sec. 6, Act of Oct. 9, 1940, Public, No. 809, 76th Congress, 54 Stat. 1023.)

SEC. 386. (Criminal Code, section 236, amended.) When the death or bodily injury of any person results from the violation of sections 382 to 385 of this title, or any regulation made by the Interstate Commerce Commission in pursuance thereof, the person or persons who shall have so knowingly violated, or cause to be violated, such provision or regulation, shall be fined not more than $10,000, or imprisoned not more than ten years, or both. (R. S. sec. 5354; Mar. 4, 1909, c. 321, sec. 236, 35 Stat. 1136; Mar. 4, 1921, c. 172, 41 Stat. 1445.)

[PUBLIC—NO. 521—74TH CONGRESS]

[S. 1152]

AN ACT

Relating to the carriage of goods by sea.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That every bill of lading or similar document of title which is evidence of a contract for the carriage of goods by sea to or from ports of the United States, in foreign trade, shall have effect subject to the provisions of this Act.

TITLE I

SECTION 1. When used in this Act—

(a) The term "carrier" includes the owner or the charterer who enters into a contract of carriage with a shipper.

(b) The term "contract of carriage" applies only to contracts of carriage covered by a bill of lading or any similar document of title, insofar as such document relates to the carriage of goods by sea, including any bill of lading or any similar document as aforesaid issued under or pursuant to a charter party from the moment at which such bill of lading or similar document of title regulates the relations between a carrier and a holder of the same.

(c) The term "goods" includes goods, wares, merchandise, and articles of every kind whatsoever, except live animals and cargo which by the contract of carriage is stated as being carried on deck and is so carried.

(d) The term "ship" means any vessel used for the carriage of goods by sea.

(e) The term "carriage of goods" covers the period from the time when the goods are loaded on to the time when they are discharged from the ship.

RISKS

SEC. 2. Subject to the provisions of section 6, under every contract of carriage of goods by sea, the carrier in relation to the loading, handling, stowage, carriage, custody, care, and discharge of such goods, shall be subject to the responsibilities and liabilities and entitled to the rights and immunities hereinafter set forth.

RESPONSIBILITIES AND LIABILITIES

SEC. 3. (1) The carrier shall be bound, before and at the beginning of the voyage, to exercise due diligence to—

(a) Make the ship seaworthy;

(b) Properly man, equip, and supply the ship;

(c) Make the holds, refrigerating and cooling chambers, and all other parts of the ship in which goods are carried, fit and safe for their reception, carriage, and preservation.

(2) The carrier shall properly and carefully load, handle, stow, carry, keep, care for, and discharge the goods carried.

(3) After receiving the goods into his charge the carrier, or the master or agent of the carrier, shall, on demand of the shipper, issue to the shipper a bill of lading showing among other things—

(a) The leading marks necessary for identification of the goods as the same are furnished in writing by the shipper before the loading of such goods starts, provided such marks are stamped or otherwise shown clearly upon the goods if uncovered, or on the cases or coverings in which such goods are contained, in such a manner as should ordinarily remain legible until the end of the voyage.

(b) Either the number of packages or pieces, or the quantity or weight, as the case may be, as furnished in writing by the shipper.

(c) The apparent order and condition of the goods: *Provided*, That no carrier, master, or agent of the carrier, shall be bound to state or show in the bill of lading any marks, number, quantity, or weight which he has reasonable ground for suspecting not accurately to represent the goods actually received, or which he has had no reasonable means of checking.

(4) Such a bill of lading shall be prima facie evidence of the receipt by the carrier of the goods as therein described in accordance with paragraphs (3) (a), (b), and (c), of this section: *Provided*, That nothing in this Act shall be construed as repealing or limiting the application of any part of the Act, as amended, entitled "an Act relating to bills of lading in interstate and foreign commerce", approved August 29, 1916 (U. S. C., title 49, secs. 81–124), commonly known as the "Pomerene Bills of Lading Act."

(5) The shipper shall be deemed to have guaranteed to the carrier the accuracy at the time of shipment of the marks, number, quantity, and weight, as furnished by him; and the shipper shall indemnify the carrier against all loss, damages, and expenses arising or resulting from inaccuracies in such particulars. The right of the carrier to such indemnity shall in no way limit his responsibility and liability under the contract of carriage to any person other than the shipper.

(6) Unless notice of loss or damage and the general nature of such loss or damage be given in writing to the carrier or his agent at the port of discharge before or at the time of the removal of the goods into the custody of the person entitled to delivery thereof under the contract of carriage, such removal shall be prima facie evidence of the delivery by the carrier of the goods as described in the bill of lading. If the loss or damage is not apparent, the notice must be given within three days of the delivery.

Said notice of loss or damage may be endorsed upon the receipt for the goods given by the person taking delivery thereof.

The notice in writing need not be given if the state of the goods has at the time of their receipt been the subject of joint survey or inspection.

In any event the carrier and the ship shall be discharged from all liability in respect of loss or damage unless suit is brought within one year after delivery of the goods or the date when the goods should have been delivered: *Provided*, That if a notice of loss or damage, either apparent or concealed, is not given as provided for in this section, that fact shall not affect or prejudice the right of the shipper to bring suit within one year after the delivery of the goods or the date when the goods should have been delivered.

In the case of any actual or apprehended loss or damage the carrier and the receiver shall give all reasonable facilities to each other for inspecting and tallying the goods.

(7) After the goods are loaded the bill of lading to be issued by the carrier, master, or agent of the carrier to the shipper shall, if the shipper so demands, be a "shipped" bill of lading: *Provided*, That if the shipper shall have previously taken up any document of title to such goods, he shall surrender the same as against the issue of the "shipped" bill of lading, but at the option of the carrier such document of title may be noted at the port of shipment by the carrier, master, or agent with the name or names of the ship or ships upon which the goods have been shipped and the date or dates of shipment, and when so noted the same shall for the purpose of this section be deemed to constitute a "shipped" bill of lading.

(8) Any clause, covenant, or agreement in a contract of carriage relieving the carrier or the ship from liability for loss or damage to or in connection with the goods, arising from negligence, fault, or failure in the duties and obligations provided in this section, or lessening such liability otherwise than as provided in this Act, shall be null and void and of no effect. A benefit of insurance in favor of the carrier, or similar clause, shall be deemed to be a clause relieving the carrier from liability.

RIGHTS AND IMMUNITIES

SEC. 4. (1) Neither the carrier nor the ship shall be liable for loss or damage arising or resulting from unseaworthiness unless caused by want of due diligence on the part of the carrier to make the ship seaworthy, and to secure that the ship is properly manned, equipped, and supplied, and to make the holds, refrigerating and cool chambers, and all other parts of the ship in which goods are carried fit and safe for their reception, carriage, and preservation in accordance with the provisions of paragraph (1) of section 3. Whenever loss or damage has resulted from unseaworthiness, the burden of proving the exercise of due diligence shall be on the carrier or other persons claiming exemption under this section.

(2) Neither the carrier nor the ship shall be responsible for loss or damage arising or resulting from—

(a) Act, neglect, or default of the master, mariner, pilot, or the servants of the carrier in the navigation or in the management of the ship;

(b) Fire, unless caused by the actual fault or privity of the carrier;

(c) Perils, dangers, and accidents of the sea or other navigable waters;

(d) Act of God;

(e) Act of war;

(f) Act of public enemies;

(g) Arrest or restraint of princes, rulers, or people, or seizure under legal process;

(h) Quarantine restrictions;

(i) Act or omission of the shipper or owner of the goods, his agent or representative;

(j) Strikes or lockouts or stoppage or restraint of labor from whatever cause, whether partial or general: *Provided*, That nothing herein contained shall be construed to relieve a carrier from responsibility for the carrier's own acts;

(k) Riots and civil commotions;

(l) Saving or attempting to save life or property at sea;

(m) Wastage in bulk or weight or any other loss or damage arising from inherent defect, quality, or vice of the goods;

(n) Insufficiency of packing;

(o) Insufficiency or inadequacy of marks;

(p) Latent defects not discoverable by due diligence; and

(q) Any other cause arising without the actual fault and privity of the carrier and without the fault or neglect of the agents or servants of the carrier, but the burden of proof shall be on the person claiming the benefit of this exception to show that neither the actual fault or privity of the carrier nor the fault or neglect of the agents or servants of the carrier contributed to the loss or damage.

(3) The shipper shall not be responsible for loss or damage sustained by the carrier or the ship arising or resulting from any cause without the act, fault, or neglect of the shipper, his agents, or his servants.

(4) Any deviation in saving or attempting to save life or property at sea, or any reasonable deviation shall not be deemed to be an infringement or breach of this Act or of the contract of carriage, and the carrier shall not be liable for any loss or damage resulting therefrom: *Provided, however*, That if the deviation is for the purpose of loading or unloading cargo or passengers it shall, prima facie, be regarded as unreasonable.

(5) Neither the carrier nor the ship shall in any event be or become liable for any loss or damage to or in connection with the transportation of goods in an amount exceeding $500 per package lawful money of the United States, or in case of goods not shipped in packages, per customary freight unit, or the equivalent of that sum in other currency, unless the nature and value of such goods have been declared by the shipper before shipment and inserted in the bill of lading. This declaration, if embodied in the bill of lading, shall be prima facie evidence, but shall not be conclusive on the carrier.

By agreement between the carrier, master, or agent of the carrier, and the shipper another maximum amount than that mentioned in this paragraph may be fixed: *Provided*, That such maximum shall not be less than the figure above named. In no event shall the carrier be liable for more than the amount of damage actually sustained.

Neither the carrier nor the ship shall be responsible in any event for loss or damage to or in connection with the transportation of the goods if the nature or value thereof has been knowingly and fraudulently misstated by the shipper in the bill of lading.

(6) Goods of an inflammable, explosive, or dangerous nature to the shipment whereof the carrier, master or agent of the carrier, has not consented with knowledge of their nature and character, may at any time before discharge be landed at any place or destroyed or rendered innocuous by the carrier without compensation, and the shipper of such goods shall be liable for all damages and expenses directly or indirectly arising out of or resulting from such shipment. If any such goods shipped with such knowledge and consent shall become a danger to the ship or cargo, they may in like manner be landed at any place, or destroyed or rendered innocuous by the carrier without liability on the part of the carrier except to general average, if any.

SURRENDER OF RIGHTS AND IMMUNITIES AND INCREASE OF RESPONSIBILITIES AND LIABILITIES

SEC. 5. A carrier shall be at liberty to surrender in whole or in part all or any of his rights and immunities or to increase any of his responsibilities and liabilities under this Act, provided such surrender or increase shall be embodied in the bill of lading issued to the shipper.

The provisions of this Act shall not be applicable to charter parties; but if bills of lading are issued in the case of a ship under a charter party, they shall comply with the terms of this Act. Nothing in this Act shall be held to prevent the insertion in a bill of lading of any lawful provision regarding general average.

SPECIAL CONDITIONS

SEC. 6. Notwithstanding the provisions of the preceding sections, a carrier, master or agent of the carrier, and a shipper shall, in regard to any particular goods be at liberty to enter into any agreement in any terms as to the responsibility and liability of the carrier for such goods, and as to the rights and immunities of the carrier in respect of such goods, or his obligation as to seaworthiness (so far as the stipulation regarding seaworthiness is not contrary to public policy), or the care or diligence of his servants or

agents in regard to the loading, handling, stowage, carriage, custody, care, and discharge of the goods carried by sea: *Provided*, That in this case no bill of lading has been or shall be issued and that the terms agreed shall be embodied in a receipt which shall be a nonnegotiable document and shall be marked as such.

Any agreement so entered into shall have full legal effect: *Provided*, That this section shall not apply to ordinary commercial shipments made in the ordinary course of trade but only to other shipments where the character or condition of the property to be carried or the circumstances, terms, and conditions under which the carriage is to be performed are such as reasonably to justify a special agreement.

SEC. 7. Nothing contained in this Act shall prevent a carrier or a shipper from entering into any agreement, stipulation, condition, reservation, or exemption as to the responsibility and liability of the carrier or the ship for the loss or damage to or in connection with the custody and care and handling of goods prior to the loading on and subsequent to the discharge from the ship on which the goods are carried by sea.

SEC. 8. The provisions of this Act shall not affect the rights and obligations of the carrier under the provisions of the Shipping Act, 1916, or under the provisions of sections 4281 to 4289, inclusive, of the Revised Statutes of the United States, or of any amendments thereto; or under the provisions of any other enactment for the time being in force relating to the limitation of the liability of the owners of seagoing vessels.

TITLE II.

SECTION 9. Nothing contained in this Act shall be construed as permitting a common carrier by water to discriminate between competing shippers similarly placed in time and circumstances, either (a) with respect to their right to demand and receive bills of lading subject to the provisions of this Act; or (b) when issuing such bills of lading, either in the surrender of any of the carrier's rights and immunities or in the increase of any of the carrier's responsibilities and liabilities pursuant to section 5, title I, of this Act; or (c) in any other way prohibited by the Shipping Act, 1916, as amended.

SEC. 10. Section 25 of the Interstate Commerce Act is hereby amended by adding the following proviso at the end of paragraph 4 thereof: "*Provided, however*, That insofar as any bill of lading authorized hereunder relates to the carriage of goods by sea, such bill of lading shall be subject to the provisions of the Carriage of Goods by Sea Act."

SEC. 11. Where under the customs of any trade the weight of any bulk cargo inserted in the bill of lading is a weight ascertained or accepted by a third party other than the carrier or the shipper, and the fact that the weight is so ascertained or accepted is stated in the bill of lading, then, notwithstanding anything in this Act, the bill of lading shall not be deemed to be prima facie evidence against the carrier of the receipt of goods of the weight so inserted in the bill of lading, and the accuracy thereof at the time of shipment shall not be deemed to have been guaranteed by the shipper.

SEC. 12. Nothing in this Act shall be construed as superseding any part of the Act entitled "An Act relating to navigation of vessels, bills of lading, and to certain obligations, duties, and rights in connection with the carriage of property", approved February 13, 1893, or of any other law which would be applicable in the absence of this Act, insofar as they relate to the duties, responsibilities, and liabilities of the ship or carrier prior to the time when the goods are loaded on or after the time they are discharged from the ship.

SEC. 13. This Act shall apply to all contracts for carriage of goods by sea to or from ports of the United States in foreign trade. As used in this Act the term "United States" includes its districts, territories, and possessions: *Provided, however*, That the Philippine Legislature may by law exclude its application to transportation to or from ports of the Philippine Islands. The term "foreign trade" means the transportation of goods between the ports of the United States and ports of foreign countries. Nothing in this Act shall be held to apply to contracts for carriage of goods by sea between any port of the United States or its possessions, and any other port of the United States or its possessions: *Provided, however*, That any bill of lading or similar document of title which is evidence of a contract for the carriage of goods by sea between such ports, containing an express statement that it shall be subject to the provisions of this Act, shall be

subjected hereto as fully as if subject hereto by the express provisions of this Act: *Provided, further*, That every bill of lading or similar document of title which is evidence of a contract for the carriage of goods by sea from ports of the United States, in foreign trade, shall contain a statement that it shall have effect subject to the provisions of this Act.

SEC. 14. Upon the certification of the Secretary of Commerce that the foreign commerce of the United States in its competition with that of foreign nations is prejudiced by the provisions, or any of them, of title I of this Act, or by the laws of any foreign country or countries relating to the carriage of goods by sea, the President of the United States may, from time to time, by proclamation, suspend any or all provisions of title I of this Act for such periods of time or indefinitely as may be designated in the proclamation. The President may at any time rescind such suspension of title I hereof, and any provisions thereof which may have been suspended shall thereby be reinstated and again apply to contracts thereafter made for the carriage of goods by sea. Any proclamation of suspension or rescission of any such suspension shall take effect on a date named therein, which date shall be not less than ten days from the issue of the proclamation.

Any contract for the carriage of goods by sea, subject to the provisions of this Act, effective during any period when title I hereof, or any part thereof, is suspended, shall be subject to all provisions of law now or hereafter applicable to that part of title I which may have thus been suspended.

SEC. 15. This Act shall take effect ninety days after the date of its approval; but nothing in this Act shall apply during a period not to exceed one year following its approval to any contract for the carriage of goods by sea, made before the date on which this Act is approved, nor to any bill of lading or similar document of title issued, whether before or after such date of approval in pursuance of any such contract as aforesaid.

SEC. 16. This Act may be cited as the "Carriage of Goods by Sea Act."

Approved, April 16, 1936.

EXCERPT FROM THE MERCHANT MARINE ACT, 1920

Cargo vessels documented under the laws of the United States may carry not to exceed sixteen persons in addition to the crew between any ports or places in the United States or its Districts, Territories, or possessions, or between any such port or place and any foreign port, or from any foreign port to another foreign port, and such vessels shall not be held to be "passenger vessels" or "vessels carrying passengers" within the meaning of the inspection laws and the rules and regulations thereunder; *Provided*, That nothing herein shall be taken to exempt such vessels from the laws, rules, and regulations respecting life-saving equipment; *Provided further*, That when any such vessel carries persons other than the crew as herein provided for, the owner, agent, or master of the vessel shall first notify such persons of the presence on board of any dangerous articles, as defined by law, or of any other condition or circumstance which would constitute a risk of safety for passenger or crew.

The privilege bestowed by this section on vessels of the United States shall be extended in so far as the foreign trade is concerned to the cargo vessels of any nation which allows the like privilege to cargo vessels of the United States in trades not restricted to vessels under its own flag.

Failure on the part of the owner, agent, or master of the vessel to give such notice shall subject the vessel to a penalty of $500, which may be mitigated or remitted by the Secretary of Commerce upon a proper representation of the facts. (Sec. 26, Act of June 5, 1920, 41 Stat. 998.)

[Order No. 190]

SUBCHAPTER N—EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES, AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS

Part 146—Transportation or Storage of Explosives or Other Dangerous Articles or Substances, and Combustible Liquids on Board Vessels—Appendix

(Order Permitting Passenger-Carrying Vessels to Transport Military Supplies or Stores of a Dangerous Nature)

Pursuant to the authority vested in the Secretary of Commerce by section 4472 of the Revised Statutes, as amended, the following findings relative to the acceptance, transportation, carriage or conveyance of vehicles containing dangerous articles or substances on board certain classes of vessels and an exemption of such vessels from provisions of subsections (4) and (6) of R. S. 4472, as amended, and provisions of the regulations Governing Explosives or Other Dangerous Articles on Board Vessels, are hereby promulgated.

Acting upon representations made to the Bureau of Marine Inspection and Navigation, I have caused an investigation to be made, and as a result thereof I find that in the interest of the successful prosecution of the war, and notwithstanding the provisions of subsections (4) and (6) of R. S. 4472, as amended, it is essential that our Army and Navy be afforded the opportunity to move their military supplies and stores of a dangerous nature as freely as possible by utilizing existing water transportation facilities not at present available for such transportation because of the provisions of R. S. 4472, as amended, and the regulations promulgated thereunder. I further find that because of the type, packing and marking, the method of loading in the vehicle and the supervision exercised over shipments of munitions of war, such military supplies or stores may be accepted, transported, carried or conveyed in vehicles on board certain vessels with safety, provided such acceptance, transportation, carriage or conveyance is carried out in accordance with the provisions contained in this order. Because of the existing situation I also find it essential to take action to make this exemption and authorization effective immediately.

Therefore, it is ordered, That under the authority contained in subsection (11), and under the emergency provisions of said subsection of R. S. 4472, as amended (46 U. S. C.; 1940 ed. 170), passenger-carrying vessels constructed and equipped for, and normally engaged in, transporting highway or railroad vehicles shall be exempt from the application of the provisions of subsections (4) and (6) of R. S. 4472, as amended, and the provisions of the regulations promulgated thereunder to the extent that such vessels may accept, transport, carry or convey highway or railroad vehicles loaded with military supplies or stores of a dangerous nature when said highway or railroad vehicles are accepted, transported, carried or conveyed in accordance with the provisions of this order:

1. (a) Passenger-carrying vessels constructed and equipped for, and normally engaged in, transporting highway or railroad vehicles are exempt from the provisions of subsections (4) and (6) of R. S. 4472, as amended, and may accept, transport, carry or convey high explosives in compliance with the provisions of sections 2 and 3 of this order: *Provided, however,* This exemption shall not apply to the acceptance, transportation, carriage or conveyance of "Liquid nitroglycerin."

(b) Passenger-carrying vessels constructed and equipped for, and normally engaged in, transporting highway or railway vehicles are exempt from the provisions of Part 146 of the regulations of the Secretary of Commerce Governing Explosives or Other Dangerous Articles on Board Vessels, and may accept, transport, carry or convey high or any other explosives or other dangerous articles or substances included within the regulations, in compliance with the provisions of sections 2 and 3 of this order: *Provided, however,* This exemption shall not apply to the acceptance, transportation, carriage or conveyance of "Liquid nitroglycerin," "Initiating explosives in bulk in dry condition," "Unstable explosives," "Fireworks forbidden," or "Class A extremely dangerous poisons."

2. (a) The exemptions granted in section 1 shall be applicable when such substances are tendered to said vessel loaded in an Army or Navy vehicle, such vehicle being in the custody of and operated by personnel of the Army or Navy.

(b) The exemptions granted in section 1 shall be applicable when such substances are tendered to a vessel loaded in a commercial highway vehicle or railroad vehicle other than an Army or Navy vehicle or in a vehicle not in the custody or under the operation of personnel of the Army or Navy, provided a written request signed by a responsible officer of the Army or Navy for such transportation is presented to the vessel.

3. A passenger-carrying vessel transporting high or any other explosives or other dangerous articles or substances under the provisions of this order shall not transport passengers at the same time; *Provided, however*, That if, after notification of the presence aboard the vessel of such high or other explosives or other dangerous articles or substances, persons voluntarily elect to engage passage or enter upon said vessel, such persons may be transported as passengers. The notification referred to shall be given by the vessel's representatives prior to the time the person or persons actually engage passage or enter upon the vessel. The form of the notification shall include the following statement:

Because of military necessity certain provisions of law and regulations have been suspended and this vessel has been permitted and is carrying on this voyage military supplies or stores of a dangerous nature.

4. The provisions of this order are effective immediately and shall remain in effect for the duration of the war. (R. S. 4472, as amended; 46 U. S. C., 1940 ed. 170.)

Part 146—Transportation or Storage of Explosives or Other Dangerous Articles or Substances, and Combustible Liquids on Board Vessels

TEMPORARY AMENDMENTS TO REGULATIONS

146.28–1 Scope.—The regulations contained in the sections under the heading "Temporary Amendments to Regulations" are supplementary and amendatory to the regulations in Part 146 and are effective for the duration of the present war, except as hereafter modified or rescinded.

146.28–2 Reused single-trip containers.—Notwithstanding the provisions of § 146.05–10 (h), single-trip containers may for the duration of the present war be reused if retested and approved for service in accordance with the regulations of the Interstate Commerce Commission in effect at the time of shipment.

146.28–3 The Captain of the Port to establish conditions for loading and unloading cargo.—(a) Notwithstanding the provisions of § 146.20–15, the Captain of the Port may in his judgment authorize the loading or unloading of cargo on board a vessel after the loading and stowage of Class A dangerous explosives or Class B less dangerous explosives has been completed.

(b) The Captain of the Port shall set forth the conditions under which cargo permitted to be loaded under authority of the provisions of paragraph (a) of this section shall be handled and stowed on board a vessel. These conditions shall prescribe:

(1) Where the vessel may berth, moor or anchor to receive such cargo.

(2) Stipulate the equipment and appurtenances that shall be used in the loading of such cargo.

(3) If vessel's gear is stipulated, the condition of said gear will be subject to inspection by personnel of the office of the Captain of the Port.

(4) Stipulate the number of persons engaged in such loading and their occupational skill or experience.

(5) Authorize the particular stowage to be utilized on board the vessel and require that the means used in the stowage and securing of deck cargo be satisfactory.

(6) Stipulate any other conditions which in the judgment of the Captain of the Port are necessary to the safety and security of the vessel or the loading operations.

146.28–4 Authority to waive or relax regulations.—Upon receipt of a written application, the Captain of the Port may give consideration to the waiving of the provisions of § 146.06–8; § 146.06–9 (a) and (b); the first sentence of § 146.20–7; § 146.21–4; § 146.22–4; § 146.23–3; § 146.24–4; § 146.25–6; § 146.26–4; § 146.27–3; and is authorized to relax any of the provisions of said sections; imposing in lieu thereof such provisions as in his judgment are consistent with safe handling and stowage of the substances involved.

(10th Amend.—§§ 146.28–1 and 146.28–2 added—Feb. 1942)
(12th Amend.—§§ 146.28–3 and 146.28–4 added—May 1942
(3rd Rev.—Page printed to opposite hand—Sept. 194

146.28–5 Additional containers for cyanides.—Cyanide of calcium, solid, cyanides dry; cyanide mixtures, dry; cyanide of potassium, solid; and cyanide of sodium, solid; may in addition to the containers authorized in § 146.25–100 be accepted for transportation on board vessels when packed in the following containers: Plywood drums (ICC–22A, 22B), not over 200 pounds net weight. Fiber drums (ICC–21A) with one added ply of asphalt laminated kraft, not over 225 pounds net weight.

146.28–6 Additional containers for rubber scrap.—Rubber scrap without cotton or fabric, if ground, powdered, or granulated with rubber content exceeding 45 percent and rubber buffings from any grade of rubber, irrespective of the percentage of rubber content, may in addition to the containers authorized in § 146.22–100 also be accepted for transportation on board cargo vessels, ferry vessels (passenger or vehicle), and railroad car ferries (passenger or vehicle) when packed in: Wooden barrels or kegs (ICC–10A); fiberboard boxes (ICC–12B); fiber drums (ICC–21A); wooden drums (ICC–22A); tank cars tightly and securely closed.

146.28–7 Additional type tank cars for gasoline.—Gasoline may, in addition to the tank cars prescribed in § 146.21–100, also be accepted in tank cars specifications Emergency USG–A, USG–B and USG–C.

146.28–8 Additional containers for gasoline.—Gasoline shipments offered by or consigned to the War and Navy Departments or the United States Government or governments of any country whose defense is deemed vital to the defense of the United States may, in addition to the containers authorized in § 146.21–100, also be accepted in metal barrels or drums (ICC–5L).

146.28–9 Additional containers for poisonous solids.—Less dangerous poisons—Class B-solids, other than those for which special packing requirements are prescribed, may be accepted for transportation on board vessels when packed in the following containers. Fiber drums (ICC–21A) not over 115 pounds net weight. Fiber drums (ICC–21A) with one added ply of asphalt laminated kraft, 30/60/30 basis weight in side walls and heading (metal heading excluded). Maximum loaded capacity 225 pounds net.

146.28–10 Additional containers for blasting caps.—Blasting caps, electric blasting caps and blasting caps with safety fuses may be accepted for transportation on board vessels packed in fiberboard boxes (ICC–23F), gross weight not to exceed 65 pounds.

146.28–11 Additional containers for airplane flares.—Airplane flares may be accepted for transportation on board vessels when packed in fiberboard boxes (ICC–12B), gross weight not to exceed 90 pounds.

146.28–12 Additional containers for empty cartridge cases primed.—Empty cartridge cases, primed, may be accepted for transportation on board vessels when packed in strong wooden barrels.

146.28–13 Additional type tank cars for inflammable liquids.—Inflammable liquids weighing not over 8 pounds per gallon and having vapor pressure not exceeding 16 pounds per square inch, absolute, at 100° F. may in addition to the tank cars prescribed in § 146.21–100 also be accepted in tank cars specifications emergency USG–A, USG–B and USG–C.

146.28–14 Additional containers for inflammable liquids.—Inflammable liquids permitted by the provisions of §146.21–100 for transportation on board vessels when packed

in fiberboard boxes with inside containers (ICC–12B) may also be accepted on board vessels when packed in fiberboard boxes with inside containers (ICC–12D).

146.28–15 Additional container for rubber cement.—Rubber cement not containing any carbon bisulfide may be accepted for transportation on board vessels when packed in wooden barrels or kegs (ICC–10A).

146.28–16 Additional container for sodium hydrosulfite.—Sodium hydrosulfite may be accepted for transportation on board vessels when packed in (ICC–21A) fiber drums without inside metal drums, provided a moistureproof liner is substituted in lieu of the inside metal drum or provided further the (ICC–21A) fiber drum is made with one added ply of asphalt laminated kraft. Net weight for either type packing not to exceed 250 pounds.

146.28–17 Additional container for chromic acid solution.—Chromic acid solution may be accepted for transportation on board vessels when packed in (ICC–12B) fiberboard boxes with one inside glass container of capacity not over 4 fluid ounces in a wax lined cylindrical fiber carton and surrounded with asbestos.

146.28–18 Additional container for batteries, electric, wet.—Batteries, electric, storage, wet may be accepted for transportation on board vessels when packed in (ICC–12B) fiberboard box.

146.28–19 Additional container for nitrogen dioxide, liquid (nitrogen peroxide, nitrogen tetroxide).—Nitrogen dioxide, liquid (nitrogen peroxide, nitrogen tetroxide) may be accepted for transportation on board vessels when packed in (ICC–3A480 or 3A1800) metal cylinders with valve removed, valve opening closed with solid metal plug, cylinder fitted with gas-tight valve protection cap.

146.28–20 Additional container for methyl bromide, liquid.—Methyl bromide, liquid, may be accepted for transportation on board vessels when packed in (ICC–5A) metal drums not to exceed 30 gallons capacity.

146.28–21 Additional containers for poisonous liquids.—Poisonous liquids other than such liquids for which special requirements are prescribed by the Interstate Commerce Commission regulations may be accepted for transportation on board vessels when packed in (ICC–12D) fiberboard boxes WIC not more than 75 pounds gross weight, or not containing more than 4 inside containers of a capacity greater than 5 pints each.

146.28–22 Increase of weight limitation for Class B poisonous solids.—Class B poisonous solids other than such poisonous solids for which special requirements are prescribed may be accepted for transportation on board vessels when packed in metal drums (ICC–17E or 37D) having a gross weight not over 375 pounds in lieu of 300 pounds now specified.

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