

**USCG Marine Safety Center  
Inland Tank Barge  
Tank Group Characteristics Loading Form**

**1. Vessel Information**

Vessel Name: \_\_\_\_\_ Official Number: \_\_\_\_\_  
 Shipyard: \_\_\_\_\_ Hull Number: \_\_\_\_\_  
 Operating Subchapter (D, O, etc.): \_\_\_\_\_

**2. Bulk Liquid Cargo Authority**

*(MSC-3 use only)*

46 CFR Subchapter D Authority: \_\_\_\_\_ Highest Grade: \_\_\_\_\_ Capacity: \_\_\_\_\_ (bbls)  
 46 CFR Subchapter O Authority: \_\_\_\_\_ Part 151: \_\_\_\_\_ Part 153: \_\_\_\_\_ Part 154: \_\_\_\_\_

**3. Bulk Liquid Cargo Conditions of Carriage**

(applies only to Subchapter O Cargoes - 46 CFR 151)

*(MSC-3 use only)*

**Loading Constraints - Structural**

Tank(s)	Tank Capacity (bbls)	Max Cargo Weight/Tank (Short Tons)	Max Density (lbs/gal)

**Loading Constraints - Stability**

Hull Type(s)	Route(s)	Max Load (Short Tons)	Max Draft (ft. in.)	Max Density (lbs/gal)

**4. Cargo Tank Group Characteristics**

(complete the following section for each tank group by filling in the requested information or choosing the appropriate characteristics)

4.a. Tank Group Designation (A, B, etc.): \_\_\_\_\_

4.b. Tanks in tank group (#1P, #2S, etc.): \_\_\_\_\_

4.c. Flammability Grade:      A       B       C       D       E       none   
(46 CFR 30.10-15 and 30.10-22)

**4. Cargo Tank Group Characteristics (continued)**

(complete the following section for each tank group by filling in the requested information or choosing the appropriate characteristics)

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- 4.d. Cargo Identification - Pressure: Pressurized  Atmospheric   
*(46 CFR 151.05-1(b))*
- 4.e. Cargo Identification - Temperature: Ambient  Low  Elevated   
*(46 CFR 151.05-1(c))*
- 4.f. Maximum Cargo Density: \_\_\_\_\_ (lbs/gal)
- 4.g. Hull Type: I  I-L  II  III   
*(46 CFR 151.10 and 46 CFR 32.63)*
- 4.h. Cargo Segregation - Tanks: 1i  1ii  2i  2ii   
*(46 CFR 151.13)*
- 4.i. Tanks - Type: Integral  Independent  Gravity  Pressure   
*(46 CFR 151.15-1)*
- 4.j. Tanks - Venting: Open  Pressure/Vacuum  Safety Relief  Rupture Disk   
*(46 CFR 151.15-5)*  
PV valve setting (psig):  SR valve setting (psig):
- 4.k. Height of Vent Header above deck at centerline: \_\_\_\_\_ (feet)  
*(46 CFR 32.55)*
- 4.l. Tanks - Gauging Devices: Open  Restricted  Closed  Isolated or Indirect   
*(46 CFR 151.15-10)*
- 4.m. Cargo Transfer - Piping: I  I-L  II  II-L   
*(46 CFR 32.50; Table 56.04-2; and 151.20)*
- 4.n. Cargo Transfer - Control: G-1  G-2  P-1  P-2   
*(46 CFR 151.20-5)*
- 4.o. Environmental Control - Cargo Tanks: Inerted  Inert Dry  Dry   
*(46 CFR 151.25-1)*  
Padded  Water Pad   
Ventilated-natural  Ventilated-forced  NR
- 4.p. Environmental Control - Cargo Handling Space:  
*(46 CFR 151.25-2)*  
Ventilated-natural  Ventilated-forced  NR  NA
- 4.q. Fire Protection Provided: No  Yes  Type: \_\_\_\_\_  
*(46 CFR 151.30-1)*
- 4.r. Is there any electrical equipment located in a hazardous location inside this tank group?  
*(46 CFR 111.105-1,*  
Yes  No
- 4.s. Does the tank group have some form of cargo temperature control?  
*(46 CFR 151.40)*  
Yes  No

**4. Cargo Tank Group Characteristics (continued)**

*(complete the following section for each tank group by filling in the requested information or choosing the appropriate characteristics)*

4.t. Special 46 CFR 151 Design and Material Requirements

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*(check those requirements that the tank group meets)*

151.40- Temperature or Pressure Control Installations

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | 1(a) Cargo Boiloff                                 |
| <input type="checkbox"/> | 1(b)(1) External cargo cooling - vapor compression |
| <input type="checkbox"/> | 1(c) Internal heat exchange                        |
| <input type="checkbox"/> | 1(f)(1) Tank heating                               |

151.50- Special Requirements

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | 5 Toxic cargoes                               |
| <input type="checkbox"/> | 5(d) Independent piping                       |
| <input type="checkbox"/> | 6(a) Motor fuel antiknock compounds           |
| <input type="checkbox"/> | 10 Alkylene oxides                            |
| <input type="checkbox"/> | 12 Ethylene oxide                             |
| <input type="checkbox"/> | 13 Propylene oxide                            |
| <input type="checkbox"/> | 20 Inorganic acids                            |
| <input type="checkbox"/> | 21 Sulfuric acid                              |
| <input type="checkbox"/> | 22 Hydrochloric acid                          |
| <input type="checkbox"/> | 23 Phosphoric acid                            |
| <input type="checkbox"/> | 30 Compressed gases                           |
| <input type="checkbox"/> | 31 Chlorine                                   |
| <input type="checkbox"/> | 32 Ammonia, Anhydrous                         |
| <input type="checkbox"/> | 34 Vinyl chloride (VCM)                       |
| <input type="checkbox"/> | 35 Sulfur dioxide                             |
| <input type="checkbox"/> | 36 Argon or Nitrogen                          |
| <input type="checkbox"/> | 40 Carbon disulfide/bisulfide and ethyl ether |
| <input type="checkbox"/> | 41 Carbon disulfide/bisulfide                 |

151.50- Special Requirements *(cont'd)*

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | 42 Ethyl ether                              |
| <input type="checkbox"/> | 50 Elemental phosphorus in water            |
| <input type="checkbox"/> | 55 Sulfur, molten                           |
| <input type="checkbox"/> | 60 Benzene                                  |
| <input type="checkbox"/> | 70(a) Cargoes requiring inhibition          |
| <input type="checkbox"/> | 70(b) Cargoes requiring stabilization       |
| <input type="checkbox"/> | 73 Chemical protective clothing             |
| <input type="checkbox"/> | 74 Ethylene nobornene                       |
| <input type="checkbox"/> | 75 Ferric chloride solution                 |
| <input type="checkbox"/> | 76 Hydrochloric acid, spent (NTE 15%)       |
| <input type="checkbox"/> | 77 Fluorosilicic acid (30% or less)         |
| <input type="checkbox"/> | 79 Methyl acetylene-propadiene mixture      |
| <input type="checkbox"/> | 80 Nitric acid (70% or less)                |
| <input type="checkbox"/> | 81 Special op req. - heat sensitive cargoes |
| <input type="checkbox"/> | 81(a) No heating coils or coils blanked off |
| <input type="checkbox"/> | 81(b) Not next to an elevated cargo         |
| <input type="checkbox"/> | 84 Sulfur dioxide                           |
| <input type="checkbox"/> | 86 Octyl nitrates                           |

151.55- Special Material Requirements

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | 1(b) Cu, Cu alloys, Zn, Al prohibited             |
| <input type="checkbox"/> | 1(c) Cu, Cu alloys, Zn, galv steel, Hg prohibited |
| <input type="checkbox"/> | 1(e) Cu, Cu alloys prohibited                     |
| <input type="checkbox"/> | 1(f) Cu, Cu alloys, Al, Al alloys prohibited      |
| <input type="checkbox"/> | 1(g) Al, SS, steel w/protective coating req'd     |
| <input type="checkbox"/> | 1(h) Do not contam w/alkaline or acidic mat'ls    |
| <input type="checkbox"/> | 1(i) ≥ 98%, Al or SS req.; < 98%, 304L/316 SS req |
| <input type="checkbox"/> | 1(j) Zn, alloy with > 10 wt% Zn, Al prohibited    |

151.56- Prohibited Mat'ls of Construction

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | 1(a) Al or Al alloys                       |
| <input type="checkbox"/> | 1(b) Cu or Cu alloys                       |
| <input type="checkbox"/> | 1(c) Zn, galv steel, alloy with > 10wt% Zn |
| <input type="checkbox"/> | 1(d) Magnesium                             |
| <input type="checkbox"/> | 1(e) Lead                                  |
| <input type="checkbox"/> | 1(f) Silver or Silver alloys               |
| <input type="checkbox"/> | 1(g) Mercury                               |

151.58- Required Materials of Construction

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | 1(a) Al, SS, or steel w/protective lining or coating |
| <input type="checkbox"/> | 1(d) Solid austenitic SS                             |
| <input type="checkbox"/> | 1(e) SS or w/protective lining or coating            |