USCG Marine Safety Center
Tank Group Characteristics Loading Form (TGCLF) for Tank Vessels Subject to MARPOL Annex II

This form applies to any vessel operating on OCEAN routes desiring to carry NLS cargoes for International Trade
[Holds valid international certificates or voluntarily complies with the 2007 revisions to MARPOL Annex II]

1. Vessel Information

Vessel Name(s):_____
Official Number(s):_____
Hull Number(s):_____
Shipyard: _____
Date: _____ / Revision: _____

2. Bulk Liquid Cargo Authority Summary

Maximum Cargo Density: _____ (lbs/gal)

NLS Category Authorized: ☐ X ☐ Y ☐ Z ☐ OS ☐ Annex I

Does the Vessel have an approved P&A Manual? ☐ Yes ☐ No

Is the Vessel compliant with MARPOL Annex I? ☐ Yes ☐ No

Flammability Grades Desired: _____
(46 CFR 30.10-15 and 30.10-22)

3. Supplemental Information for Cargo Authority

List Serial Numbers for all prior Cargo Authority or Procedures & Arrangements Manual Approval Letters:

_____

Notes Section:

_____

_____

_____

_____

4. Cargo Tank Group Characteristics

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

Tank Group Designations Requested (A, B, etc.): _____

Tanks in Tank Group (#1P,#2C,etc.): _____

Ship Type: 46 CFR 153.230 ☐ I ☐ II ☐ III

IBC 2.1.2 ☐ 1 ☐ 2 ☐ 3

(46 CFR 153.230 – 153.232, IBC 2.1.2)

Tank Types:

☐	1:	Independent	(IBC 4.1.1)
☐	2:	Integral	(IBC 4.1.2)
☐	G:	Gravity	(IBC 4.1.3)
☐	P:	Pressure	(IBC 4.1.4)

Cargo Tank Venting: ☐ PV (Controlled) ☐ Open

(46CFR 153.355 – 153.358 and IBC Chapter 8)

Does the vessel have High Velocity Vents? ☐ Yes ☐ No

(IBC Chapter 8: Allows for 3m vent outlet instead of 6m)

Cargo Venting System (Most Stringent Only): ☐ B/3 ☐ 6m ☐ 4m ☐ 3m (High-Velocity Vents) ☐ NR

(46 CFR 153.350, 46 CFR 153.352, and IBC Chapter 8.3)

Tank Environmental Control:

☐	Inert:	Inerting	(IBC 9.1.2.1)
☐	Pad:	Liquid or gas padding	(IBC 9.1.2.2)
☐	Dry:	Drying	(IBC 9.1.2.3)
☐	Vent:	Ventilation	(IBC 9.1.2.4)
☐	N/A:	Meets no special requirements of IBC Code	

Is there any electrical equipment located within the hazardous location? ☐ Yes ☐ No

(46 CFR 111.105-1/ National Electric Code/ IEC 60079-1, IBC Chapter 10)

If yes: Indicate CFR Electrical hazard group _____

Indicate IBC temperature classification _____

Indicate IBC Apparatus Group _____

Indicate IBC Flashpoint ☐ Yes ☐ No ☐ NF

Cargo Tank Gauging: ☐ Closed ☐ Restricted ☐ Open

(46 CFR 153.404 – 153.406 and 46 CFR 153.935 and IBC 13.1.1)

Vapor Detection:

☐	F:	Flammable vapors
☐	T:	Toxic vapors
☐	No:	Meets no special requirements

Fire Protection:

☐	A:	Alcohol-resistant foam or multi-purpose foam
☐	B:	Regular foam; not of alcohol-resistant type

☐ C: Water-spray

☐ D: Dry chemical

☐ No: Meets no special requirements

Emergency Equipment: ☐ Yes (IBC 14.3.1) ☐ No

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46 CFR 153.236 Prohibited Materials of Construction

- ☐ (a) Aluminum or aluminum alloys
- ☐ (b) Copper or copper alloys
- ☐ (c) Zinc, galvanized steel or alloys with > 10 wt% Zn
- ☐ (d) Magnesium
- ☐ (e) Lead
- ☐ (f) Silver or silver alloys
- ☐ (g) Mercury

46 CFR 153.238 Required Materials of Construction

- ☐ (a) Al, SS, or Steel w/tank lining
- ☐ (b) < 98% concentrations Al or SS
- ☐ (c) 304L or 316 SS
- ☐ (d) Solid Austenitic SS
- ☐ (e) SS or Steel w/tank lining

Special 46 CFR 153/IBC Design and Material Requirements (select requirements that the tank group meets)

46 CFR 153 Requirements (Similar IBC Regs in parentheses)

- ☐ 252 Independent Cargo tank
- ☐ 266 Tank Linings
- ☐ 316 Pump Room Ventilation
- ☐ 336 Room Requirement
- ☐ 355 PV Venting System
- ☐ 372 High vapor pressure requirement **(IBC 15.14)**
- ☐ 400 Cargo gauging requirements
- ☐ 408 (all) Overflow control
  - ☐ 408 (a) Overflow control, (a) only
- ☐ 409 High Level Alarms **(IBC 15.19)**
- ☐ 440 (a, b) Temperature sensors **(IBC 15.21)**
- ☐ 440 (a)(1) Temperature sensors meeting (a)(1) only
- ☐ 440 (c) Portable thermometer (Open/Restricted Gauging Only – Alternate Compliance)
- ☐ 465 Flammable Vapor Detection
- ☐ 488 High melting point NLS
- ☐ 500 Inert Gas Systems
- ☐ 501 Dry Inert Gas System

IBC Code Requirements

- ☐ 15.2 Ammonium nitrate solution (93% or less)
- ☐ 15.3 Carbon Disulfide
- ☐ 15.4 Diethyl ether
- ☐ 15.5 Hydrogen peroxide solutions
- ☐ 15.6 Motor fuel anti-knock compounds
- ☐ 15.7 Phosphorus, yellow or white
- ☐ 15.8 Propylene Oxide/Ethylene Oxide (See Citation)
  - ☐ 15.8 (var.) Butylene Oxide
- ☐ 15.9 Sodium chlorate solution (50% or less by mass)
- ☐ 15.10 Sulphur (molten)
- ☐ 15.11(all) Acids
  - ☐ 15.11.1 Tank boundary
  - ☐ 15.11.2 Tank lining elasticity
  - ☐ 15.11.3 Plating thickness for corrosive cargoes
  - ☐ 15.11.4 Flange shields, drip trays
  - ☐ 15.11.5 Electrical arrangements IAW 10.1.4
  - ☐ 15.11.6 Separation from oil tanks
  - ☐ 15.11.7 Leak detection

- ☐ 515 Extremely Flammable Cargoes
- ☐ 520 Carbon Disulfide **(IBC 15.3)**
- ☐ 525 (all) Toxic Cargoes **(IBC 15.12)**
  - ☐ 525 (a) Piping
  - ☐ 525 (b) PV Setting > 21kPa
  - ☐ 525 (c) Pumps/Valves
  - ☐ 525 (d) Heat Transfer
  - ☐ 525(e) Cargo Separation
  - ☐ 525 (f) Vapor Retention
- ☐ 526 Toxic Vapor Detectors
- ☐ 527 Toxic Vapor Protection
- ☐ 530 Alkylene Oxides (See Citation)

- ☐ 545 Liquid Sulfur **(IBC 15.10)**
- ☐ 554 Acids **(IBC 15.11)**
- ☐ 555 Inorganic Acids
- ☐ 556 Sulfuric Acid/Oleum
- ☐ 557 Hydrochloric Acid
- ☐ 558 Phosphoric Acid
- ☐ 559 Nitric Acid (Less than 70%)
- ☐ 560 Alkyl (C7-C9) nitrates **(IBC 15.20)**
- ☐ 602 Cargoes Reactive with Water **(IBC 15.6.2)**

- ☐ 15.11.8 Corrosion resistance – Bilge/Drainage systems
- ☐ 15.12 (all) Toxic products
  - ☐ 15.12.1 Vent Height/Location
  - ☐ 15.12.2 Vapor Return
  - ☐ 15.12.3 Stowage
  - ☐ 15.12.3.2 Separate Piping
  - ☐ 15.12.3.3 Vapor piping segregation
  - ☐ 15.12.4 PV Setting > 0.2 bar gauge
- ☐ 15.13 Cargoes protected by additives
- ☐ 15.14 Vapour Pressure **>** 0.1013MPa at 37.8°C
- ☐ 15.15 Hydrogen sulphide (H_2S) detection equipment
- ☐ 15.16.2 Water Contamination Prohibited

- ☐ 15.17 Increased Ventilation Requirements
- ☐ 15.18 Special Cargo Pump Room Requirements
- ☐ 15.19 (all) Overflow Control
- ☐ 15.19.6 High Level Alarms (meets 15.19.1 thru 15.19.5)
- ☐ 15.20 Alkyl (C7-C9) nitrates, all isomers
- ☐ 15.21 Temperature sensors