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(f) No lights may be used during the cargo transfer operations, except installed electric or portable battery lights. Smoking is prohibited and the person in charge of cargo transfer shall ensure that ''No Smoking'' signs are displayed during cargo transfer operations.

(g) Tanks approved for the transportation of acid cargoes subject to this section may not be used for the transportation of any other commodity, except upon authorization by the Commandant (G–MSO).

(h) Each cargo tank must be examined internally at least once in every 4 years. If the lining of the cargo tank has deteriorated in service or is not in place, the Marine Inspector may require the tank to be tested by such nondestructive means as he may consider necessary to determine its condition.

[CGD 80–001, 46 FR 63279, Dec. 31, 1981, as amended by CGD 82–063b, 48 FR 4781, Feb. 3, 1983]

§ 151.50–77 Fluorosilicic acid (30% or less) (hydrofluorosilicic acid).

(a) Hydrofluorosilicic acid must be carried in gravity or pressure type cargo tanks independent of the vessel's structure. The tanks must be lined with rubber or other equally suitable material approved by the Commandant (G–MSO). See § 151.15–3(f)(2).

(b) Notwithstanding the provisions of § 151.50–20(b)(3), no compressed air may be used to discharge hydrofluorosilicic acid from gravity type cargo tanks unless:

(1) The tanks are of cylindrical shape with dished heads, and

(2) The air pressure does not exceed:

(i) The design pressure of the tank, and

(ii) 10 pounds per square inch gauge. The tanks must be fitted with pressure relief devices.

(c) During cargo tansfer, a water hose must be connected to a water supply and be ready for immediate use. Any leakage or spillage of acid must be immediately washed down. This requirement can be met by facilities provided from shore.

[CGD 80–001, 46 FR 63279, Dec. 31, 1981, as amended by CGD 82–063b, 48 FR 4781, Feb. 3, 1983; CGD 92–100, 59 FR 17028, Apr. 11, 1994]

§ 151.50–79 Methyl acetylene-propadiene mixture.

(a) The composition of the methyl acetylene-propadiene mixture at loading must be within one of the following sets of composition limits:

(1) Composition 1 is:

(i) Maximum methyl acetylene to propadiene molar ratio of 3 to 1;

(ii) Maximum combined concentration of methyl acetylene and propadiene of 65 mole percent;

(iii) Minimum combined concentration of propane, butane, and isobutane of 24 mole percent, of which at least one-third (on a molar basis) must be butanes and one-third propane; and

(iv) Maximum combined concentration of propylene and butadiene of 10 mole percent.

(2) Composition 2 is:

(i) Maximum methyl acetylene and propadiene combined concentration of 30 mole percent;

(ii) Maximum methyl acetylene concentration of 20 mole percent;

(iii) Maximum propadiene concentration of 20 mole percent;

(iv) Maximum propylene concentration of 45 mole percent;

(v) Maximum butadiene and butylenes combined concentration of 2 mole percent;

(vi) Minimum saturated C_4 hydrocarbon concentration of 4 mole percent; and

(vii) Minimum propane concentration of 25 mole percent.

(b) A barge carrying a methyl acetylene-propadiene mixture must have a refrigeration system that does not compress the cargo vapor or have a refrigeration system with the following features:

(1) A vapor compressor that does not raise the temperature and pressure of the vapor above 60°C (140°F) and 1.72 MPa guage (250 psig) during its operations, and that does not allow vapor to stagnate in the compressor while it continues to run.

(2) At the discharge piping from each compressor stage or each cylinder in the same stage of a reciprocating compressor:

(i) Two temperature actuated shutdown switches set to operate at 60°C (140°F) or less;

(ii) A pressure actuated shutdown switch set to operate at 1.72 MPa gauge (250 psig) or less; and

(iii) A safety relief valve set to relieve at 1.77 MPa gauge (256 psig) or less anywhere except into the compressor suction line.

(c) The piping system, including the cargo refrigeration system, for tanks to be loaded with methyl acetylene-propadiene mixture must be completely separate from piping and refrigeration systems for other tanks. If the piping system for the tanks to be loaded with methyl acetylene-propadiene mixture is not independent, the required piping separation must be accomplished by the removal of spool pieces, valves or other pipe sections and the installation of blank flanges at these locations. The required separation applies to all liquid and vapor piping, liquid and vapor vent lines and any other possible connections, such as common inert gas supply lines.

[CGD 80–001, 46 FR 63279, Dec. 31, 1981]

§ 151.50–80 Nitric acid (70% or less).

(a) Tanks, cargo piping, valves, fittings, and flanges (where exposed to the acid) must be lined with nitric acid resistant rubber or fabricated from nitric acid resistant stainless steel. See § 151.15–3(f)(2).

(b) During cargo transfer, a water hose must be connected to a water supply, ready for immediate use. Any leakage or spillage of acid must be immediately washed down. This requirement can be met by facilities provided from shore.

(c) Nitric acid contaminated by other chemicals, oils, solvents, etc. may not be transported in bulk without an authorization from the Commandant (G–MSO).

[CGD 80–001, 46 FR 63280, Dec. 31, 1981, as amended by CGD 82–063b, 48 FR 4781, Feb. 3, 1983; CGD 88–100, 54 FR 40041, Sept. 29, 1989]

§ 151.50–81 Special operating requirements for heat sensitive cargoes.

When table 151.05 refers to this section, the following apply to the cargo:

(a) Must not be carried in a tank equipped with heating coils unless the heating supply to the coils is disconnected.

(b) Must not be carried in a tank adjacent to another tank containing an elevated temperature cargo.

(c) Must not be carried in a deck tank.

[CGD 80–001, 46 FR 63280, Dec. 31, 1981, as amended by CGD 88–100, 54 FR 40041, Sept. 29, 1989]

§ 151.50–84 Sulfur dioxide.

(a) Sulfur dioxide that is transported under the provisions of this part may not contain more than 100 ppm of water.

(b) Cargo piping must be at least Schedule 40 pipe.

(c) Flanges must be 150 lb. A.N.S.I. Standard minimum with tongue and groove or raised face.

(d) A cargo tank must:

(1) Meet the requirements of a Class I welded pressure vessel;

(2) Be designed for a maximum allowable working pressure of at least 125 psig;

(3) Be hydrostatically tested every two years to at least 188 psig;

(4) Be provided with one or more manholes that are fitted with a cover sized not less than 15 inches by 23 inches or 13 inches nominal diameter, located above the maximum liquid level, and as close as possible to the top of the tank;

(5) Have no openings other than those required in paragraph (d)(4) of this section;

(6) Have no liquid level gauges other than closed or indirect gauges;

(7) Have all valves and the closed gauge that is required by Table 151.05 bolted to the cover or covers that are required in paragraph (d)(4) of this section;

(8) Have a metal housing that is fitted with a drain and vent connection protecting all valves and the closed gauge within this housing against mechanical damage;

(9) Have all safety relief valves discharging into the protective housing;

(10) Not be interconnected with another cargo tank by piping or manifold that carriers cargo liquid, except vapor lines connected to a common header, and

(11) Have an excess flow valve that is located on the inside of the tank for