§ 151.50–32 Ammonia, anhydrous.

(a) The anhydrous ammonia tanks may be installed in the bulk liquid cargo tanks provided the liquid surrounding the enclosed anhydrous ammonia tanks complies with the following chemical and physical properties:

1. Boiling point above 125 °F atmospheric pressure.
2. Inert to ammonia at 100 °F at atmospheric pressure.
3. Noncorrosive in the liquid and vapor phase to the ammonia tanks and piping.

(b) Copper, copper alloys, and copper bearing alloys shall not be used as materials of construction for tanks, pipelines, valves, fittings, and other items of equipment that may come in contact with anhydrous ammonia liquid or vapor.

(c) Valves, flanges and pipe fittings shall be of the tongue and groove or raised-face type, fitted with suitable gasket material. Welded fittings shall be used wherever possible and the number of pipe joints shall be held to a minimum. Threaded joints are not permitted for pipe diameters exceeding 2 inches. Brazed joints are prohibited.

(d) All enclosed spaces containing cargo tanks fitted with bottom outlet connections shall be provided with mechanical ventilation of sufficient capacity to assure a change of air every 3 minutes.

(e) Each cargo tank shall be electrically grounded to the hull.

(f) When transferring cargo, a hose shall be connected to a water supply so that if leakage of anhydrous ammonia occurs the vapor may be dispersed by the use of water fog. This requirement can be met by facilities provided from shore.

(g) During cargo transfer operations, every person on the vessel shall carry on his person or have close at hand at all times a canister mask approved for ammonia or each person shall carry on his person a respiratory protective device which will protect the wearer against ammonia vapors and will provide respiratory protection for emergency escape from a contaminated area resulting from cargo leakage. This respiratory protective equipment shall be of such size and weight that the person wearing it will not be restricted in movement or in the wearing of a lifesaving device.

(h) [Reserved]

(i) The requirements of §151.50–30 for compressed gases are also applicable to the shipment of anhydrous ammonia.


§ 151.50–34 Vinyl chloride (vinyl chloride monomer).

(a) Copper, aluminum, magnesium, mercury, silver, and their alloys shall not be used as materials of construction for tanks, pipelines, valves, fittings, and other items of equipment that may come in contact with vinyl chloride liquid or vapor.

(b) Valves, flanges, and pipe fittings shall be of the tongue and groove or raised-face type, fitted with suitable gasket material. Welded fittings shall be used wherever possible and the number of pipe joints shall be held to a minimum. Threaded joints are not permitted for pipe diameters exceeding 2 inches. Brazed joints are prohibited.

(c) Each cargo tank shall be electrically grounded to the hull.

(d) The vessel shall be electrically bonded to the shore piping prior to connecting the cargo hose. This electrical bonding shall be maintained until after the cargo hose has been disconnected and any spillage has been removed.

(e) To the extent he deems it necessary, the Officer in Charge, Marine Inspection, may require that sufficient insulation shall be removed from insulated tanks at least once in each 8 calendar years to permit spot external examination of the tanks and insulation in accordance with §151.04–5(c).

(f) The requirements of §151.50–30 for compressed gases are also applicable to the shipment of vinyl chloride.

(g) The person in charge of cargo transfer shall ensure that:

1. Cargo vapors are returned to the cargo tank or shore disposition for reclamation or destruction during cargo transfer operations;
2. Continuous monitoring for vinyl chloride vapor leaks is conducted aboard a tank barge undergoing vinyl chloride transfer operations. Fixed or
§ 151.50–36 Argon or nitrogen.

(a) A cargo tank that contains argon or nitrogen and that has a maximum allowable working pressure of 172 kPa (25 psig) or greater must have one of the following arrangements:

(1) A refrigeration system that keeps the tank pressure below the safety relief valve operating pressure when ambient temperatures are 46°C (115°F) air and 32°C (90°F) water.

(2) A relief valve or pressure control valve that maintains the tank pressure below the setting of the tank’s required safety relief valve in ambient temperatures of 46°C (115°F) air and 32°C (90°F) water.

(b) A cargo tank with a maximum allowable working pressure of less than 172 kPa (25 psig) is approved by the Commandant (CG–ENG) on a case by case basis.

(c) Section 151.50–30 also applies to the carriage of argon or nitrogen.


§ 151.50–40 Additional requirements for carbon disulfide (carbon bisul-fide) and ethyl ether.

(a) The provisions of this section are applicable if specifically referenced in the Special Requirements column of Table 151.05.

(b) Cargo tanks shall be electrically bonded to the hull of the vessel. A vessel shall be electrically bonded to the shore piping prior to connecting the cargo hose. This electrical bonding shall be maintained until after the cargo hose has been disconnected and any spillage has been removed.

(c) Pumps may be used for discharging cargo: Provided, That they are