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- (2) Purge the containment system until the oxygen content of the cargo tank is less than 2% by volume.
- (b) The person in charge of an alkylene oxide cargo transfer shall ensure that:
- (1) No alkylene oxide vapor or liquid is released to the atmosphere during cargo transfer;
- (2) No vapor return system connected to an alkylene oxide containment system is at the same time connected to another containment system;
- (3) Alkylene oxide is discharged only by an intank cargo pump or inert gas displacement;
- (4) Transfer hose is approved by the Commandant (G-MSO) under §153.530(o) for alkylene oxide transfer and is marked "For Alkylene Oxide Transfer Only"; and
- (5) A water hose is laid out on deck with water pressure to the nozzle, and all alkylene oxide spillages are washed away immediately.
- (c) While alkylene oxides are onboard the vessel, the master shall make sure that the oxygen content of the vapor space above the alkylene oxide and those spaces specified in §153.530 (k) and (l) is maintained below 2% by volume
- (d) Tankships with independent piping for alkylene oxides must have onboard:
- (1) Alkylene oxide handling plans approved by the Coast Guard or the tankship's flag administration; and
- (2) Certification from the Coast Guard or the tankship's flag administration that the cargo piping for alkylene oxides is independent.

[CGD 73-96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78-128, 47 FR 21211, May 17, 1982; CGD 82-063b, 48 FR 4782, Feb. 3, 1983]

§ 153.1011 Changing containment systems and hoses to and from alkylene oxide service.

- (a) The person in charge of cargo transfer shall make sure that:
- (1) No alkylene oxide is loaded into a containment system that last carried a cargo other than an alkylene oxide unless the containment system has been cleaned and inspected to make sure it is in good condition with no heavy rust accumulations or traces of previous cargoes;

- (2) No alkylene oxide is loaded into a containment system that within the previous three loadings carried a cargo listed in paragraph (b) of this section unless the containment system has been cleaned to the satisfaction of a Coast Guard Marine Inspector or a person specifically authorized by the Commandant (G-MSO) to approve alkylene oxide tank cleaning;
- (3) No cargo but an alkylene oxide is loaded into a containment system which last carried an alkylene oxide unless the containment system has been cleaned of alkylene oxide to the satisfaction of a Coast Guard Marine Inspector or person specifically authorized by the Commandant (G-MSO) to approve alkylene oxide tank cleaning; and
- (4) No hose marked "For Alkylene Oxide Transfer Only" is used for the transfer of a cargo other than an alkylene oxide.
- (b) The following cargoes are particularly reactive with alkylene oxides:
- (1) Non-oxidizing mineral acids (e.g. hydrochloric, phosphoric);
 - (2) Sulfuric acid;
 - (3) Nitric acid;
 - (4) Organic acids (e.g. acetic, formic);
- (5) Halogenated organic acids (e.g. chloroacetic);
- (6) Sulfonic acids (e.g. alkyl benzene sulfonic):
- (7) Caustic alkalies (e.g. caustic soda, caustic potash; sodium hydrosulfide);
 - (8) Ammonia and ammonia solutions;
 - (9) Aliphatic amines;
 - (10) Alkanolamines; and
 - (11) Oxidizing substances.

[CGD 78-128, 47 FR 21211, May 17, 1982, as amended by CGD 82-063b, 48 FR 4782, Feb. 3, 1983; CGD 81-078, 50 FR 21174, May 22, 1985]

§153.1020 Unusually toxic cargoes.

- (a) No person may load or carry a cargo referenced to this section in Table 1 unless the cargo's piping and venting systems are separated from piping and venting systems carrying cargoes not referred to this section.
- (b) The master shall ensure that no heat transfer medium that has been circulated through a cargo referenced to this section in Table 1 is circulated through a cargo not referenced to this section unless he determines the medium to be uncontaminated with cargo.

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(c) No person may discharge overboard condensed steam from the heating system of a cargo referenced to this section in Table 1 unless he first determines the condensate to be uncontaminated with cargo.

[CGD 73-96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78-128, 47 FR 21212, May 17, 1982]

§153.1025 Motor fuel antiknock compounds.

- (a) No person may load or carry any other cargo in a containment system approved for motor fuel antiknock compounds containing lead alkyls except a cargo to be used solely in the manufacture of motor fuel antiknock compounds.
- (b) The master shall ensure that no person enter a pumproom or void space that contains piping from a containment system approved for motor fuel antiknock compounds containing lead alkyls unless:
- (1) The pumproom or void space atmosphere has been analyzed for its lead (as Pb) content and found to be less than $0.075~\text{mg/m}^3$; or
- (2) The person follows the procedures for entering a cargo tank described in paragraph (c) of this section.
- (c) No person may enter a cargo tank endorsed for motor fuel antiknock compounds containing lead alkyls without prior specific authorization from the Commandant (G-MSO). This authorization may be obtained by telephone ((202) 372–1425) if the person has previously obtained approval for the cargo tank entry procedure from the Commandant (G-MSO).
- (d) No person may enter a cargo tank endorsed for motor fuel antiknock compounds if he does not follow the conditions in the authorization under paragraph (c) of this section.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21212, May 17, 1982; CGD 82–063b, 48 FR 4782, Feb. 3, 1983; CGD 88–100, 54 FR 40042, Sept. 29, 1989; USCG–2006–25697, 71 FR 55747, Sept. 25, 2006]

§ 153.1035 Acetone cyanohydrin or lactonitrile solutions.

No person may operate a tankship carrying a cargo of acetone cyanohydrin or lactonitrile solutions, unless that cargo is stabilized with an inorganic acid.

[CGD 88-100, 54 FR 40042, Sept. 29, 1989]

§153.1040 Carbon disulfide.

- (a) No person may load, carry, or discharge carbon disulfide unless the cargo tank has a water pad over the cargo of at least one meter (approx. 40 in.).
- (b) The person in charge of a carbon disulfide transfer operation shall ensure that carbon disulfide is discharged only by displacement or intank cargo pump.
- (c) No person may remove a cargo pump for a containment system that carries carbon disulfide unless:
- (1) The containment system has a gas free certificate issued under the standards in §35.01–1 of this chapter; or
- (2) The vapor space in the pump well is filled with water.

§153.1045 Inorganic acids.

When Table 1 refers to this section, the person in charge of cargo transfer shall ensure that the legends "NO SMOKING" and "NO OPEN LIGHTS" are displayed on the warning sign required in §153.955(a) when cargo is transferred.

§153.1046 Sulfuric acid.

No person may liquefy frozen or congealed sulfuric acid other than by external tank heating coils.

§ 153.1052 Carriage of other cargoes in acid tanks.

No person shall load or carry other cargoes in a cargo containment system of a U.S. flag ship endorsed to carry sulfuric acid, hydrochloric acid, or phosphoric acid with out specific authorization from the Commandant (G-MSO).

[CGD 94-900, 59 FR 45139, Aug. 31, 1994]

§ 153.1060 Benzene.

The person in charge of a Coast Guard inspected vessel must ensure that the provisions of part 197, subpart C. of this chapter are applied.

 $[{\tt CGD~88-040,\,56~FR~65006,\,Dec.\,13,\,1991}]$