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safe for use in an explosive gas atmosphere must be de-energized at a location outside of that space. This location must be labeled to prohibit reenergizing until the atmosphere in the space is tested and found to be less than 30 percent of the LFL.

(c) Each person who enters any space adjacent to a cargo hold or compartment containing the material must wear a self-contained breathing apparatus unless—

(1) The space has been tested, or is routinely monitored, for the appropriate flammable gas and oxygen;

(2) The level of flammable gas is less than 10 percent of the LFL; and

(3) The level of toxic gas, if required to be tested, is less than the TLV.

(d) No person may enter an adjacent space if the level of flammable gas is greater than 30 percent of the LFL. If emergency entry is necessary, each person who enters the space must wear a self-contained breathing apparatus and caution must be exercised to ensure that no sparks are produced.

§ 148.450 Cargoes subject to liquefaction.

(a) This section applies only to cargoes identified in Table 148.10 of this part with a reference to this section and cargoes identified in the IMSBC Code (incorporated by reference, see §148.8) as cargoes that may liquefy.

(b) This section does not apply to—

(1) Shipments by unmanned barge; or

(2) Cargoes of coal that have an average particle size of 10mm (.394 in.) or greater.

(c) Definitions as used in this section—

(1) *Cargo subject to liquefaction* means a material that is subject to moisture migration and subsequent liquefaction if shipped with moisture content in excess of the transportable moisture limit.

(2) *Moisture migration* is the movement of moisture by settling and consolidation of a material, which may result in the development of a flow state in the material.

(3) *Transportable moisture limit* or *TML* of a cargo that may liquefy is the maximum moisture content that is considered safe for carriage on vessels.

(d) Except on a vessel that is specially constructed or specially fitted for the purpose of carrying such cargoes (see also section 7 of the IMSBC Code, incorporated by reference, see §148.8), a cargo subject to liquefaction may not be transported by vessel if its moisture content exceeds its TML.

(e) The shipper of a cargo subject to liquefaction must give the master the material's moisture content and TML.

(f) The master of a vessel shipping a cargo subject to liquefaction must ensure that—

(1) A cargo containing a liquid is not stowed in the same cargo space with a cargo subject to liquefaction; and

(2) Precautions are taken to prevent the entry of liquids into a cargo space containing a cargo subject to liquefaction.

(g) The moisture content and TML of a material may be determined by the tests described in Appendix 2, Section 1, of the IMSBC Code (incorporated by reference, see §148.8).

PART 149 [RESERVED]