

Transporting ASME Tanks

Description:

The federal regulations prohibit transporting ASME tanks with water capacities of 125 or more gallons to and from stationary installations with more than 5% liquid LP-gas in them. Unless the tank is marked to contain unodorized gas as required in NFPA 58, the gas must be properly odorized. Other NFPA 58 requirements for transporting ASME tanks must be met as well.

Regulatory Reference

49 CFR § 173.315 Compressed gases in cargo tanks and portable tanks

Applies to:

ASME tanks transported to and from stationary installations.

General Requirements:

Applicable requirements are found in 49 CFR § 173.315.

- (1) Paragraph (b)(1) requires, "All liquefied petroleum gas shall be effectively odorized as required in Note 2 of this paragraph to indicate positively, by a distinctive odor, the presence of gas down to a concentration in air of not over one-fifth the lower limit of combustibility: Provided, however, That odorization is not required if harmful in the use or further processing of the liquefied petroleum gas, or if odorization will serve no useful purpose as a warning agent in such use or further processing.

Note 1: The lower limits of combustibility of the more commonly used liquefied petroleum gases are: Propane, 2.15 percent; butane, 1.55 percent. These figures represent volumetric percentages of gas-air mixtures in each case.

Note 2: The use of 1.0 pound of ethyl mercaptan, 1.0 pound of thiophane, or 1.4 pounds of amyl mercaptan per 10,000 gallons of liquefied petroleum gas shall be considered sufficient to meet the requirements of §173.315(b)(1). This note does not exclude the use of any other odorant in sufficient quantity to meet the requirements of §173.315(b)(1).

- (2) Paragraph (j) reads as follows: Storage containers for liquefied petroleum gas for permanent installation on consumer premises may be shipped by private motor carrier only under the following conditions:
 - (1) Each container must be constructed in compliance with the requirements of the ASME Code (containers built in compliance with earlier editions starting with 1943 are authorized) and must be marked to indicate compliance in the manner specified by the respective Code.
 - (2) Each container must be equipped with safety devices in compliance with the requirements for safety devices on containers as specified in NFPA Pamphlet No. 58.

- (3) The containers shall be so braced or otherwise secured on the vehicle as to prevent relative motion while in transit. Valves or other fittings shall be adequately protected against injury during transportation. (See §177.834(g) of this subchapter.)
 - (4) Except as provided in paragraph (j)(5) of this section, containers shall not be shipped when charged with liquefied petroleum gas to more than 5 percent of their water capacity.
 - (5) Storage containers of less than 1,042 pounds water capacity (125 gallons) may be shipped when charged with liquefied petroleum gas in compliance with DOT filling density.
- (3) In addition to these specific requirements, the other regulations regarding container labeling, vehicle placarding, shipping papers, and emergency information covered in other guides in this reference apply as well.

The National Propane Gas Association on behalf of its members applied for and was granted a Special Permit (SP-13341) that allows the one-way transportation (consumer location to a bulk plant only) of ASME tanks up to and including 500 gallons water capacity with more than 5% liquid propane under special conditions.

1. DOT Special Permit 13341 was issued to the National Propane Gas Association as agent for its members. It can therefore be used by member companies who meet all requirements for using the special permit. Non-member companies can either apply to the Pipeline and Hazardous Materials Safety Administration of DOT for a similar special permit on their own, or they can apply to be made a party to SP-13341.
2. Persons transporting an ASME tank under SP-13341 must be trained to apply the permit and all its requirements.
3. Persons transporting an ASME tank under SP-13341 must carry a copy of the **DOT authorization letter** and **all 6 pages of SP-13341** (or other similar special permit) in the transporting vehicle.
4. The SP-13341 granted to NPGA and members on file with PHMSA has an expiration date of May 31, 2012.

Training Requirements:

Training requirements for the regulations should be met as a function-specific training element of hazmat employee training. In order to utilize a special permit to move an ASME tank under extraordinary circumstances with more than 5% liquid propane in it, personnel must be trained to comply with the terms of the special permit.

Maintenance and Review

Observation of employee performance of ASME tank transportation by supervisors and managers, and the development of company-specific standard operating procedures that are periodically reviewed with employees are effective compliance measures.

Additional Information and Resources

Propane Delivery, Certification Area 2.0, Certified Employee Training Program

Initial OSHA and DOT Training: For the Handling and Transport of Hazardous Materials, Propane Education and Research Council, Washington, DC