

527 CMR: BOARD OF FIRE PREVENTION REGULATIONS

527 CMR 6.00: LIQUEFIED PETROLEUM GAS CONTAINERS AND SYSTEMS

Section

- 6.01: Purpose
- 6.02: Adoption of NFPA 58 (2008 Edition) by Reference
- 6.03: Conflict Between NFPA 58 (2008 Edition) and Other 527 CMR Provisions
- 6.04: Modification of NFPA 58 (2008 Edition)
- 6.05: Definitions
- 6.06: Installation of Equipment - Compliance Requirements
- 6.07: Permits, Inspections, Storage and Licenses

6.01: Purpose

The purpose of 527 CMR 6.00 is to prescribe minimum standards for LP-gas systems for the protection and safety of the public at large. The application of 527 CMR 6.00 is limited to the storage of LP-gas and the operation of LP-gas systems upstream from the outlet of the first stage regulator.

6.02: Adoption of NFPA 58 (2008 Edition) by Reference

527 CMR 6.00 hereby adopts and incorporates by reference the National Fire Protection Association (NFPA) Standard NFPA 58 entitled: *Liquefied Petroleum Gas Code* (2008 Edition) with the following modifications:

6.03: Conflict Between NFPA 58 (2008 Edition) and Other 527 CMR Provisions

In the event of a conflict between the provisions of NFPA 58 (2008 Edition) and any other provision of 527 CMR, the standard that requires the greater level of safety shall prevail.

6.04: Modification of NFPA 58 (2008 Edition)

Delete the term Authority Having Jurisdiction (AHJ) from NFPA 58 (2008 Edition) and insert the following definition in its place.

3.2.2 Authority Having Jurisdiction (AHJ) shall be the Head of the Fire Department or the Marshal and their designees, as defined in M.G.L. c. 148.

Add a new section title in NFPA 58 (2008 Edition) as follows:

4.2 LP-Container, Filling, Shipment, Odorization, and Testing Requirements

Modify by inserting the following:

4.2.3* If odorization is required, as provided in 4.2.1, one of the testing thresholds required in section 4.2.5.1(2) shall be completed and documented. The presence of the odorant shall be permitted thereafter by sniff testing each time the propane changes in the distribution network. If the amount of odorant in the propane is questionable by sniff testing or the records are not accepted by or made available to the AHJ as required in section 4.2.6, the testing as prescribed in accordance with the section 4.2.5.1(2) shall be repeated. If necessary, thresholds shall be met by adding additional odorant to obtain proper odorized propane levels as prescribed in sections 4.2.5.1(1) or 4.2.5.1(2). In such situations where the propane odorant is questionable, immediate verbal notification shall be given to the AHJ, which shall be followed by written notification within 24 hours documenting the date, time, and location of discovery and status of such event.

Add the new section and entitle it as follows:

4.2.4 Railcar Shipments.

6.04: continued

Add the following:

4.2.4.1 Each railcar shipment of LP-gas intended for distribution within Massachusetts shall comply with the provisions in section 4.2.5.1(1). Each railcar shipment delivered to a bulk plant for distribution shall be tested for odorization using one of the tests prescribed in section 4.2.5.1(2) subsection (a), (b) or (c).

Add the following new section:

4.2.5 Odorization Thresholds, Testing and filling of Containers:

4.2.5.1 Odorization Thresholds, Testing and filling of Containers:

- (1) If ethyl mercaptan is used for odorization purposes, it shall be injected at a minimum rate of 1 pound per 10,000 gallons of propane.
- (2) For testing purposes one of the following tests listed below in (a), (b) or (c) shall be required to determine adequate ethyl mercaptan odorant levels equivalent to 1 pound per 10,000 gallons of propane.
 - (a) Vapor Test using stain tubes resulting in a minimum of 5 ppm of ethyl mercaptan utilizing ASTM D 5305 or
 - (b) Flash Vapor Test using stain tubes resulting in a minimum of 17 ppm of ethyl mercaptan utilizing ASTM D 5305 or
 - (c) Liquid Test for analysis of volatile sulfurs using gas chromatography resulting in a minimum of 17 ppm of ethyl mercaptan utilizing ASTM D1265.
- (3) Newly filled tanks and containers shall be purged according to manufactures instructions.
- (4) Newly installed tanks greater than 125 gallons shall comply with the following:
 - (a) Within two business days of the tank installation approval by the AHJ, such tank shall be filled with LP-gas and;
 - (b) If the tank is not placed into service within 30 days of the tank installation approval date, such tank shall be tested by the LP-gas company in accordance with 4.2.5.1(2), prior to being placed into service and;
 - (c) Maintain records in accordance with 4.2.6 and report findings, if applicable, in accordance with 4.2.3.

4.2.6 Records

4.2.6.1 Records of all testing required by 527 CMR 6.00 shall be maintained. The results shall be kept by both the shipper and user for a minimum of three years from the date of delivery.

4.2.6.2 Tests results shall be made available to the AHJ upon request.

Modify Section 4.4 by inserting a second paragraph as follows:

4.4 Effective September 1, 2014, each person handling LP-gas in the quantities of 42 pounds (ten gallons) or greater, shall be trained, at applicable level, in accordance with the Certified Employee Training Program (CETP) or other education programs acceptable to the Marshal. Each person handling cylinders less than 42 pounds shall receive annual training utilizing the program *Dispensing Propane Safely* published by the Propane Education and Research Council. Certificates of completion shall be maintained by the employer for three years and a copy of said certificate shall be given to the trainee at the completion of each program. Certificates of completion shall include the date of completion, the course name and be signed by the instructor or provider. Such certificates shall be submitted to the AHJ upon request.

Add the new section entitled as follows:

4.7 Field Equipment Identification

Add the following:

4.7.1 All LP-gas installations of 125 gallons or greater shall be provided with a sign identifying the responsible party for the installation and maintenance of the LP-gas installation. The sign shall be installed in a plainly visible location. Such sign shall include the name and telephone number of the LP-gas supplier, plant installer, owner, or operator.

527 CMR: BOARD OF FIRE PREVENTION REGULATIONS

6.04: continued

Add the new section entitled as follows:

4.8 Emergency and Reporting Procedure

Add the following:

4.8.1 In situations where a gas leak results in imminent danger, immediate verbal notification shall be given to the head of the fire department, which shall be followed by written notification within 24 hours of said verbal notification documenting the date, time, and the location of discovery and status of such event.

4.8.1.2 In situations where the AHJ has directed an LP-gas provider to take corrective action, the provider shall immediately respond verbally to the AHJ, as directed. Such provider's response shall be followed by written notification, if requested, within 24 hours after resolution, documenting the date, time, and the location of discovery and status of the LP-gas installation.

Modify Section 6.3.7(1) by adding after the word "3 foot" the word "arc".

Add a new section as follows:

8.2.1.6 Areas used for the storage of containers or cylinders awaiting use or resale shall post a readily accessible and clearly visible warning sign stating "NO SMOKING" and "FLAMMABLE GAS" or otherwise indicate the contents of such containers or cylinders, such as "FLAMMABLE GAS - PROPANE" or "FLAMMABLE GAS -BUTANE".

Modify Vehicle Fuel Dispensers by adding 9.4.10 (4) as follows:

(4) "NO SMOKING" and "STOP ENGINE WHEN REFUELING" signs shall be displayed on the front and rear of each dispenser at the filling station. The signs shall have block letters at least one inch high with either red letters on a white background or white letters on a red background.

6.05: Definitions

Abandoned. Any container, which has not been used either for filling or draw off of LP-gas, for a continuous period in excess of 12 months.

Head of the Fire Department. The head of the fire department as defined in M.G.L. c. 148, § 1, or a designee of the head of the fire department.

Imminent Danger. A condition or practice in an occupancy or structure that poses a danger that could reasonably be expected to cause death, serious physical harm, or serious property loss.

Marshal. The state fire Marshal or his designee as defined in M.G.L. c. 148, § 1 and appointed in accordance with M.G.L. c. 22D, § 3.

6.06: Installation of Equipment - Compliance Requirements

(1) The owner of the storage equipment shall be responsible for the installation of the LP-gas facility and for maintaining it in a safe operating condition.

(2) No person shall install, remove, connect, disconnect, fill or refill any LP-gas container without permission of the owner of the container.

(3) Only a trained individual complying with section 4.4 shall install, remove, connect, disconnect, sell, fill, refill, deliver or permit to be delivered, or operate any LP-gas system utilizing containers of over 42 pounds (ten gallons) product capacity.

(4) The Marshal may order the user of a system in writing to meet additional requirements:

- (a) Where unusual conditions exist;
- (b) When it necessary for the protection of life and property;

6.06: continued

(c) Provided the additional requirements are within the intent and purpose of 527 CMR 6.00.

6.07: Permits, Inspections, Storage and Licenses

Permit, inspection, storage of and license requirements shall comply with 527 CMR 6.00.

(1) Installation and Inspection.

(a) No person shall install or connect any LP-gas storage equipment unless a permit to install LP-gas has been obtained from the head of the fire department.

(b) No permit shall be required, however, to make a connection in the replacement of a portable container, or the filling of a stationary container.

(c) The person, firm, or corporation who will make the installation or connection shall make the application for a permit to install LP-gas storage container in the name of the owner or occupant of the premises. If the aggregate amount of LP-gas to be stored exceeds 2,000 gallons, then a license as required by 527 CMR 6.07(2)(b) must first be obtained and a copy of the license or registration shall be submitted with the application for a permit to install LP-gas. If any one tank for the storage of LP-gas exceeds 10,000 gallons, then the requirements of 502 CMR 5.00: *Permit Requirements and Annual Inspection of above Ground Storage Tanks or Containers of More than Ten Thousand Gallons' Capacity* must be complied with and documentation of compliance with 502 CMR 5.00: *Permit Requirements and Annual Inspection of above Ground Storage Tanks or Containers of More than Ten Thousand Gallons' Capacity* shall be submitted with the application for a permit to install LP-gas.

(d) The AHJ may limit the quantity of LP-gas that may be stored under a permit or order the installer of a system to meet additional requirements:

1. Where unusual conditions exist;
2. When it is necessary for the protection of life and property and they are documented in writing;
3. Provided the additional requirements are within the intent and purpose of 527 CMR 6.00.

(e) Upon completion of an installation or connection authorized by a permit to store LP-gas, the person, firm or corporation having made the installation or connection shall certify in writing to the AHJ that the work has been completed in conformity with the requirements of 527 CMR 6.00.

(f) Upon receipt of such notification of completion of the work, the AHJ shall make an inspection of the installation within a reasonable time; and if same is found to be in accordance with 527 CMR 6.00 or if applicable 502 CMR 5.00: *Permit Requirements and Annual Inspection of above Ground Storage Tanks or Containers of More than Ten Thousand Gallons' Capacity*, he or she shall issue to the owner or occupant a permit for the keeping, storage, manufacture or sale LP-gas in connection therewith, except where such storage is otherwise authorized by license. However, if such installation is found not to be in accordance with 527 CMR 6.00, the permit shall be withheld and shall not be issued until the proper corrections have been made as directed, by written notice if requested, within a reasonably specified time and prior to any LP-gas being stored in the container(s).

(2) Storage, License or Registration.

(a) No person shall keep or use any LP-gas, or install or connect any LP-gas storage equipment except in accordance with the requirements of 527 CMR 6.00.

(b) In accordance with the provisions of M.G.L. c. 148, § 13, 2,000 gallons of LP-gas, in the aggregate, is hereby prescribed as the maximum amount that may be kept, stored, manufactured or sold, in one or more containers without a license or registration, or either of them, provided that a permit for the keeping, storage, manufacture or sale of LP-gas has been obtained, except as hereinafter provided.

(c) When more than 2,000 gallons of LP-gas will be stored, manufactured or sold, a license shall first be obtained from the local licensing authority by the owner or occupant of the premises in accordance with the provisions of M.G.L. c. 148, § 13.

(d) The permit for the keeping, storage, manufacture or sale of LP-gas must be obtained from the head of the fire department as provided by M.G.L. c. 148, §§ 10A and 23.

6.07: continued

(e) No permit will be required for the storage and use of LP-gas in an amount less than 42 pounds (ten gallons), provided that the provisions of 527 CMR 6.00 shall apply.

(f) The permit for the keeping, storage, manufacture or sale of LP-gas may be revoked, in writing by the AHJ as provided by M.G.L. c. 148, §§ 10A and 23, if the installation is changed or modified in any way or if the provisions of 527 CMR 6.00 are not complied with.

REGULATORY AUTHORITY

527 CMR 6.00: M.G.L. c. 22, §14 and c. 148, §§ 9, 10 and 28.

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527 CMR: BOARD OF FIRE PREVENTION REGULATIONS

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