

BULK LPG TANKS PROTECTION

Understanding the risk

When single or multiple bulk LP Gas storage containers exceed 4,000 aggregate gallons (water capacity) at a single site, the fire codes require special fire protection features to protect the tanks from exposure fires.

Controlling the hazard

The Liquefied Petroleum Gas Code (NFPA 58) outlines five methods for protecting bulk facilities from exposure fires:

1- Insulation

Is a method of protecting the tank with a material that is capable of limiting the container temperature to 800°F (429°C) for at least 50 minutes. NFPA 58 appendices describe the insulation fire test criteria.

2- Mounding

Is means of covering the cylinder by at least 1 foot of earth, sand, or other noncombustible, noncorrosive material such as vermiculite or perlite.

3- Burial

Requires placing the cylinders at least 6 inches (16 cm) below the ground.

4- Water Spray

Is an automatic system capable of delivering densities of at least 0.25 GPM (1 LPM) over all of the tank surfaces. It is similar to an automatic sprinkler system.



5- Monitor Nozzles

(Master Streams) must be operated automatically and located to wet any part of the tank area that may be subjected to an exposure fire.

Reference

For additional information, refer to International Fire Code®, or NFPA 1, Uniform Fire Code; NFPA 58, Liquefied Petroleum Gas Code; and NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection.

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