



# Tailgate/Toolbox Safety Training

Safety Services Company-Safety Meeting Division, PO Box 6408 Yuma, AZ 85366-6408 Toll Free (866) 204-4786



Company Name: \_\_\_\_\_ Job Site Location: \_\_\_\_\_

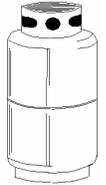
Date: \_\_\_\_\_ Start Time: \_\_\_\_\_ Finish Time: \_\_\_\_\_ Foreman/Supervisor: \_\_\_\_\_

## Topic 435: Handling, Transport and Storage of Propane

**Introduction:** Propane is identified in OSHA regulations as liquefied petroleum gas (LPG) and is an aromatic hydrocarbon that is utilized as a gaseous fuel. Propane will vaporize at any temperature above -44 degrees F, and unlike many gas vapors that are lighter than air, propane vapor is heavier than air. For safety and detection purposes, a chemical odorant (ethyl mercaptan) is added to propane, which gives it a distinctive unpleasant odor. The odor indicates that propane vapor is likely to be present and a potentially dangerous situation may exist. Following are guidelines for the safe handling, storage, and transporting of propane:

**Handling, Transport, and Storage of Propane**

- **Do not smoke**, allow open flame, or any ignition source in the vicinity of propane filling operations or storage
- **Propane must be handled with caution.** In the event that a propane leak should occur leave the building or area and take the following steps:
  - \* Immediately shut off the storage tank's service valve.
  - \* Eliminate all possible outside sources of ignition.
  - \* Do not turn any light switches on or off.
  - \* Have a qualified technician check the system.
- **Do not transport**, or load propane tanks for transport, into a vehicle in the same compartment with occupants.
- **Propane containers** must be transported in an upright position. Only a container designed for horizontal use may be transported horizontally.
- **Propane tanks must be** securely mounted to prevent jarring loose, slipping, or rotating, and the fastenings must be designed and constructed to withstand static loading in any direction equal to twice the weight of the tank and attachments when filled with fuel.
- **All valves and connections** on containers in transport or storage must be adequately protected to prevent damage due to accidental contact.
- **Ensure that** the fill and overflow valves are tightly closed before transporting portable tanks.
- **Storage containers** must be designed and classified in accordance with API-ASME code. Containers installed for use may not be stacked.
- **Containers in storage** must be placed to minimize exposure to excessive temperature rise, physical damage, or tampering by unauthorized persons.
- **Containers when stored** inside may not be located near exits, stairways, or in areas normally used or intended for the safe exit of people. The outlet valves of containers in storage must be closed.
- **The quantity of LP-Gas** stored within buildings not frequented by the public (such as industrial buildings) may not exceed 300 pounds. However, up to 10,000 pounds of propane may be stored in rooms or buildings of special construction with walls adjacent to other parts of structures having a minimum two hour fire resistance rating, and not less than ten percent of the building being of explosion relieving construction.
- **Containers may be filled** or used only with the authorization of the owner.
- **Any container** that is damaged, corroded, exposed to fire, or appears to be leaking must be removed from service immediately.
- **Filling of portable containers**, containers mounted on skids, fuel containers on farm tractors, or similar applications, from storage containers used in domestic or commercial service, may only be done at least 50 feet from the nearest important building.
- **Fuel supply containers** may be gauged and charged only in the open air or in buildings especially provided for that purpose.
- **When necessary**, unloading piping or hoses shall be provided with suitable bleeder valves for relieving pressure before disconnection.
- **Since liquefied petroleum gas is contained** in a closed system of piping and equipment, the system need not be electrically conductive or electrically bonded for protection against static electricity.
- **Storage outside of buildings** for containers for use or resale, must be placed in accordance with the table shown.
- **Storage locations** must be provided with at least one approved portable fire extinguisher having a minimum rating of 8-B, C.
- **Readily ignitable material** including weeds and long dry grass, must be removed within 10 feet of containers.
- **Bulk storage containers** must be protected by crash rails or guards to prevent physical damage unless they are protected by virtue of their location. Vehicles may not be serviced within 10 feet of containers.



Quantity Stored	Distances
500 lbs or less	0
501 to 2,500 lbs	0
2,501 to 6,000 lbs	10 feet
6,001 to 10,000 lbs	20 feet
Over 10,000 lbs	25 feet

Distances shown are from the nearest important or occupied building, busy sidewalk, or thoroughfare

**Transport truck unloading point**

- **During unloading**, the transport truck must not be parked on public thoroughfares and must be at least 5 feet from storage containers, and positioned so that shutoff valves are readily accessible.
- **The filling pipe inlet terminal** may not be located inside, or within 10 feet of any building or driveway. It must be protected against physical damage.
- **Valves, regulators, gages**, and other container fittings must be protected against tampering and physical damage.
- **The dispensing of LP-Gas** must be performed by a competent attendant who must remain at the LP-Gas dispenser during the entire transfer operation.

**Conclusion:** Propane provides many benefits if handled carefully, but there is also the potential for explosion or fire if it is handled incorrectly. Follow the guidelines above for the safe use of propane.

### Work Site Review

Work-Site Hazards and Safety Suggestions: \_\_\_\_\_

Personnel Safety Violations: \_\_\_\_\_

**Employee Signatures:** \_\_\_\_\_ (My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

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**Foreman/Supervisor's Signature:** \_\_\_\_\_

These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.