

safety for transport delivery

Liquefied Petroleum Gas, or propane, is a versatile, environmentally friendly energy source used in many residential, commercial, and industrial applications. A typical installation at a home or business may involve a 500 or 1,000 gallon tank or a small cylinder. For many agricultural or industrial applications, it is necessary to store much more propane than your typical residential application.

Perhaps there is a confinement barn for swine, or a brooder for chicks, a dryer for rice, corn, nuts, or a large boiler or heating unit in a manufacturing application that has a very high BTU connected load. These installations can typically involve one or more larger containers that are delivered by tractor trailer.

The purpose of this safety guide is to advise you of the things you should know if you use or plan to install and utilize propane for your agriculture operation. It is important to:

1 Make sure the propane system is designed and installed properly.

2 Ensure the propane system operates properly day to day.

3 Make sure the propane system is easily accessible, the valves are working properly, the bulkhead is cleared of snow, and it is safe to make a delivery when the transport arrives.

training requirements

Both the NFPA code and the OSHA regulations require those operating a propane system must be formally trained in the applicable portions of their job.

In addition, OSHA requires that where a hazardous chemical is involved, the employer must have a formal hazard communication program. That program will instruct employees how to identify hazardous chemicals and how to handle them.

special safety considerations

- » The container and piping system must remain in compliance with the code.
- » Ensure the installation is protected from tampering or unauthorized access.
- » Be sure the system is in safe operating condition before each use, all valves are working properly, snow is cleared, and it is safe for the transport to deliver.
- » Propane is a flammable product and has a distinct odor so you can identify if there is a leak. The odor is added to propane as a safety measure.
- » Ask your supplier to help you get a whiff of propane so you know what it smells like.



code requirements

There are several codes, laws, and regulations that apply to propane systems. The National Fire Protection Association (NFPA) develops codes, such as NFPA 58 Liquefied Petroleum Gas Code and others that apply to system installations including:

- » Distance requirements from buildings, property lines, sources of ignition, and other fuels.
- » Requirements for piping, valves, and appliance installations taking place in and out of buildings.
- » Requirements specifically addressing electrical equipment that are part of these systems. The local Authority Having Jurisdiction (AHJ) will approve and/or enforce the requirements of the applicable codes.

For container installations over 4,000 gallons, NFPA requires that a Fire Safety Analysis must be completed by the time the system is put into operation.

If your installation is storing 60,000 pounds (approximately 14,000 gallons) or more of propane, the Department of Homeland Security (DHS) requires the installation to be registered in accordance with the Chemical Facility Anti-Terrorism Standard (CFATS).

In accordance with the Emergency Planning and Community Right to Know Act of 1986, **those who store 10,000 pounds (approximately 2,358 gallons) or more must file with the Environmental Protection Agency, the Local Emergency Planning Committee, and their local fire department.** This is done by filling out a form called a Tier II and sending it to the agencies. Some states allow the form to be done electronically, while others require some or all parts to be done through the mail. The best thing to do is contact your propane supplier for guidance on these compliance requirements.

specific hazards

- » Know the location of the emergency shutoff device(s) for the plant. They must be clearly identified by a sign visible from the point of transfer. These devices may be cable operated or pneumatic and should be tested regularly to ensure they work.
- » There should be signs at the point of transfer that warn delivery drivers about ignition sources, smoking, and an emergency number to call. There should be a warning about delivery to an operating system if there are open flames near a point of transfer such as a grain dryer or a vaporizer.
- » One very important item to consider is the use of anhydrous ammonia in agriculture. An anhydrous ammonia container and a propane container look similar and may look like they are the same. **There are subtle differences, but the two biggest ones are (1) the differences in the products in them and (2) the valves and fittings used in the system.**
- » Since large commercial systems have anhydrous ammonia and propane in similar containers, sometimes side-by-side, **it is critical to make sure the correct product is being delivered into the correct tank.**
 - The Bill of Lading for the load should be verified prior to the delivery.
 - Odorant must be verified (sniff test) prior to delivery.
 - Cross contamination of these products in these systems can have major implications. After delivery into the wrong tank, it's too late.
- » **Transport drivers may be the only eyes and ears of a system for several months**, make sure they let you know if they see something like security issues, safety hazards, unsafe conditions, equipment not working, or other abnormal conditions.

contact your propane supplier

Consult with your propane supplier or your Authority Having Jurisdiction (AHJ) to help with design, compliance, and training, or if you have any questions.



ENERGY FOR EVERYONE
propane

propane.com