

Propane Safety on a Construction Site



Propane can be found on construction sites year-round for a variety of uses. But construction sites are busy places and change is always happening. That means there are important safety considerations that must be communicated to employees working on these sites. Your propane supplier can help you understand NFPA 58 and local codes applicable to your operation.

USING PROPANE HEATERS LOCATED OUTDOORS FOR TEMPORARY HEAT

Propane heating equipment located outdoors is generally larger BTU/hr. heating capacity units designed to heat larger buildings where there's more demand. These units are also effective for assisting with the drying processes during construction because any moisture created during the combustion process remains outdoors. With the heating unit located outdoors, the warm air supply is generally ducted to the inside of the building. When using propane heating equipment located outdoors, keep the following safety considerations in mind:

- ▶ Be sure the space heater is located on a secure base to prevent it from tipping over or moving while operating.
- ▶ Verify any clearances from combustible materials are met based on the heater manufacturer's specifications.
- ▶ Heating equipment must be approved for use with propane and listed for the specific application.

USING PROPANE HEATERS LOCATED INDOORS FOR TEMPORARY HEAT

In areas where it gets cold, construction sites utilize propane to heat building structures while they are being built. The number of heaters used within a building varies based on the size of the building and the capacity of the heaters. Keep the following safety considerations in mind when using temporary space heaters indoors:

- ▶ Temporary heaters used indoors must be provided adequate air supply for them to burn properly. If indoor air is inadequate there is a potential for space heating equipment to produce carbon monoxide.
- ▶ Temporary heaters used indoors must be placed a safe distance away from combustible materials.
- ▶ Place space heaters at least six feet from any propane cylinder.

USING PROPANE VAPORIZERS AND LIQUID SYSTEMS

- ▶ Vaporizers must be placed on a secure non-flammable base in a safe location away from the supply container, building openings, and combustible materials.
- ▶ Vaporizers and liquid piping must be protected from physical damage by vehicular traffic nearby.
- ▶ Liquid propane must not be piped inside a building.
- ▶ Systems involving liquid service and a vaporizer should not be tampered with. Contact your fuel supplier.

PROPANE CONTAINER SAFETY & STORAGE

At construction sites, propane containers large or small can be in multiple locations. They may be connected for use, or they may be set aside for later. Propane containers may be full, empty of liquid propane, or anywhere in between while on a construction site. It's a good idea to keep any unused propane cylinders in a central safe and secure outside location and to separate any liquid empty ones from the full ones. Keep the following safety considerations in mind when using propane containers on a construction site:

- ▶ Both tanks and cylinders must be protected from vehicular damage by placing adequate barriers around the containers.
- ▶ Moving stationary ASME containers around the construction site should be performed with the assistance of your propane supplier. There are specific NFPA 58 codes for the proper location and positioning of containers.
- ▶ Tanks and cylinders must be located on a secure and level base to prevent the container from tipping over.
- ▶ Propane cylinders used indoors cannot exceed 100-pound propane capacity.
- ▶ Cylinders used indoors and manifolded together to supply a single heater should not exceed the 300-pound propane capacity.

GAS PIPING AND TEMPORARY GAS HOSE USE

Gas piping materials used to supply heating units will vary depending on the application. Gas pressures inside the gas piping will range from less than ½ psi to full container pressure depending on the application. Keep in mind for any propane system on a construction site:

- ▶ Gas piping and hoses used must be protected from physical damage. A few examples are vehicles operating near the gas piping, people walking near or over the piping, construction material handling, and possible damage from snow and ice accumulation.
- ▶ The heaters, gas piping, and hoses used must be approved for use with propane. Using inappropriate gas piping materials may cause a leak.

SAFETY TIPS FOR USE OF PROPANE

Below are a few additional safety tips that should be considered when working around propane on a construction site:

- ▶ Be sure that employees working on a construction site know the smell of propane by conducting a sniff test of the propane vapor at the container.
- ▶ Educate personnel working at the construction site about how to turn off the propane supply source in the event of a gas leak or other emergency situation. Ask the fuel supplier to demonstrate a sniff test at the container.
- ▶ Be sure employees are aware of the signs of potential CO poisoning. If in doubt, get them out.
- ▶ Warn workers to stay a safe distance from any heating source to prevent personal injuries. Be sure to check the distance recommended by the specific appliance or equipment manufacturer utilized at your construction site.



contact your
propane supplier

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

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