



OUTDOOR HEATER SAFETY

Many restaurants, schools, offices, and other businesses have been using outdoor spaces to stay open and running amidst the COVID-19 pandemic. As temperatures begin to drop, portable outdoor appliances are increasingly being used to heat outdoor areas, particularly those where it is too cool to comfortably sit or stand. Restaurants with outdoor seating areas, in particular, are relying on heaters to extend the outdoor dining season as long as possible. This fact sheet includes information to help ensure that propane heaters and electric heaters for outdoor heating are used safely and in accordance with NFPA® 1, *Fire Code* (2018 edition).

Propane Patio Heaters [For More: See NFPA 1, Subsection 69.3.13](#)

For patio heaters that use integral LP-Gas containers with a capacity greater than 1.08 lb (0.49 kg), NFPA 1 requires that the heaters be listed by an organization acceptable to the authority having jurisdiction (AHJ).

Propane heaters need to be used in accordance with their listing and manufacturer instructions. Prior to using a propane heater, refer to the manufacturer's instructions for information such as the following:

- Necessary clearances from the heating element
- Proper ventilation required
- Proper inspection, cleaning, and maintenance procedures
- Lighting and shutdown procedures
- Where the heater can and cannot be used (for example, heaters cannot be used in enclosed locations)
- Procedures for properly storing heaters

The restrictions for using propane heaters are also based on the occupancy in which they are used. For example, in assembly occupancies, such as restaurants with 50 or more occupants, heaters cannot be located within 5 ft (1.5 m) of the exits.

Regardless of where they are used, if a heater uses propane hoses, they must be as short as possible, visible, and protected from damage.

GENERAL SAFETY TIPS

- Keep anything that can burn at least 3 ft (1 m) away from heating equipment.
- Turn off all portable heaters when the area in which they are used is not occupied.

In addition, the installation, modification, and maintenance of a fixed liquid propane system needs to be performed by a qualified person in accordance with NFPA® 58, *Liquefied Petroleum Gas Code*.

Storage of Propane Cylinders [For More: See NFPA 1, Section 69.5](#)

Where propane heaters are used, special attention must be paid to ensure that the cylinders are stored properly when not in use. NFPA 1 requires the following:

- Cylinders must not be stored inside a building.
- Cylinders in storage must be placed in a location with minimal potential for physical damage, tampering, or exposure to excessive temperature increases.
- Cylinders must not be stored on the roof.

Additionally, cylinders that are stored outside must be located a minimum of:

- 5 ft (1.5 m) away from any doorway or opening in a building frequented by the public where occupants have at least two means of egress



OUTDOOR HEATER SAFETY *CONTINUED*

- 10 ft (3 m) away from any doorway or opening in a building or section of a building that has only one means of egress
- 20 ft (6.1 m) away from any automotive service station fuel dispenser

Electric Patio Heaters

For More: See NFPA 1, Section 11.1, & Subsection 11.5.3

Portable electric heaters must be placed in locations where they cannot be easily overturned. The heaters must also be listed by a qualified electrical testing laboratory.

Electric heaters need to be used in accordance with their listing and manufacturer instructions. Prior to using an electric heater, refer to the manufacturer's instructions for information such as the following:

- Necessary clearances from the heating element
- Installation and wiring requirements
- Proper inspection, cleaning, and maintenance procedures

The use of electric heaters also requires special attention as to how they are powered. Some of the power restrictions include the following:

- Electric heaters should be used only where they can be plugged directly into the appropriate receptacles or extension cords of adequate current capacity.
- Multiplug adapters and extension cords must not be used in place of permanent wiring.
- Extension cords must be plugged directly into an approved receptacle, power tap, or multiplug adapter and must, with the exception of approved multiplug extension cords, serve only one portable appliance.

- Extension cords must be grounded when servicing grounded portable appliances.
- Extension cords must be maintained in good condition without splices, deterioration, or other damage.
- For installations that are not deemed temporary structures, extension cords and flexible cords cannot be affixed to structures; extended through walls, ceilings, floors, or under doors or floor coverings; or be subjected to environmental or physical damage.

This information is intended to clarify the major requirements for outdoor heaters to help ensure that heating appliances are being used properly. Facility managers and owners must check with the AHJ for specific requirements and final approval.



Learn More

As the world grapples with the COVID-19 pandemic, NFPA continues to provide key resources and information addressing emergency planning, building, and fire and life safety issues. New resources are being added as the crisis evolves and challenges emerge.

- ▶ Visit [nfpa.org/coronavirus](https://www.nfpa.org/coronavirus) to access the latest NFPA resources.
- ▶ Get free digital access to NFPA 1 at [nfpa.org/1](https://www.nfpa.org/1).

