

## Heating Appliances

One of the best sources of information for heating appliances during construction are the OSHA regulations. A review of OSHA rules and regulations, part 1926 subpart F standard number 1926.154 addresses temporary heating devices. The following provisions are based upon the OSHA regulations. Heaters provide a potential ignition source in buildings under construction. Placing them properly and making sure that housekeeping is conducted around them goes a long way to reduce the risk of fire.



For purposes of definition in this material we are defining heating appliances in the context of their temporary use. Temporary heating is portable and is not intended for any permanent use. Heating appliances in this section are primarily used to expedite plasterwork tile work or any other construction that requires a temperature more than ambient to properly cure. Temporary heating equipment that uses gas, liquid or solid fuels is not for the use of providing heat for human comfort.

Heaters are also classified by their forms of heat transfer. As we have already noted in fire behavior there are three forms of heat transfer: conduction, convection and radiation. Conduction is direct heat flow through matter such as the conduction of heat from the hot surface of a stove to a cooking pot. Convection is the transport of heat within a gas or liquid caused by the actual flow of the material itself, such as heat traveling upwards with a natural upward movement of air. Radiation is the transmission of electromagnetic rays through space. These rays have no temperature, only energy every material or object with a temperature above absolute zero and Missy's rays in all directions, in a straight line until they are deflected are absorbed. Heaters themselves fall into two types. They are as follows: direct fired heaters or indirect fired heaters. Release all the heat generated by flame directly into a heated area. Indirect heaters require that the heater there be ducted two areas intended for heating separate from the appliance itself. Another danger associated with heating devices has to do with refueling. This also brings into play the proper use of combustible liquids and gases depending upon the design and specifications of the heating device.

**OSHA 1926.154(b)(3)**

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Heaters not suitable for use on wood floors shall not be set directly upon them or other combustible materials. When such heaters are used, they shall rest on suitable heat insulating material or at least 1-inch concrete, or equivalent. The insulating material shall extend beyond the heater 2 feet or more in all directions.

**1926.154(b)(4)**

Heaters used in the vicinity of combustible tarpaulins, canvas, or similar coverings shall be located at least 10 feet from the coverings. The coverings shall be securely fastened to prevent ignition or upsetting of the heater due to wind action on the covering or other material.

**1926.154(c)**

Heaters, when in use, shall be set horizontally level, unless otherwise permitted by the manufacturer's markings.

**1926.154(d)**

Solid fuel salamanders are prohibited in buildings and on scaffolds.

**1926.154(e)**

Oil-fired heaters.

**1926.154(e)(1)**

Flammable liquid-fired heaters shall be equipped with a primary safety control to stop the flow of fuel in the event of flame failure. Barometric or gravity oil feed shall not be considered a primary safety control.

**1926.154(e)(2)**

Heaters designed for barometric or gravity oil feed shall be used only with the integral tanks.

**1926.154(e)(4)**

Heaters specifically designed and approved for use with separate supply tanks may be directly connected for gravity feed, or an automatic pump, from a supply tank.

**Conclusion**

Heaters that are properly installed and maintained and supervised should not result in accidental ignition of materials. Conversely, the improper use of heating devices could easily result in creating fire conditions. Competent personnel should be utilized to supervise all heating operations.

For additional information on this topic see below:

[www.OSHA.gov](http://www.OSHA.gov)