

Portable Kerosene Heaters: Safety Considerations

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Dramatic increases in home heating costs have resulted in a significant expansion in the use of portable kerosene heaters. Although the new generation of kerosene heaters are equipped with many safety features, safety officials remind consumers that they are not hazard-free. In fact, they present safety hazards not found with other supplemental heating systems. These include the risk of fire from careless refueling or the use of gasoline instead of kerosene, improper storage of combustible liquids, as well as health hazards from the pollutants an unvented kerosene heater puts into the building.

Tips to remember before purchasing a kerosene heater:

1. Check to insure local building and fire codes permit its use in residential structures.
2. Check with your insurance carrier to determine what impact its use may have on your homeowner's policy.

Every adult member of the family should become an informed consumer and operator. Never allow children to operate the unit! Adults should be aware of the equipment maintenance, safety considerations, operating procedures, emergency procedures and fuel storage requirements. Read and follow the owner's manual before you attempt to operate, service or perform maintenance on the unit.

Follow these recommendations when buying and using a portable kerosene heater:

1. Use only heaters that have been tested and listed in accordance with Underwriters Laboratories (UL) Standard 647. This listing should be shown on the nameplate of the heater.
2. Use the correct fuel. Experts recommend only 1-K kerosene to be used in these heaters. Distinction between grades of kerosene cannot be made through visual inspection. The terms "water clear" or "clear white" should not be used as an indicator of kerosene grade. Find a dealer who can certify that you are buying 1-K grade kerosene. In addition, never use diesel; jet "A" fuel, No. 1 or No. 2 fuel oil or gasoline in your heater. The use of any of these fuels could result in a fire or explosion.
3. Maintain a minimum distance of 36 inches from all combustible materials such as curtains or furniture unless specified otherwise by the manufacturer. Do not use flammable solvents, aerosol sprays or lacquers near the heater. Do not operate the heater in the same room where other flammable liquids such as gasoline are stored. Do not operate it in dusty environments. The surface temperature of some units can exceed 500 degrees F. This temperature is hot enough to ignite flammable liquids, combustible liquids, flammable vapors and grain dusts.

4. Provide required maintenance and upkeep for your heater according to your operator's manual, including periodic cleaning and wick care. If you suspect the heater is not working properly, extinguish it and allow it to cool before performing any necessary maintenance. You may choose to take your heater to a qualified service center for repair. Don't take a chance! A heater, which is not working properly, can result in fire or excessive combustion by-products such as soot, carbon monoxide and sulfur dioxide.
5. Provide adequate ventilation according to the manufacturer's instruction. Burning kerosene consumes oxygen and produces carbon dioxide, sulfur dioxide, nitrogen dioxide, carbon monoxide and other gases. If the manufacturer lists no specifications, a good rule of thumb is one square inch of window opening for each 1,000 BTUs of the heater rating. For example, a 10,000 BTU heater may require opening an outside window 10 square inches to provide the necessary air intake. Energy efficient homes may require additional intake.
6. Use kerosene heaters only as supplemental heat except in an emergency situation. Do not operate it while you are asleep because a malfunction could lead to asphyxiation. Never leave a heater unattended.
7. Keep the heater out of traffic flow to prevent the potential for tip-over.
8. Always allow the heater to cool a minimum of 15 minutes before refueling. Spilled kerosene could ignite on a hot heater.
9. Refuel the heater and store the kerosene outdoors. Fuel should be stored outdoors in an approved blue safety can and visibly labeled "Kerosene." Never store kerosene in a red container, which could be easily mistaken as gasoline.
10. Never overfill the heater. Leave sufficient space for fuel expansion.
11. Do not let children operate or refuel the heater. Only an adult familiar with operating and refueling procedures should operate or refuel it. Warn children of the dangers of the hot surface. Remember, surface temperature of some heaters may be as high as 500 degrees Fahrenheit.
12. Develop a pre-fire plan. Install and maintain a smoke detection system on each living level. Install and maintain a fire extinguisher in a visible and easily accessible location. Lastly, develop and practice a fire evacuation plan. The plan is only good if everyone knows about it and has practiced it to make sure it works.

For additional information see MU Guide Sheet G1999, contact your local Outreach and Extension Center, or the MU Extension Rural Safety and Health Program at 1.800.995.8503.

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