

Kerosene Heater Safety¹

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Portable kerosene heaters can supply homeowners with temporary heat during a power outage or can be used to warm a cool room without the expense of heating the entire house. Newer models are manufactured with numerous safety features, but operator errors such as using gasoline instead of kerosene, failure to provide adequate ventilation, fuel spills, etc. have resulted in numerous home fires. According to the National Fire Protection Association, there is a "much higher" fatal fire risk associated with the use of wood stoves, portable kerosene heaters and space heaters as compared to central heating.

The Fire Marshal Division of the Michigan State Police reports there were 18 fires in Michigan during 1993 that were directly attributed to kerosene heaters. One person was killed and one injured in these 18 fires which caused an estimated \$209,000 in damages.

The following list will help reduce the risk of a fire from using a portable kerosene heater:

- Use only water-clear 1-K grade kerosene (see Figure 1). Never use gasoline. Gasoline is not the same as kerosene. Even small amounts of gasoline or other volatile fuels or solvents mixed with kerosene can substantially increase the risk of a fire or an explosion.

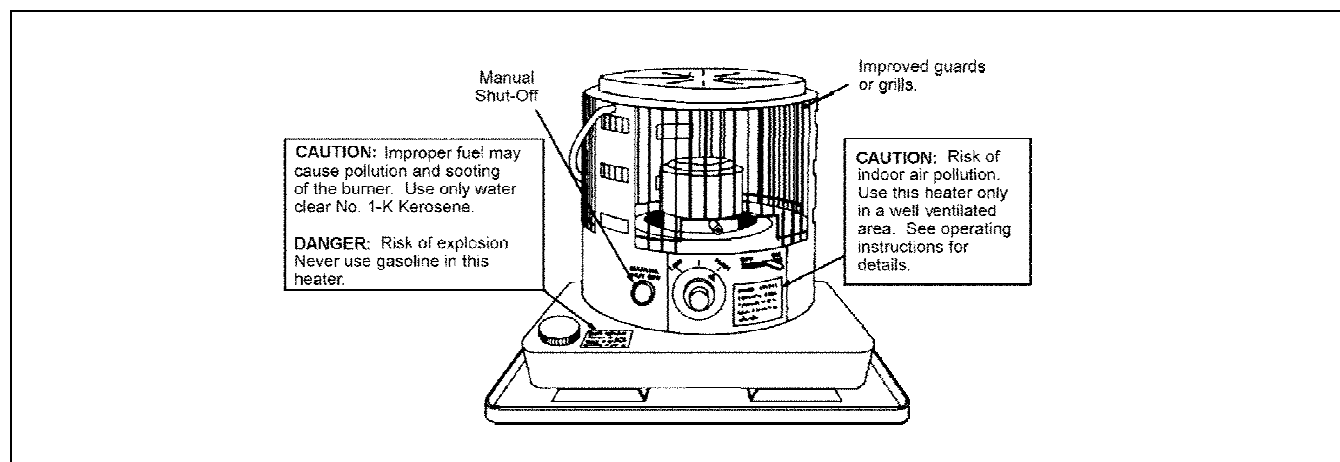


Figure 1.

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2. Howard J. Doss, Safety Leader, Agricultural Engineering Department, Michigan State University, East Lansing, MI 48824-1323. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by the MSU Extension or bias against those not mentioned.

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- Always store kerosene in a container intended for kerosene, not in a gasoline can or a can that has contained gasoline. This helps avoid using contaminated fuel or the wrong fuel by mistake. Kerosene containers are usually blue, gasoline containers are red.
- When purchasing kerosene at the pump, make sure to use the kerosene pump, not the gasoline pump. Some service stations have separate islands for kerosene. Some oil companies have also established quality control programs to minimize the chances of gasoline contamination of kerosene.
- 1-K grade kerosene should be purchased from a dealer who can certify that what is being sold is 1-K. State-operated and private sector certification programs that ensure the quality of kerosene are established in some states. Grades other than 1-K can lead to a release of more pollutants in your home, posing a possible health risk. Different grades of kerosene can look the same so it important that the dealer certify that the product sold is 1-K grade kerosene.
- Never refuel the heater inside the home. Fill the tank outdoors, away from combustible materials, and only after the heater has been turned off and allowed to cool. Do not refuel the heater when it is hot or in operation. Do not fill the fuel tank above the "full" mark. The space above the "full" mark is to allow the fuel to expand without causing leakage when the heater is operated.
- In case of flare-up or if uncontrolled flaming occurs, do not attempt to move or carry the heater. This can make the fire worse. If the heater is equipped with a manual shut-off switch, activate the switch to turn off the heater. If this does not extinguish the fire, leave the house immediately and call the fire department. As an added reminder and precaution, install at least one smoke detector near each sleeping area or on each level of the house.
- Reduce your exposure to indoor air pollutants by properly operating and maintaining your portable kerosene heater. Although portable kerosene heaters are very efficient in the burning of fuel to produce heat, low levels of certain pollutants such as carbon monoxide and nitrogen dioxide are produced. Exposure to low levels of these pollutants may be harmful, especially to individuals with chronic respiratory or circulatory health problems.
- To assure you and family members are not exposed to significant levels of these pollutants, you should follow carefully the following rules of safe operation:
 - Operate your heater in a room with a door open to the rest of the house.
 - If you must operate your heater in a room with the door closed to the rest of the house, open an outside window approximately an inch to permit fresh air to effectively dilute the pollutants below a level of concern.
 - Always operate your heater according to the manufacturer's instructions, making sure that the wick is set at the proper level as instructed by the manufacturer.
 - Keep the wick in your heater clean and in good operating condition by following the cleaning and maintenance procedures recommended by the manufacturer.
 - Keep an outside window opened approximately an inch to ensure adequate fresh air infiltration. This is important regardless of whether you use a kerosene heater or some other conventional method of heating. If your home is relatively new and tight, or if it is older but has been winterized to reduce air infiltration from the outside.

Reference: *Consumer Produce Safety Alert - 009403.*