



Understanding Deep-Fat Turkey Fryers: What's the Risk?

RISK ALERT

DECEMBER 2009 NUMBER 31

Deep-fat turkey fryers, which have become very popular, are extremely hazardous. The fryers are designed to heat five gallons or more of oil to a very high temperature. Boil-overs, splashes, and spills can occur when consumers immerse frozen, wet, or oversized birds, or when they immerse or remove the birds too quickly, or if rain falls while the unit is in use. The units are notoriously unstable and tip over easily when jostled or when the turkey added, turned, or removed. When the oil spills, it often catches fire, spreading quickly to lawns, trees, buildings and decks, and clothing. If the propane tank that fuels the fryer catches fire, it can explode, causing significant property damage, injuries, and death.

According to the Consumer Product Safety Commission (CPSC), from 1998 to 2007, there were 138 fire incidents involving turkey fryers, which caused 36 injuries and more than \$7.8 million in property loss. NFPA discourages the use of turkey fryers except by properly trained professionals using professional-quality equipment. Due to safety concerns, Underwriters Laboratories has decided not to certify turkey fryers. If a turkey fryer is used, follow the important safety guidelines outlined here.

Choose and Set Up Fryer Equipment Safely

- Select a fryer that meets ANSI Standard Z21.89/CSA 1.18, *Outdoor Specialty Gas Cooking Appliances*. (Note that NFPA does not consider the ANSI standard to be sufficiently comprehensive to protect consumers.)
- Be sure that the unit has standard safety features, including maximum fill line, accurate thermometer, a temperature limiting device to prevent overheating the oil, and a stable frame to prevent tip-overs.
- Follow the manufacturer's instructions for assembly, use, and maintenance.
- Set up the fryer outdoors in an open area, well away from buildings, walls, decks, furniture, vehicles, and other combustible or flammable materials. Be sure that it is set up on a firm, stable surface such as a paved driveway or patio. Never set up the fryer in a garage, carport, or breezeway, or under a canopy, roof, overhang, or other covering. Flames can shoot up unexpectedly.
- Be sure there is at least two feet of open space between the fryer and the liquid propane tank.
- Have an appropriate portable Class B or K fire extinguisher ready, and know how to use it safely on a grease fire.

Use Safe Cooking Methods

- Never leave the fryer unattended. Keep the fryer in full view while the burner is on, and while the oil is still hot. Only adults should use and supervise these appliances.
- Keep children, pets, and anyone with an unstable gait far away from the fryer during all phases of use: while the oil is heating, during the cooking, and until the oil is completely cooled, which could take several hours.
- Use the amount of oil recommended by the manufacturer. Overfilling sharply increases the risk of spills and fires.
- Monitor the oil temperature closely to maintain it below the flashpoint, the temperature at which it will ignite. Flashpoints vary for different types of oil (peanut, canola, corn, etc.). If the temperature rises above the recommended level, or if any smoke rises from the oil, turn the heat off immediately. The smoke is a signal that the oil is too hot and may ignite at any time.
- Prepare the turkey carefully. Make sure it is completely thawed, and dry it completely before immersing it. Any water droplets, marinade, or ice will vaporize as steam, causing the oil to splatter and boil over.
- Dress appropriately. Cover bare skin; be sure that sleeves are close-fitting. Use pot holders or oven mitts. Wear protective goggles or a face shield to protect the eyes and face from splashes and excess heat.
- Use an appropriate cradle or tool to lower the turkey *very slowly* into the hot oil.

In Case of Fire in or Around a Turkey Fryer

If the oil catches fire:

- Call 911 immediately. Do not wait!
- Get everyone away from the area.
- If you can do so safely, turn off the gas.
- DO NOT USE WATER to extinguish a grease fire. Water will spread the burning oil around.
- While waiting for firefighters to arrive, you may try to control the fire with a portable Class B or K extinguisher, if you have one and know how to use it. Do not spray it directly into the fryer; the force of the spray will spread the burning oil. Aim the spray at the flames at the bottom of the cooking vessel.