



Understanding Grease Fires in Commercial Kitchens: What's the Risk?

RISK ALERT

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Why Grease Fires are so Dangerous

Most fires in commercial kitchens involve grease, oil, or fat; these flammable liquids ignite easily, splatter unpredictably, and burn quickly and persistently. Grease fires can flare up into ventilation systems, where burning grease can spread flames into the building. Splashes of burning grease can ignite cabinets and other surfaces. What starts as a small stove-top fire can quickly overwhelm suppression systems and destroy an entire building. Though grease fires are a risk for any kitchen, they are less likely to occur, and will cause the least damage, in clean kitchens that have appropriate ventilation and suppression equipment, and where employees are trained in prevention and response.

Cleanliness and Housekeeping

- Empty grease traps before they become full. Clean up grease and oil spills as soon as they occur.
- On a daily basis, clean all grease and food from cooking appliances, including grates, racks, grills, broilers, splatter guards, drip pans, etc., and from as much of the hood and duct system as can be reached. Change or clean filters once a week or as needed.
- Clean greasy residues from countertops, work surfaces, floors, walls, wiring, outlets, etc.
- Keep pots, pans, and other cooking equipment scrupulously clean, inside and out.
- Empty trash and garbage regularly, before they become full, and before closing the building.
- Keep combustible and flammable materials away from fryers, grills, ovens, stoves, etc. where they might be splashed with oil or fall into the hot fat.

Ventilation and Suppression Systems

- Be sure that the ventilation and suppression systems have been designed to provide sufficient capacity for the volume and type of cooking done in your kitchen.
- Update systems and maintenance schedules if you change the type of cooking oil, or add equipment, or increase the volume of frying or deep-fat cooking.
- Establish a schedule for inspection, cleaning, and maintenance of the ventilation and suppression systems by a qualified professional.
- Be aware of the differences between wet and dry chemical suppression systems. Wet chemical extinguishing systems have become the protection system of choice for modern fryers.
- Teach employees about the functions, reliability, and operation of the suppression system, so that they know what should happen and what they need to do if there is a fire and the system activates.
- Show employees how to activate suppression systems and alarms manually, should these fail to activate automatically during a fire.

- Have appropriate portable fire extinguishers within 30 feet of the fryer. Be sure that they are inspected, serviced, and fully charged. Class K extinguishers are best for grease fires, since ABC extinguishers can interfere with the automatic suppression system.
- Train employees in the proper uses and operation of portable ABC and Class K fire extinguishers.
- Place a placard conspicuously near the Class K extinguisher that states that the fire protection system shall be activated prior to using the fire extinguisher.
- Be sure that the facility has smoke and fire alarms that are installed, maintained, and monitored by a qualified central station alarm company. Be sure that the facility is equipped with automatic fire sprinklers.

Safe Cooking Practices

- Use only fresh, high-quality oils or fats. Vegetable oils are less likely to ignite than animal fats.
- Keep cooking temperatures within the safe ranges recommended by manufacturers. Note that different types of oil require different cooking temperatures.
- Never leave cooking food unattended.*
- For stovetop cooking, keep potholders and a metal (not glass) lid handy to smother a small fire. The lid should be of the same or larger size as the target pan.
- Keep at least 16 inches between the deep fat fryer and any open flames from nearby cooking equipment. If the 16-inch separation cannot be achieved, install between the two appliances a splatter shield of stainless steel or tempered glass with a minimum height of 8 inches running the length of the fryer.
- Turn off all equipment after use.

What to Do If a Grease Fire Starts

- If the fire is in a pan on top of the stove, *slide a lid on to the pot* to smother the flames. Turn off the heat. Slide the pan carefully off the burner if you can do so without spilling. *Leave the lid on until the pan is completely cool*, to prevent it from re-igniting.
- Do not turn on the exhaust fan, as this could draw fire into the ventilation system. After the fire is out, use the exhaust to clear the smoke.
- Never discharge an extinguisher into burning grease.* The force of the spray will splash burning grease, which will spread the fire and possibly injure workers.
- Never try to extinguish the fire with water.* Water will quickly boil, forcing the burning oil up and out of the pot with explosive force.
- Activate the fire alarm. Call 911.
- Never try to carry a pan of burning oil.*
- Never try to smother the fire with flour or sugar;* these are highly explosive. Baking soda may be used to smother a small grease fire.
- If clothes catch on fire; **STOP, DROP, and ROLL.**

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