

# Security Spotlight

*An informational Guide for Securitas Canada Clients and Employees*



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## Fire Safety Tame the Flame



**Fire - possibly mankind's most important tool. Fire gives us heat and light; it cooks our food and drives our industry. Without fire, modern life as we know it would be impossible. Yet, as useful as controlled fire can be, uncontrolled fire can wreak havoc and cause terrible tragedies.**

Uncontrolled fires are a serious threat to any community or business. By far, the leading cause of home fires was related to unattended cooking. The leading cause of non-residential fires was also related to cooking, with intentionally set fires running a close second.

Our fire departments do an excellent job of fighting fires, but the best method of fighting fires - by far - is to prevent them from happening. As a security professional, an important part of your mission is to protect the client's property. You can best accomplish this if you are well informed about fire and fire prevention.

### The Fire Tetrahedron

Fire needs four fundamental components to start and keep burning:

**Fuel:** A fire cannot exist without something to burn. Any combustible or flammable material— solid, liquid, or gas— will do.

**Heat:** A fire needs a source of ignition to start burning. This could be anything from a lit match to a static electricity spark. Some substances can auto-ignite when the surrounding temperature gets high enough; certain others can auto-ignite at normal room temperatures.

**Oxygen:** A fire needs air to keep burning. Since oxygen is always present in the air around us, fire is possible whenever heat and fuel come together.

**Chemical Chain Reaction:** When a fire has started, an exothermic chain reaction results which sustains the fire and allows it to continue until one or more of the elements of the fire is removed.

Basic fire prevention boils down to this: control the four components of the fire tetrahedron—and keep them apart.

You can take oxygen away from a fire by smothering it with foam or CO<sup>2</sup> from a fire extinguisher.

You can lower the fire's temperature by dousing it with water. If the temperature is lowered below the fire's ignition point, it will stop burning.

A fire can be contained and allowed to self-extinguish by removing access to combustible material. A good example of this is when fire fighters dig a trench to block the path of a forest fire.

The fourth method to put out a fire is to interfere with the chemical chain reaction by removing the free radicals in the reaction using neutralizing chemicals such as FM-200, INERGEN, and FE-13 type extinguishers to create an inert gas barrier.

## Reducing Fire Hazards

Fuel supply and heat source hazards can be controlled by good housekeeping and responsible habits.

Ordinary combustible materials—like wood, paper, and cloth—are common fuel supplies. Fire risk increases when large volumes of materials are stored closely together. Be on the watch for overflowing trash bins, stockpiles of paper goods, and other combustibles in storage areas, and the accumulation of discarded boxes, newspapers, and wood scraps.

Other fuel sources include combustible gases like propane and natural gas. All fittings, hoses, and clamps on these containers should be tight and sealed. Flammable or combustible liquids such as gasoline, kerosene, and paint can be fuel for a fire. These liquids should be stored properly in a ventilated room, in approved, air-tight containers. Oily rags should be placed in designated metal containers and properly disposed of regularly. Spilled or leaking combustible liquids should be immediately reported.

Heat or ignition sources can be as varied as the sun shining on a container of flammable liquid to the spontaneous combustion of oily rags. Other sources include:

- open flames
- heat-producing machinery or equipment, especially cooking equipment (microwaves, toasters, ovens, coffee pots, etc.)
- damaged or flawed electrical wiring and circuits
- overloaded electrical outlets
- welding, cutting, and grinding operations that produce sparks—these can ignite ultra-fine dust particle accumulations.

## Vigilance and Reporting

Security officers should also be watchful for other hazards that can help fires start and spread or which may hamper quick evacuation. These include, but are not limited to:

- frayed electrical cords
- coffee pots left on after working hours
- work lights left on near or in contact with combustible materials
- boxes stacked too close to the ceiling, which may lessen the effectiveness of sprinkler systems
- loose or missing ceiling tiles, which may allow fire to spread to other areas
- fire extinguishers that are missing, broken, or out of date
- exits that are blocked by anything that prevents people from getting out quickly and safely
- exit signs that are missing or, if illuminated, have burnt out bulbs

Security officers can help prevent fires by being vigilant when patrolling and reporting fire hazards as soon as they are discovered. They can also help control access to the area and remain alert for suspicious persons or other conditions that might put the site at risk for arson. Watch for potential fire risks while on post and on patrol. **And report what you find.**

### Extinguisher Use

Every emergency situation is unique and requires Securitas officers to use good judgment and common sense in response. However, when dealing with fire, it is generally recommended that the first action items for officers are to call 911 and evacuate the building. If you must use an extinguisher it is very important to use the right type.

Use Type "A" for ordinary combustible material fires (wood, paper, cloth, etc.), type "B" for flammable liquid fires (cooking oil, paint, gasoline, etc.), type "C" for electrical fires, and type "D" for fires involving flammable metals. Review the ACT 2 training on Fire Prevention for more information on fire extinguishers.

