



EHS Fact Sheet

Fire Safety

Four elements of a fire

- Enough oxygen to sustain combustion;
- Enough heat to raise the material to its ignition temperature;
- A fuel or combustible material; and
- A chemical, exothermic reaction.

Oxygen, heat, and fuel are frequently referred to as the fire triangle. Add in the fourth element, the chemical reaction, and you have a fire "tetrahedron." The important thing to remember is keep these four things separated.

Fire tetrahedron



Since oxygen is usually abundant in the air around us, **fire safety, at its most basic, is based upon the principle of keeping fuel sources and ignition sources separate.**

It is important to examine your home or workplace and take note of potential heat sources and volatile fuels, such as gasoline.

Fire classifications

- **Class A:** Wood, paper, cloth, rubber, and certain plastics.
- **Class B:** Flammable liquids or gases - gasoline, oil, grease, propane, paint thinner.
- **Class C:** Electrical fires - any energized piece of electrical equipment.



Preventing fires

Class A fires: Make sure combustible materials do not encounter potential heat sources such as floor furnaces, pilot lights, light bulbs, space heaters, or electrical sources. Practice good housekeeping and store lighters or fuel sources away from combustible materials.

Class B fires: Most flammable and combustible liquids emit fumes that are heavier than air and can travel long distances. They can be ignited by something as small as a pilot light, electrical spark or even static discharge. Store gasoline in approved safety cans only. Wait until gasoline powered equipment has cooled off before refueling.

Class C fires: Don't overload wall outlets. Make sure cords and wires are in good condition, and replace them when they become frayed or damaged. Don't run cords under carpets or through doors or windows.

In case of a fire

Assist any person in immediate danger if it can be accomplished without risk to yourself.

Immediately activate the building fire alarm system to notify the fire department and other building occupants.

Dial 911 from a safe place and be ready to give the address and other details on the location of the fire.

Doors, and if possible, windows, should be closed as the last person leaves a room or area.

Do not use elevators, and never reenter a building without permission from the responding fire department.

EHS offers Fire Safety Training featuring the Bullex fire extinguisher simulator on the second Friday of each month in our conference room. Email ohsp@okstate.edu to sign up.