# Find the Fire Hazards




## WHAT'S AT STAKE?

Workplace fires account for many injuries and deaths, with approximately three percent of workplace fatalities being related to fire and explosions. Not only do workplace fires cause injuries and deaths, they also cause millions of dollars' worth of property damage every year, leading to job losses. In fact, a great many of the workplaces destroyed by fire are never rebuilt.

## WHAT'S THE DANGER?

Fire hazards can difficult to spot. They may be hidden from view, or they may involve chemical processes you are not aware of. A fire needs fuel, oxygen and ignition to burn. But you might be surprised at some of the types of fuel, sources of oxygen and causes of ignition that can start fires.

**EXAMPLE**

A worker died in a flash fire that occurred when a static spark ignited solvent vapors on top of a large blending tank in a manufacturing plant. The spark, which was either from his clothing or from metal striking metal, set off the highly volatile vapors from a solvent being used to dissolve nitrocellulose, a substance that burns very hot and fast. The coroner recommended that when handling hazardous materials, workers should wear clothing made of material less likely to gather a static charge.

## HOW TO PROTECT YOURSELF

Fire prevention on-the-job is everyone's responsibility. We all need to be alert to anything that could cause a fire, and take responsibility to report any problem areas so they can be corrected.

Here are some diverse examples of hidden and unexpected fire hazards:

- Trash that misses the garbage container can linger long enough to meet a source of ignition in an out-of-the-way corner.
- Oily rags left on work benches or in corners are serious fire hazards. They can catch fire as a result of spontaneous combustion without an outside

source of ignition. Oily rags must be placed in an approved metal covered container that is emptied regularly.

- Fine dusts and powders can burn and cause explosions when they are confined to a poorly ventilated area and exposed to ignition. The source of ignition can be as seemingly insignificant as a spark from static electricity or friction. Even a substance as ordinary as lint from the clothes dryer will burn rapidly if ignited.
- Materials or furniture placed near an unused heating device can catch fire when the heater is later turned on in cold weather. Ordinary combustibles like fabric, cushion foam, paper, wood and cardboard not only burn but give off noxious gases that could poison or smother you before you notice the fire.
- Flammable liquid vapors can catch fire far from the container they leaked from. The fire flashes back along the trail of vapor to the original container, which can then explode. Store flammable liquids such as cleaning solvents in a well-ventilated area away from an ignition source.
- A fire ordinarily uses the oxygen in the air. But a category of chemicals called oxidizers also supply oxygen to a fire and cause it to burn violently. This is one of the reasons it is important to store chemicals correctly and to separate certain substances so they cannot mix by accident.
- Overloaded electrical circuits and electrical equipment in poor repair are responsible for countless fires. Do not attempt to draw power in excess of the rated capacity for the electrical system. Maintain all electrical equipment carefully, keeping it free of moisture, which can damage insulation, and have repairs done only by qualified persons.
- Poorly adjusted machinery also causes fires. The machine overheats when it is running poorly because it is dirty, jammed or incorrectly aligned.

## FINAL WORD

Help prevent fires in your workplace. Watch for hidden fire hazards, and follow the instructions for handling and storage of chemicals.