



Practical Tips

IDENTIFYING THE CAUSES OF FIRE

What Causes Fires?

The first step in preventing fires is knowing what causes them. Then you can develop procedures for preventing, detecting, and extinguishing fires.

Flammable Liquids

Gasoline, solvents, and naphtha are extremely dangerous. If you must use them:

- Store them only in approved safety cans or storage cabinets. Be sure they are labeled.
- Keep them in areas that are well ventilated.
- Store them away from heat or sparks.
- Clean up spills right away.
- Never smoke or light a match when you're near flammable liquids or handling them.
- Oily rags must be stored in a covered metal container with a self-closing cover.
- Spontaneous ignition happens when heat builds up in piles of trash, damp waste, or oily rags.

Electrical Fire Hazards

Faulty electrical wiring is a common fire hazard. Loose wiring, overloaded circuits, and overheated electric motors are dangerous. Here's how you can prevent electrical fires:

- Check tools, equipment, extension cords, and plugs for worn spots and exposed wires.
- Keep switch boxes clean and closed.
- Don't try to use broken power tools or equipment. Report them to your supervisor.
- Don't attempt to repair broken power tools or equipment unless you're a trained and experienced repair technician.



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Arson

Some fires are started deliberately. If you see someone or something suspicious, report it to your supervisor.

Smoking

- Careless smoking can cause fires. Smoke only in areas where smoking is allowed.
- Use butt cans and ashtrays for cigarettes and matches.

Open Flames & Hot Surfaces

- Get a hot-work permit before you use heating tools or appliances, such as welding torches or soldering guns.
- To prevent falling sparks and hot metal from causing a fire, sweep off wood floors and cover them with metal or other non-combustible material.
- Clear the area of anything that could ignite. Surround the area with fire-retardant curtains if they're available.
- When welding is going on, make sure a fire watch is standing by with a fire extinguisher.
- In some cases, the fire watch may need to continue for up to 30 minutes after the job has been finished.
- Turn off and unplug appliances such as soldering irons and coffee pots when your work day is over.

Sparks

Friction produces sparks that can cause fires. To avoid them:

- Watch for sparks from metal-to-metal or metal-to-concrete contact. Use brass or plastic containers and tools when you work with flammable materials.
- Check belt drives and conveyors for inadequate lubrication, rubbing, high stress, or tautness that can produce sparks.
- Oil motor bearings frequently to cut down on friction and overheating.



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Static Electricity

Static electricity is a constant danger when transferring flammable or combustible liquids. Surface vapors can ignite when flammable liquids flow from one container to another.

- Use brass or plastic containers when you transfer flammable liquids.
- Make sure containers for flammable liquids are grounded and bonded to prevent static electricity from causing a spark.