

Talks **ZONE**

Safety Talks
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T3912

Everyone must help prevent fire

If you have ever experienced fire, you know how frightening and damaging it can be. If you think the fire risk where you work is too low to worry about, think again.

Fire hazards exist in all workplaces, and with them the possibility of injury, death, destruction of property, business interruption or closure and loss of jobs.

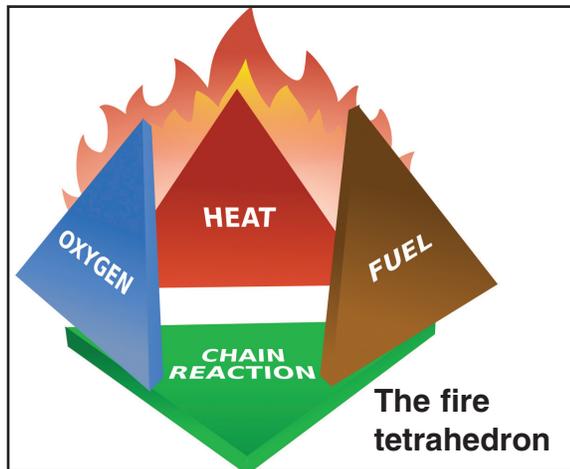
Everyone in the organization is responsible for preventing fire. All personnel must be familiar with specific fire hazards encountered on the job, and how they relate to them individually.

For fires to start and continue, three things must exist — oxygen, fuel and heat. This is called the fire triangle. If one part of the triangle is removed, a fire will not start. Since oxygen is present in just about every work location, the only way to prevent fires is by controlling sources of fuel and heat.

As both fuel and oxygen are heated, molecular activity increases. When heated to the combustion temperature, a self-sustaining chemical reaction is developed. It can escalate to a point where the external ignition source is no longer necessary for the fire to continue. This fourth factor results in what has become known as the fire tetrahedron (a solid pyramid with four sides, made up of oxygen, fuel, an ignition source and chemical reaction).

Fires are classified:

- A** — Ordinary combustibles such as wood, paper, cloth, rubber and some plastics.
- B** — Flammable or combustible gases and liquids such as gasoline, kerosene, paint, paint thinners or propane.
- C** — Energized electrical equipment such as appliances, panel boxes, switches and power tools.
- D** — Certain combustible metals such as



magnesium, titanium, potassium or sodium. These metals burn at high temperatures and give off sufficient oxygen to support combustion.

K — Fires involving commercial cooking appliances with vegetable oils, animal oils, or fats at high temperatures.

Most workplace fires are caused by:

- Poor housekeeping. Trash and other clutter provide one of a fire's basic needs: Fuel.
- Electrical overloads, which cause overheating of circuits, a major cause of industrial fires.
- Hot work operations that use high temperatures, such as welding or grinding.
- Smoking. Matches and smoldering cigarette butts start more fires each year than any other man-made source.
- Spontaneous combustion. Certain materials, such as oily rags, can heat up during a reaction between chemicals and flammable materials. If they get hot enough, a fire will start.
- Portable electric heaters. These are a particular risk near flammable material.

- Gas-fired equipment. Improper operation or maintenance can cause fires or explosions
- Reactions from combining certain chemicals that create heat and ignite.

Here are some basic fire safety tips:

- Don't allow trash and litter to accumulate. Keep areas around machines (air compressors, heaters, water heaters, fans) clear of combustibles.
 - Never block fire sprinkler heads, sprinkler controls or fire extinguishers.
 - Keep exits free of obstructions.
 - Do not use multi-outlet adapters. Never overload wall or cubicle outlets or use damaged, worn-out extension cords.
 - Keep equipment clean and maintained according to manufacturers' instructions, and use it properly.
 - Store hazardous materials in designated areas. Only store small quantities of flammable liquids outside storage cabinets. Never leave flammable liquid containers open and never use rags or shop towels in place of caps.
 - Minimize wooden pallet storage within buildings as pallets can catch fire quickly.
- Every operation should have an emergency plan. Procedures should outline who is to call the fire department and how the building is to be evacuated.
- When a fire or emergency evacuation does occur, keep calm and follow instructions. Know where fire alarm boxes, emergency exits and extinguishers are located. Know which extinguishers are for different types of fire, how to use them — and when.

The material contained in this document has been prepared from sources believed to be accurate and reliable. Application of this information to a specific worksite should be reviewed by a safety professional. Anyone making use of the information set forth herein does so at their own risk and assumes any and all liability arising therefrom. Specific medical advice should be obtained through consultation with a physician or other trained health care practitioner.

The Quiz

These questions are meant to help you remember what was discussed today — not to test your patience or challenge your intelligence. The answers are at the bottom of the page. Cover them up, and complete the quiz as quickly as you can.

1. Not all workplaces have fire hazards.
TRUE ____ FALSE ____
2. Are employers the only ones responsible for fire prevention?
YES ____ NO ____
3. Which of these terms refers to the three basic elements of a fire?
 - A. Quadrangle
 - B. Pentangle
 - C. Triangle
 - D. Tetris
 - E. Polygon
4. A Class B fire involves flammable or combustible gases and liquids.
TRUE ____ FALSE ____
5. Which of these is NOT a common cause of workplace fires?
 - A. Poor housekeeping
 - B. Terrorism
 - C. Electrical overload
 - D. Smoking
6. Portable heaters are always safe when used near flammable material.
TRUE ____ FALSE ____
7. Which of these are basic fire safety precautions:
 - A. Keep areas around machinery clear of combustibles.
 - B. Never block fire sprinkler heads, sprinkler controls, fire extinguishers or emergency exits.
 - C. Store hazardous materials in designated areas.
 - D. All of the above.
8. Does your workplace have a written emergency response plan?
YES ____ NO ____ DON'T KNOW ____

ANSWERS: 1. False, 2. No, 3. C., 4. True, 5. B., 6. False, 7. D., 8. Your answer

Hold These Thoughts

Each fire extinguisher displays a rating on the faceplate showing the class of fire it is designed to put out. Extinguishers marked with multiple ratings such as AB, BC or ABC are capable of putting out more than one type of fire.

CLASS A — Effective on ordinary combustibles. Extinguishers capable of extinguishing these fires include pressurized water, foam, or multi-purpose dry chemical agents. They carry a numerical rating that indicates how large a fire an experienced person can safely put out with that extinguisher.

CLASS B — To be used on flammable liquids or gases. Their agents include foam, carbon dioxide, ordinary dry chemical, multi-purpose dry-chemical, halon or halon replacements. They also have numerical ratings that indicate how large a fire an experienced person can put out.

CLASS C — Used specifically on electrical fires. These may contain carbon-dioxide, ordinary dry-chemical, multi-purpose dry-chemical, halon or halon replacement agents. Never use water extinguishers or any agents capable of conducting electricity on Class C fires.

CLASS D — Only used on combustible metals. Their agents are specially designed for the materials involved. Class-D fires react violently to water and other types of chemicals.

To operate a fire extinguisher, use the PASS method:

- Pull the pin.
- Aim the nozzle at the fire's base.
- Squeeze the trigger.
- Sweep the nozzle back and forth across the base of the flames, covering the area of the fire with the contents of the extinguisher.

For the Record

Date of Meeting: _____

Topic: _____

Location: _____

Department: _____

Start Time: _____ Finish Time: _____

Meeting Leader: _____

In Attendance:

Tips for Safety Meeting Leaders

Play it straight. Don't try to bamboozle your audience and don't preach to or teach to them. You might have the safety title but your audience has got the experience. Ask a few pointed questions rather than just go through safety procedures. Getting a response from your audience means a successful meeting. Try throwing in a very wrong statement just to see if anyone is awake and will challenge it.

Don't let anything interrupt the meeting. Before you start, make arrangements for someone to answer your phone and take messages. Check to make sure other activities aren't scheduled for the

same time, or that people don't have to leave early. Ask your audience to turn off their cell phones or other communication devices.

Get close to "near misses." Encourage employees to recall situations when they came close to having an accident. Try to get the group to learn from these experiences. When discussing near misses or actual incidents, be sure not to criticize anyone by name in front of the group.

Talk is cheap, and valuable. Remember, accidents are costly in more ways than one. Invest a little talk and time in safety programs.

Note: TalksZone safety meetings are not intended to take the place of your own safety procedures. Always consult and/or review your procedures before attempting any work.