

## Safety Talk - Fire Prevention

In this course you will learn, What causes fires, Recognizing fire hazards and, What to do in a fire emergency. Each year, thousands of fires cause severe injuries, property loss, job loss and hundreds of deaths

Fires are caused by

- ? Smoking – matches and other smoking materials start more fires each year than any other man-made source
- ? Hot Work – operations that use high temperatures, such as welding or grinding create extreme fire hazards
- ? Spontaneous Combustion - certain materials, such as oily rags can heat up during reaction between chemicals and flammable materials – if they get hot enough, a fire will start.
- ? Personal Electric Heaters - portable heaters must be kept away from flammable material – turn them off when not needed and unplug them at the end of the day.
- ? Trash accumulation – fire need fuel. Keep all work areas clear. Remove excess material on a routine basis, especially before the end of the work day
- ? Gas fired equipment – improper operation or maintenance can cause fires or explosions
- ? Chemical reactions from combining certain chemicals that create heat and
- ? Electrical overloads which causes overheating of circuits -- a major cause of industrial fires.

To prevent fires:

- ? Keep electric motor air intakes unblocked & clean.
- ? Don't store any material in electrical utility areas
- ? Following these rules will help prevent fires at work
- ? Store flammable liquids only in approved containers
- ? No open flames near flammable material
- ? Do not overload electrical circuits
- ? Properly maintain and operate gas fired equipment
- ? Don't let trash accumulate
- ? Turn off Personal Electric Heaters at end of the day
- ? Follow Hot Work procedures
- ? Properly extinguish cigarettes and

- ? Smoke only in approved areas

For fires to start and continue three things must exist

Oxygen, Fuel and Heat... This is called the fire triangle... If one element of the triangle is removed, a fire will not start

Oxygen is in the air all around us --- so we can only PREVENT fires by controlling the sources of FUEL and HEAT

There are four types of fires, they are classified by their type of fuel .

Class A fires involve combustible material such as paper and wood

Flammable liquids such as gasoline, paint, diesel fuel or solvents are the fuel for class B fires

Class C fire involve electrical equipment

Class D fires are from combustible metal powders, flakes or shavings

Rules for Controlling flammable liquids include

- ? Bonding & grounding of bulk liquid containers to prevent sparks which could ignite vapors
- ? Keeping flammable liquids only in approved storage areas
- ? Using only the minimum amount needed at workstations
- ? Use of approved flammable liquid containers, and
- ? Not conducting any flame or spark producing operations or equipment in areas where flammable liquids are stored or used

Flammable gases are controlled by

- ? Keeping flammable gas cylinders in approved storage areas
- ? Using non-sparking tools on flammable gas systems
- ? Not using oxygen cylinder use around oil or grease
- ? Not allowing flame or spark producing operations or equipment in areas where flammable gases are stored or used

Electrical fires can be prevented by

- ? Keeping areas around electrical equipment clear of material
- ? Safe design of electrical systems
- ? Controlling access to distribution equipment rooms
- ? Not storing material in electric utility rooms

Fires from gas fueled equipment, such as boilers and heaters, are prevented by

- ? Strict control of the fuel sources
- ? Alarms and system controls
- ? Automatic equipment shutdown features, and
- ? Periodic cleaning & inspections

Hot Work is any work that causes high temperatures or sparks... These generally involve welding, brazing or metal grinding

Hot work should only be performed in Authorized hot work areas or areas that have been checked and cleared of combustible materials.

Hot work is not allowed in areas where flammable liquids or gases are stored or used

Carelessness with smoking materials is a major source of fires

Smoke only in Authorized areas and use fire safe ash receptacles

Housekeeping rules can also prevent fires

Be sure to turn off all office electrical equipment at the end of the work day

Unplug personal electric heaters

Don't allow trash to accumulate in your work areas, and

Don't storage any material under stairs, inside stairwells or behind ladders

If you discover a fire, activate the nearest fire alarm. AND Notify your supervisor and other employees in the area

Fight the fire only if

You have been trained to use a fire extinguisher AND

The fire department has been notified of the fire AND

The fire is small and confined to its area of origin AND

You have a way out and can fight the fire with your back to the exit AND

You have the proper extinguisher, in good working order AND

You know how to use it.

If you are not sure of your ability or the fire extinguisher's capacity to contain the fire, leave the area immediately.

If you hear a fire alarm...

- ? Evacuate the area immediately
- ? Close windows and doors as you leave

- ? Leave the building - move away from exits & out of the way of emergency units
- ? Assemble in the designated area
- ? Report to the assembly monitor so they know you are safe and
- ? Remain outside until competent authority says that it is safe to re-enter

You should know at least two safe escape routes from your work area

Never use an elevator as part of your escape route

Learn how to activate a fire alarm

Learn the meaning of alarm sounds

Take an active part in emergency drills

In the event of a fire, exit quickly and stay low in smoke filled areas

Fire prevention depends on you... Report all fire hazards immediately... The life and job you save may be your own