Fire Safety

<https://miningquiz.com/powerpoints/fire_safety.htm>

Understanding Fire

* A fire needs three elements to exist: oxygen, heat and fuel.
* Fuel is anything that will burn when exposed to heat. It can be a solid, liquid or gas.
* Fuel sources include paper, wood, oil, grease, chemicals, and flammable liquids.
* The leading heat sources that could cause these fuel sources to burn include electricity, cigarettes, cutting and welding, sparks from tools, and friction.
* To prevent a fire from occurring, you need to eliminate any of the elements needed for a fire to exist.

Fire safety

* Good house keeping can help you to separate the heat sources from fuel sources.
* This is done by
  + keeping waste to a minimum
  + equipment well maintained
  + storage areas organized
* A poorly kept facility increases the chances for a fire and allows a fire to quickly get out of hand.
* Keep all equipment and tools well maintained.
* Keep loose papers and trash neat and organized
* Dust and lint can easily catch fire, keeping the workplace clean and swept is an important fire safety measure

Flammable liquids

Flammable liquids are used so often in the work environment that they are often taken for granted. Liquids, themselves, do not burn, but they form vapors that do burn.

**Flashpoint** is the lowest temperature at which the vapor from combustible liquid can be made to ignite. The lower the flashpoint, the more dangerous the liquid.

Flammable liquids should be stored in approved containers in an isolated area free of other flammable materials.

Every business should find at least one person to serve as their Fire Safety Officer. Logical candidates include your company’s Office Manager, Facility Manager, Safety Officer, Compliance Officer, or Human Resources Manager.

Fire Safety Officer tasks can include:

* Assist in implementing and improving effective emergency procedures in your workplace
* Conduct a thorough walkthrough of your company’s workspace to assess fire hazards
* Raise awareness (with both leadership and staff) about existing fire hazards
* Document risk areas and work with leadership to resolve them
* Help prevent emergencies by evaluating fire risk control measures
* Educate employees on how to respond to an emergency
* Plan and execute regular fire drills
* Continue with routine fire prevention walkthroughs
* Maintaining accountability of individuals and reporting to leadership
* Ensuring doors are closed and evacuation routes are clear
* Assisting mobility-impaired staff
* Ensuring affected areas are clear and collecting stragglers
* Test and maintain smoke alarms
* Coordinate with the Fire Department to test the fire alarm system.

Your responsibilities

* Know the location of fire alarms
* Know the nearest fire station and how to contact them
* Know where the fire extinguishers are location
* Know how to use a fire extinguisher
* Know where the emergency exits are and keep them clear at all times
* Know RACE and PASS

Types of Fires:

* **Class A** – Ordinary combustible materials, wood, paper, etc. Treat with water (cooling) or dry chemicals (coating).
* **Class B** – Flammable liquids, gases, and greases. Treat by excluding air with carbon dioxide, etc. Respirators may be required if the firefighters’ fresh air supply is threatened.
* **Class C** – Electrical fires. Treat with nonconductive extinguishing agent.
* **Class D** – Combustible and reactive metals such as magnesium. Treat with non-reactive heat-absorbing extinguishing medium.

Each type of fire uses an associated type of fire extinguisher.

When responding to a fire there are two major procedures that have become standard. The first is PASS:

* P – **Pull** the pin on the fire extinguisher
* A – **Aim** the nozzle at the base of the fire
* S – **Squeeze** the trigger
* S – **Sweep** the nozzle back and forth at the base of the fire until extinguished

The second is RACE:

* R – **Rescue** any patrons or staff not in immediate danger
* A – **Alarm** should then be pulled to alert others and the fire department
* C – **Confine** the fire as best you can
* E – **Evacuate** yourself and others if the fire is large, if the fire is small and contained you can **Extinguish** the fire using **PASS**.