FIRE EXTINGUISHERS



POINTS OF DISCUSSION

The following three elements make up a Fire Triangle and must be present before a fire will ignite; if one or more parts of the Fire Triangle are removed the possibility of fire has been eliminated?

- **FUEL** or combustible material.
- OXYGEN to sustain combustion.
- <u>HEAT</u> to raise the material to its ignition temperature.

Fires and Extinguishing agents involve four kinds of combustibles and Extinguishers are labeled with the letters A, B, C, D or a combination of letters to denote what type of fires that extinguisher can be used for:

- 1. Class A: Paper, wood, fabric, some rubbers and plastics
- 2. Class B: Liquids, gases, grease, some rubbers and plastics
- 3. Class C: Energized electrical equipment—extinguish with nonconductive agents
- 4. Class D: Combustible metals

The most common types of fire extinguishers are:

- <u>Dry Chemical</u> extinguishers are usually rated for multiple purpose use such as A-B, B-C, or A-B-C. These extinguishers contain an extinguishing agent and use a compressed, non-flammable gas as a propellant.
- <u>Carbon Dioxide</u> (CO₂) extinguishers are most effective on Class B and C fires. These extinguishers are only effective from 3 to 8 feet since the gas disperses quickly. The carbon dioxide is stored as a compressed liquid in the extinguisher; as it expands, it cools the surrounding air. Since the fire could re-ignite, continue to apply the agent even after the fire appears to be out.
- Water extinguishers contain compressed gas and water and should only be used on Class A fires.
- <u>HALON</u> extinguishers contain a gas that interrupts the chemical reaction that takes place when fuels burn. These types of extinguishers are often used to protect valuable electrical equipment since no residue is left to clean up. HALON extinguishers have a limited range, usually 4 to 6 feet.

The universal system for the use of a Fire Extinguisher is called the PASS system

- The user should always remember to use the **PASS** system
 - \checkmark P = Pull.
 - \checkmark A = Aim.
 - \checkmark S = Squeeze.
 - ✓ S = Sweep.
- Pull the pin at the top of the extinguisher that keeps the handle from being accidentally pressed.
- Aim the nozzle toward the base of the fire.
- **Squeeze** the handle to discharge the extinguisher, while standing approximately 8 feet away from the fire. If you release the handle, the discharge will stop.
- **Sweep** the nozzle side to side at the base of the fire. After the fire appears to be out, watch it carefully since it may re-ignite!

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NEVER FIGHT A FIRE:

- If the fire is spreading beyond the spot where it started.
- If you cannot fight the fire while keeping your back to an escape exit.
- If the fire can block your only escape.
- If you do not have adequate fire-fighting equipment.

FIRE EXTINGUISHER MAINTENANCE:

All portable fire extinguishers must be inspected on a daily, monthly, and annual basis.

- a. <u>Daily</u>: Employees visually note that Fire Extinguishers are in designated areas and charged, ready for use.
- b. <u>Monthly</u>: Fire extinguishers are visually inspected and the results documented. e.g. the shell or casing is not damaged, the hose or spray nozzle is present and not damaged, the squeezable lever is not damaged and pins are in place, all labeling is clean and legible and annual inspection certification (card or sticker) is on the extinguisher
- c. Annually: Fire extinguishers are serviced by a third party licensed contractor and the results documented.

When dry chemical extinguishers remain inactive for long periods of time the dry chemical settles to the bottom;

A Best Practice for Monthly inspections of A, B and C Class hand held Fire Extinguishers; is to remove the extinguisher from its location, turn the extinguisher upside down and with the palm of your hand give the extinguisher a firm and solid hit, turn the extinguisher right side up and return it to its designated area. This procedure will allow for the dry chemical inside of the extinguisher to drop and mix internally.

Following the use of a Fire Extinguisher, damage to, service, maintenance or recharging; a Fire extinguisher that is equal in Class, size and readiness must be provided in place of the out of service Fire Extinguisher.

All Hand held Fire Extinguishers must be properly hung with the base of the extinguisher not exceeding 3ft from the base of the extinguisher to the floor and maintained accessible and ready to use at all times, clothing, hand tools or any equipment or device not mentioned must not be placed on top of or hung from a Fire Extinguisher.

Fire Extinguisher location signage must be posted for all extinguishers and must be maintained clean, legible and unobstructed.

Expectations:

Safety is our primary goal; we must perform regular inspections of our work areas for identifying potential hazards that could result in a fire. If we identify a potential fire hazard we must safely correct that hazard and immediately notify our supervisor.

Fire Extinguisher Safety can and should be also apply to our lives at home and with our friends and family.