

“Use of Portable Fire Extinguishers”

The Occupational Safety and Health Act (OSHA) requires employers to select and distribute portable fire extinguishers based on the classes of anticipated workplace fires and on the size and degree of the fire for which they would be used.

Do you know how to extinguish a fire? According to OSHA regulations, no one at a workplace is supposed to use a fire extinguisher unless they have been trained to do so. Though this may seem awfully restrictive, there are several good reasons for this rule. If an untrained person tries to extinguish a blaze, some serious mistakes can happen. Any of these mistakes can cause the fire to become worse, or injure or kill the individual.

Extinguishers have been assigned a classification for the type of fire they will extinguish:

- Class A fire extinguishers are appropriate for ordinary combustibles, wood, paper, and cloth. Class A extinguishers provide for heat-absorbing effects of water types or certain dry chemical types. These are commonly identified by the letter “A” in a triangle.
- Class B fire extinguishers are appropriate for flammable liquid and gas fires, including oil, gasoline, and petroleum by products. Class B extinguishers deprive fires of oxygen and interrupt the fire chain by prohibiting the release of vapors. These are commonly identified by the letter “B” in a square.
- Class C fire extinguishers are appropriate for fires involving energized electrical equipment. These are commonly identified by the letter “C” in a circle. When electrical equipment is de-energized, extinguishers for Class A or B fires may be used.
- Class D fire extinguishers are appropriate for fires involving combustible metals, such as magnesium, titanium, sodium, powdered aluminum, etc. The extinguishing agent does not react with the burning metal, as will occur with water. The fire is “smothered” and cooled below the ignition temperature. These are commonly identified by the letter “D” in a five-pointed star.

Portable extinguishers are to be inspected visually monthly. Some have pressure gauges (pressurized stored water types and dry chemical types). Others have to be weighed to determine the level of desired contents.(CO₂ types).

- Safety pins and detachable seals should be in place.
- There must not be visual signs of corrosion or damage such as indentations or broken parts.
- Portable extinguishers should be mounted, and not blocked from access by equipment or material storage.

The employer is to assure the portable fire extinguishers are subjected to an annual maintenance check and that the appropriate hydrostatic testing is conducted.

Training must be provided for those employees designated to use fire suppression equipment. A trained person using the appropriate extinguisher on a properly identified class of fire can prevent major fire damage and high value losses.

There are four things to remember when it comes to using a fire extinguisher: **Use Your Judgment, Communicate, Ready the Extinguisher,** and **Use It.** You must also know what to do if your efforts fail.

Use Your Judgment – When you see smoke or fire you should use your own good judgment before you decide to extinguish the blaze. Ask yourself these questions:

- Is the fire limited in size and spread?
- Will you have an escape route if something goes wrong?
- Do you know the location of the nearest fire extinguisher?

If you are confident the fire is controllable and your safety is ensured, attempt to put it out. If the answer to any of these questions is *no*, evacuate the area immediately.

Communicate – Once you have decided to extinguish the blaze, make every reasonable attempt to tell at least one other person what you are doing. This person should report your activity to someone else as soon as possible.

Ready the Extinguisher – You must select the proper extinguisher. Fire extinguishers are classified according to the type of fires they extinguish. It is very important to use the proper extinguisher. Some extinguishers are rated for more than one class. Some are for only one type of fire. Just be sure the extinguisher you're using is rated for the fire you're extinguishing.

- Quickly but carefully remove the extinguisher from its mounting bracket. It may be heavy, so use caution when lifting it.
- Stand about six feet from the fire.
- Extend the nozzle toward the fire.

Use It – Once the extinguisher is ready, you are ready to release the extinguishing agent. This must be done properly. For example, if you squeeze the handle before you have aimed the nozzle properly, valuable time and extinguishing agent will be wasted.

A technique to remember for using an extinguisher is published by the National Fire Protection Association (NFPA). It is known as the **P.A.S.S. Technique**.

The **P.A.S.S.** Technique:

Pull out the pin that secures the handle.

Aim the extinguisher nozzle at the base of the fire.

Squeeze the handle. (Do not be startled by the noise or velocity of the agent as it is released.)

Sweep the agent stream from side to side across the base of the fire until it is completely out. Be alert for re-ignition. If this happens, douse the fire until the extinguisher is empty.

Once the fire is out, back carefully away from the scene. This will enable you to know immediately if the fire re-ignites.

Knowing how to use a fire extinguisher the right way is an important skill. Sometimes, though, in spite of your best efforts, you attempt may fail. The last point to remember about using a fire extinguisher is what to do if your efforts fail. It is really quite simple. If you cannot extinguish the blaze or it recurs repeatedly, **evacuate the area immediately**.

The best time to familiarize yourself with potential fire hazards in your work area is before a fire happens. Knowing the hazards that exist, and what types of fires could occur are critical skills to working safely. You can also use this knowledge to make sure the proper type of fire extinguisher is available should the need arise.

