

# A guide to portable fire extinguishers



You know fire extinguishers are important and understand their basic function. But are you aware if your organization has extinguishers, and if so, which types are installed, where they are located, and how to correctly use and maintain them?

Portable fire extinguishers can be extremely effective in combating small fires within the workplace. However, not all extinguishers are the same. There are different classes for different types of fires. Proper selection and placement of extinguishers is extremely important. It's also essential that once installed, the units are carefully, regularly inspected and maintained, and all employees are trained on proper use.

## TYPES OF PORTABLE FIRE EXTINGUISHERS

### Class A (most common)

- Identified by a green triangle containing the letter A.
- Used for wood, paper, cloth, cardboard, and most ordinary combustibles.
- Cool and quench using water.

### Class B

- Identified by a red square containing the letter B.
- Used for flammable liquids, such as oil, solvents, tars, paints, greases, and gases.
- Smother or exclude air. Extinguisher types: dry chemicals, foam or carbon dioxide.

### Class C

- Identified by a blue circle containing the letter C.
- Used for energized electrical equipment, such as electrical boxes, panels, transformers, etc.
- Use non conductive extinguishing material, dry chemical, or carbon dioxide to smother the fire.

### Class D

- Identified by a yellow five-pointed star containing the letter D.
- Used for combustible metals such as aluminum, titanium, magnesium.
- Extinguisher type - use dry powder agent, specific to the combustible metal involved.

### Class K

- Identified by the letter K.
- Used for fats, grease, and oils in commercial kitchens.
- Use special agents. Some of these agents are dry and some are wet. Potassium bicarbonate is used in some of the dry chemical types and some wet types spray a fine chemical mist.

## PLACEMENT & MAINTENANCE

- Select and position portable fire extinguishers based on the potential type and size of fire that can occur. Make sure size and spacing is in accordance with industry standards.
- Mount fire extinguisher units on brackets or in wall cabinets with the carrying handle placed 3-1/2 to 5 feet above the floor. Position larger units at lower heights with the carrying handle about 3 feet from the floor.
- Make sure your organization has a program that addresses the maintenance and inspection of fire extinguishers. Each month, this program should ensure that:
  - Extinguishers are in their assigned location, clearly visible, and not blocked or hidden by objects that would interfere with access.
  - Nameplates with operating instructions are legible and facing outward.
  - Pressure gauges (if so equipped) indicate that the equipment is fully charged (in the green zone).
  - Pins and tamper seals are intact.
  - Equipment is in good condition - no physical damage, corrosion, or leaks.
  - If the powder in dry powder extinguishers becomes packed, it can be loosened by gently rocking the extinguishers from top to bottom.

## EMPLOYEE TRAINING

- Make sure employees know and follow all fire safety rules. Communicate your organization's employee evacuation plan and conduct periodic fire drills.
- Provide specific guidelines for using portable fire extinguishers.
- Identify the location of all fire extinguishers within your facility and train employees on extinguisher parts and operation. Local fire departments or fire equipment distributors often offer hands-on fire extinguisher training. However, as a general rule, the 4-step PASS process can be used for operation:
  - Pull the pin.
  - Aim the extinguisher at the base of the fire.
  - Squeeze the handle slowly and evenly to discharge the material.
  - Sweep the nozzle from side-to-side.
- Stress that safety is paramount. If there is ever an instance where life is threatened, instruct employees to immediately leave the facility.
- \* *When selecting a portable fire extinguisher, make sure it carries the label of an independent, nationally recognized testing laboratory such as Underwriters Laboratories (UL) or Factory Mutual (FM).*