



# FIRE EXTINGUISHER LOCATION AND PLACEMENT

Code officials are charged with ensuring that occupancies are properly outfitted with fire extinguishers and that they are placed in the right locations. This resource identifies which occupancies require extinguishers and where they should be placed within them. It also outlines related fire extinguisher requirements in NFPA® 10, *Standard for Portable Fire Extinguishers*.

## Occupancy Requirements

Fire extinguishers **are required** in the following occupancy types:

Ambulatory health care	Hotel and dormitory	Health care
Apartments	Industrial	Educational
Assemblies	Lodging and rooming	Storage
Businesses	Mercantile	Detention and correctional
Day care	Occupancies in special structures	Residential board and care

Fire extinguishers **are not required** in one- and two-family dwellings. For more information on occupancy requirements, see Table 13.6.1.2 of NFPA 1, *Fire Code* (2018).

## Where and How Should Extinguishers Be Located?

Fire extinguishers that are placed correctly can be accessed more quickly to help control a fire until the fire department arrives. Fire extinguishers are not intended to be a substitute for evacuating the building safely and quickly. Two key factors for locating extinguishers are that they should be accessible and visible.

### Accessible

Extinguishers should be placed where they are readily accessible in the event of a fire, which typically includes normal paths of travel.

### Visible

If visual obstructions cannot be avoided, then arrows, lights, or signs are needed to help indicate where a fire extinguisher is located.

If extinguisher weighs  
**more than 40 lb (18.14 kg) ...**

- ▶ **Top of extinguisher** cannot be more than **3.5 ft (1.07 m)** from the ground
- ▶ **Bottom of extinguisher** must be at least **4 in. (102 mm)** off the ground



If extinguisher weighs  
**less than 40 lb (18.14 kg) ...**

- ▶ **Top of extinguisher** cannot be more than **5 ft (1.53 m)** from the ground
- ▶ **Bottom of extinguisher** must be at least **4 in. (102 mm)** off the ground

**In both cases, this includes extinguishers in cabinets, but it does not include wheeled extinguishers.**



# FIRE EXTINGUISHER LOCATION AND PLACEMENT *CONTINUED*

## Class A, B, C, D, and K Extinguisher Requirements

A portable extinguisher must match the fire that is being fought. There are five classes of fires. Extinguishers are labeled with letters and symbols for the classes of fires they can put out. While these requirements apply to all portable fire

extinguishers, different location requirements exist for Class A, B, C, D, and K extinguishers. See Figure B.1.1 of NFPA 10 for a recommended marking system that can be used to illustrate the uses and nonuses of fire extinguishers on a single label.

### Extinguisher Requirements Table

Extinguisher Class and Letter-Shaped Symbol Markings	Extinguisher Use	Location Requirements
<p>A</p> <p>Ordinary  Combustibles</p>	<ul style="list-style-type: none"> <li>▶ Required anywhere ordinary combustibles are present.</li> <li>▶ Fires involve materials such as wood, cloth, and paper.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Requirements for fire extinguisher size and spacing based on your hazard level are located in Table 6.2.1.1 of NFPA 10.</li> <li>▶ To determine the minimum number of extinguishers needed, divide the total floor area by the maximum floor area to be protected per extinguisher.</li> <li>▶ Travel distance to the extinguisher can't be more than 75 ft (22.9 m).</li> </ul>
<p>B</p> <p>Flammable  Liquids</p>	<ul style="list-style-type: none"> <li>▶ Required for locations where there is the potential for flammable liquid fires.</li> <li>▶ Fires involve flammable liquids such as gasoline, oil, and some paints and solvents.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Table 6.3.1.1 in NFPA 10 includes information about the maximum travel distance to extinguishers based on the type of hazard (low, moderate, or high) and the extinguisher rating.</li> <li>▶ Travel distance to the extinguisher cannot be more than 30 ft to 50 ft (9.1 m to 15.25 m), depending on the type of hazard and extinguisher rating.</li> </ul>
<p>C</p> <p>Electrical  Equipment</p>	<ul style="list-style-type: none"> <li>▶ Required in areas where energized electrical equipment may be encountered.</li> <li>▶ Fires involve energized electrical equipment.</li> </ul>	<ul style="list-style-type: none"> <li>▶ A Class C rating is only put on extinguishers that already have a Class A or Class B rating.</li> <li>▶ A Class A, Class B, or Class A &amp; B extinguisher gets measured to see if it conducts electricity and if it doesn't, then it gets a Class C rating.</li> </ul>
<p>D</p> <p>Combustible  Metals</p>	<ul style="list-style-type: none"> <li>▶ Required in areas where there is a potential for fires involving combustible metals.</li> <li>▶ Fires involve combustible metals, such as magnesium and sodium.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Should not be placed more than 75 ft (22.9 m) of travel distance from a potential hazard.</li> </ul>
<p>K</p> <p>N/A</p>	<ul style="list-style-type: none"> <li>▶ Used where there is a potential for fires involving combustible cooking components.</li> <li>▶ Fires involve cooking oils used in commercial cooking equipment.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Should not be located further than 30 ft (9.1 m) from the hazard.</li> </ul>

**For More Information** Visit [nfpa.org/10](http://nfpa.org/10).



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### **Safety tips**

-Use a portable fire extinguisher when the fire is confined to a small area, such as a wastebasket, and is not growing; everyone has exited the building; the fire department has been called or is being called; and the room is not filled with smoke.

### **To Operate a Fire Extinguisher**

-Remember the word PASS:

- P**ull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
- A**im low. Point the extinguisher at the base of the fire.
- S**queeze the lever slowly and evenly.
- S**weep the nozzle from side-to-side.

### **For the Home**

- Select a multi-purpose extinguisher (can be used on all types of home fires) that is large enough to put out a small fire, but not so heavy as to be difficult to handle.
- Choose a fire extinguisher that carries the label of an independent testing laboratory.
- Read the instructions that come with the fire extinguisher and become familiar with its parts and operation before a fire breaks out. Local fire departments or fire equipment distributors often offer hands-on fire extinguisher trainings.
- Install fire extinguishers close to an exit and keep your back to a clear exit when you use the device so you can make an easy escape if the fire cannot be controlled. If the room fills with smoke, leave immediately.
- Know when to go. Fire extinguishers are one element of a fire response plan, but the primary element is safe escape. Every household should have a home fire escape plan and working smoke alarms.

### **Portable Fire Extinguishers and Children**

NFPA believes that children **should not** be trained how to operate portable fire extinguishers. Teaching children to use portable fire extinguishers runs counter to NFPA messaging to get out and stay out if there is a fire. Furthermore, children may not have the maturity to operate a portable fire extinguisher properly or decide whether or not a fire is small enough to be put out by the extinguisher. They may not have the physical ability to handle the extinguisher or dexterity to perform the complex actions required to put out a fire. In the process of extinguishing flames, children may not know how to respond if the fire spreads. NFPA continues to believe that only adults who know how to operate portable fire extinguishers should use them.