



# 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>Ordinary</p> <p><b>A</b></p>  <p>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>Flammable</p> <p><b>B</b></p>  <p>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>Electrical</p> <p><b>C</b></p>  <p>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>Combustible</p> <p><b>D</b></p>  <p>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><b>K</b></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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