

Fire Extinguisher

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I. Introduction

Fire is a chemical reaction. Actually, there are four elements that must be present for a fire to exist – Oxygen to sustain combustion, heat to raise the material to its ignition temperature, fuel to support the combustion and a chemical reaction between the other three elements.

The concept of fire prevention is based on keeping these four elements separate.



II. Types of Fires



Class A - Fires involving ordinary combustibles such as wood, paper, cloth, trash and plastics which produce glowing embers or char.

Class B - Fires involving flammable gases and liquids such as gasoline, petroleum, oil, paint, propane, butane and most hydrocarbon liquids which must be vaporized for combustion to occur. Class B do not include fires involving cooking oils and grease.

Class C - Fires involving energized electrical equipment or in materials near electrically powered equipment, such as motors, transformers and electrical appliance.

Class D - Fires involving combustible metals, such as magnesium, zirconium, potassium, and sodium.

Class K - Fires involving cooking oils and grease, such as animal fats and vegetable oils.

Some fires may involve a combination of these classifications. Your fire extinguishers should have ABC ratings on them.

III. Types of Fire Extinguishers

Essentially, consider two things while choosing the proper type of fire extinguisher

- 1) the material you wish to protect;
- 2) the type of extinguishing agent that will be most effective at suppressing the possible type of fire caused by these materials. Using the wrong type of fire extinguisher can be dangerous; in some cases, it can encourage a fire to spread!

All of our fire extinguishers are labeled indicating which classes of fires they are effective on. Here are the

types of our portable extinguishers:

ABC Powder Fire Extinguishers – This type of fire extinguishers extinguish the fire primarily by interrupting the chemical reaction, they are effective on class A, B and C fires. The versatility of the mono-ammonium phosphate extinguishant, combined with tremendous fire knockdown capabilities have made the ABC Powder fire extinguishers one of the best fire extinguishers to use in almost all circumstances.

AFFF Foam Fire Extinguishers - AFFF is a fast, efficient means of extinguish those fires by depriving oxygen and taking away the heat. The Foam fire extinguishers can be used on class A & B fires.

Water Fire Extinguishers – Water fire extinguishers are filled with regular tap water and pressurized with oxygen. The best way to remove heat is to dump water on the fire but, water fire extinguishers are suitable for Class A fires only. Never use a water extinguisher on grease fires, electrical fires or class D fires - the flames will spread and make the fire bigger!

Carbon dioxide Fire Extinguishers – The carbon dioxide extinguishers work by displacing or taking away oxygen from the surrounding area. The highly pressurized CO₂ is also very cold so it also works by cooling the fuel. Carbon dioxide fire extinguishers can be used on Class B & C fires.

Carbon dioxide fire extinguishers have an advantage over dry chemical extinguishers since they don't leave a harmful residue. It is a good choice for an electrical fire on a computer or other favorite electronic device such as a stereo or TV.

IV. Location

We recommend you to have at least one fire extinguisher on each floor of your home. The most important places to have a fire extinguisher in areas are the kitchen and the garage, where are more susceptible to fire. While locate your fire extinguishers, please remember as below:

1. Keep them in plain sight and no more than five feet above the floor, not behind curtains or drapes.
2. Readily accessible for immediate use. Do not put them in closets.
3. Located along normal paths of travel & exit.
4. Not blocked.
5. Keeping them in designated locations when not being used.
6. Installed on hangers, brackets, in cabinets, or on shelves.
7. Class A & D Extinguishers travel distance 75 feet or less.
8. Class B & K Extinguishers travel distance 50 feet or less.
9. Class C Extinguishers, locate in areas with electrical distribution equipment.

V. How to use a Fire Extinguisher - Remember the 'P-A-S-S' word

It is important to know the locations and the types of extinguishers before using it.

P – Pull the Pin at the top of the fire extinguisher.

A - Aim at base of fire, not the flames.

S - Squeeze the actuating handle slowly.

S - Sweep from side to side until the fire is completely out.

If Class C fires, turn off the power first, never touch electrical equipment with any part of the extinguisher.

Once the fire is out, don't walk away! Watch the area for a few minutes in case it re-ignites. Recharge the extinguisher immediately after use.

Please recharge all extinguishers immediately after use.

VI. Inspection and Maintenance

Inspection:

We recommend you to inspect your fire extinguishers monthly to ensure that (quick check):

1. The extinguisher is not blocked by equipment, coats or other objects.
 2. The pressure is at the recommended level.
 3. The nozzle or other parts are not missing or damaged in any way.
 4. The pin and tamper seal (if it has one) are intact.
 5. No dents, leaks, rust & chemical deposits. Wipe off any corrosive chemicals, oil, gunk etc.
- You may shake your dry chemical extinguishers once a month to prevent the powder from agglomeration.

Maintenance:

We recommend you to maintain your fire extinguishers at least once a year. It is a thorough examination of the fire extinguisher, including any necessary repair, recharging or replacement. The fire equipment professional is the ideal person to perform the annual maintenance.

We are a Chinese supplier focus on fire safety equipment. Here are some pictures of our portable fire extinguishers (international standard):

www.starkinsafety.com



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Reference:

<http://www.fireextinguisher.com>

<http://www.fire-extinguisher101.com>