

How Does A Fire Extinguisher Work?

Every home, office and car should have a fire extinguisher. The most common type of extinguisher is called an ABC. The majority of fires can be extinguished using an ABC.

There are two other classes of fires shown on the diagram, D and K. Most people will not deal with those types of fires in their home or office. Class D is for combustible metals and Class K is for restaurant cooking equipment.

		Ordinary Combustibles	Wood, Paper, Cloth, Etc.
		Flammable Liquids	Grease, Oil, Paint, Solvents
		Live Electrical Equipment	Electrical Panel, Motor, Wiring, Etc.
		Combustible Metal	Magnesium, Aluminum, Etc.
		Commercial Cooking Equipment	Cooking Oils, Animal Fats, Vegetable Oils

Inside of an extinguisher is the extinguishing agent. Dry chemical powder is used in an ABC extinguisher since powder is the most versatile agent for extinguishing ABC classes of fire.

But how does an extinguisher work?

Inside, a fire extinguisher is quite like a giant [aerosol can](#), often with two different substances inside. One of them is a [solid, liquid, or gas](#) substance for fighting the fire. The other one is called a **propellant** and is a pressurized chemical that makes the fire-fighting substance come out when you press the extinguisher handle. Next time you see a fire extinguisher, take a good look. Have you noticed that fire extinguishers are always really strong [steel](#) canisters? That's because the propellant is stored inside at a high pressure. Strong canisters are needed to stop the extinguishers exploding!.

A water extinguisher is like a giant water pistol, but instead of using pressure from your finger to fire out the water, it uses pressure from a trapped gas (the propellant). Typically, this is nitrogen or carbon dioxide. Dry chemical extinguishers work in the same way.

1. A ring or pin on the handle stops the fire extinguisher from being set off by accident. It also acts as a tamper-proof seal: if the ring is broken or missing, you know the extinguisher needs to be checked.
2. Inside the sturdy [steel](#) case, there's a canister containing high-pressure gas (orange with blue hashing).
3. Most of the extinguisher is filled with water (blue) or dry chem
4. A tube runs right up the inside of the tube to a nozzle outside (gray).
5. The nozzle often ends in a piece of bendy [plastic](#) so you can easily direct it toward the base of a fire.
6. To operate the extinguisher, you pull the ring and press the handle.
7. Pressing the handle opens a valve (shown here as a green arrow) that releases the pressurized gas from the canister.
8. The gas immediately expands and fills the inside of the extinguisher, pushing the water downward
9. As the water is pushed down, it rises up the tube
10. A jet of water emerges from the nozzle.

