

Fire Extinguisher Guide



Fire Protection Shop



Choosing the Correct Fire Extinguisher

Do you need a fire extinguisher? There's a good chance that you do. If your premises are used for non-domestic activities you may be legally required to install and maintain at least one fire extinguisher. This can include home-based businesses as well as the traditional workplace.

It is vital that you have the knowledge to operate a fire extinguisher in case of emergency, and that you choose the correct variety of fire extinguisher for the kind of fire you are most likely to experience. Last year there were just under 160,000 fires attended by the fire and rescue service according to the Home Office, resulting in hundreds of casualties and more than £100 million in property damage. Being prepared will lower your risk.

In this guide we aim to give you an overview of the different varieties of fire extinguisher available, their uses, and how to identify them in an emergency situation. We will also provide you with basic operating instructions. Let our years of experience help you to keep your property, and your people safe.

There are in fact several different types of fire extinguisher, each one designed to tackle one or more type of fire. Using the wrong kind can be completely ineffective, and even dangerous, so it's important to understand which extinguisher to use and when.

Types of Fire:

In order to select the correct fire extinguisher for your premises you first need to identify from which class of fire you are at most risk. Fires are differentiated into Classes A, B, C, D, Electrical, and F. The following is a brief overview of each class.

Know your fires: Fire Classification

First, let's take a look at the different types of fire that you might encounter. They're known as fire classes, and all fire extinguishers will detail which type they're appropriate for.



Class A fires are the most commonly encountered kind, and involve most varieties of solid combustible material. This can typically include wood, paper and textiles, and commonly occur in the home as well as in the workplace. Class A fires are combated effectively and cheaply by the use of either water or foam fire extinguishers.

Class B Fires



Class B fires are outbreaks involving flammable liquids. These include fuels such as petrol and diesel, but also paints, oils and alcohol. For Class B fires a foam fire extinguisher is recommended.

Class C Fires



Class C fires are caused by flammable or combustible gases. These gases include methane, propane, or natural gas. You should refer to your Fire Risk Assessment as to which type of extinguisher is most suitable in these circumstances. Your Fire Risk Assessment will also advise that the appropriate training is provided for the extinguisher recommended to ensure safe use.



Class D fires are mostly encountered in industrial settings and they refer specifically to fires resulting from flammable metals like magnesium. Class D fires are put out by specialist dry powder extinguishers- like this one.

Electrical Fires



Electrical fires are fires involving electrical equipment or appliances. These can occur at home, in the office, or anywhere that electrical equipment is in use. Due to the risk of electric shock, and further equipment damage, water extinguishers are not recommended for electrical fires. Instead a CO2 extinguisher is best.

Class F Fires



Class F fires typically occur in professional kitchens or other spaces where oils are being heated to high temperatures, like in a deep-fat fryer. Due to the exceptionally high temperatures involved in these fires a wet chemical extinguisher is recommended. We carry several wet chemical extinguishers which are suitable for Class A, B and F fires- making them great all-rounders for in the home, or in a workplace with on-site food preparation facilities.

Fire Extinguisher Types



Extinguisher Type

Water

Colour Code

Red

Standard water jet extinguishers are a cheaper option, designed to deal with common Class A fires. They should under no circumstances be used on an electrical fire as the water conducts electricity and can pose a further safety hazard. Water extinguishers are the most commonly recommended extinguishers for hotels, public places, and residential areas. All water extinguishers are totally red.



Extinguisher Type

Foam

Colour Code

Cream

Foam extinguishers are suitable for use on both Class A and B fires which makes them a good option for many environments. The foam acts as a rapid coolant and prevents oxygen from reaching the fire. Foam extinguishers have a cream panel. Foam extinguishers work by smothering the fire and cools via the water content which helps to prevent it from reigniting.



Extinguisher Type

CO₂

Colour Code

Black

CO₂ fire extinguishers are easily recognisable by their slimline shape and work by displacing the oxygen in the air to suffocate the fire. They are the go to choice for use on electrical fires as they won't harm the electrical equipment and they leave no residue behind. CO₂ Fire Extinguishers can be identified by a black coloured panel on the body of the extinguisher.

**Extinguisher Type**

Powder

Colour Code**Blue**

Powder extinguishers come in many varieties. ABC powders can be used on Class A, B and C fires. In 2012 British Standards were changed to state that powder extinguishers should not be used inside, unless specified otherwise by a health and safety assessment. If you have powder fire extinguishers inside your premises and are in need of replacing them in order to comply, our team will be happy to help you pick the most appropriate replacement. For large workshops, forecourts, and other well-ventilated areas powder extinguishers are still an excellent choice.

**Extinguisher Type**

Wet Chemical

Colour Code**Purple**

Specialist dry powder extinguishers are formulated to deal with Class D fires, caused by flammable metals. Powder extinguishers have a purple panel.

**Extinguisher Type**

Wet Chemical

Colour Code**Yellow**

Wet Chemical extinguishers are used to put out Class F fires, which most commonly occur in commercial kitchens due to the presence of hot cooking oils. If your premises contain any form of deep fat fryer, or chip pan, your insurance company will likely require you to install a wet chemical extinguisher.

Whilst they are specified for Class F fires, some brands of wet chemical extinguisher like the Gloria and the Titan Pro are also effective on Class A and B fires. Always check your extinguisher prior to use to confirm. Wet chemical extinguishers have a yellow panel.

Frequently Asked Questions

What are the Latest UK Fire Extinguisher Colour Codes in 2019?

Water: **Red**

Foam: **Cream**

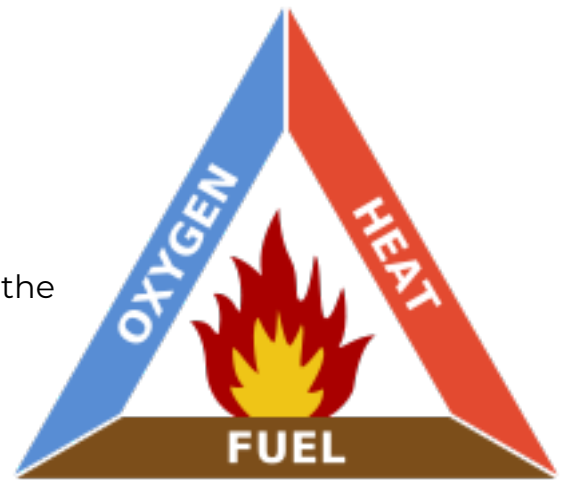
Powder: **Blue**

CO2: **Black**

Wet Chemical: **Yellow**

How exactly does my fire extinguisher work?

Fire extinguishers work by removing one or more components of the fire triangle. The fire triangle is the collective name for the three elements required to create and sustain a fire. These elements are heat, oxygen and fuel. The simplest elements to remove are heat and oxygen. For example a water jet fire extinguisher works by using the cooling effect of the water to remove the heat from the triangle, whereas a CO2 extinguisher removes the oxygen. A foam extinguisher aims to remove both, with the foam acting as a cooling agent but also a barrier to prevent further oxygen from reaching the fuel source.



Which fire extinguisher for the home?

A variety of extinguishers are commonly used in the home depending on the situation. The main types of extinguisher to use would be:

- Water
- Foam
- CO2
- Wet Chemical

For most residential properties a simple water extinguisher is recommended. If you have a lot of electrical equipment you may find a CO2 extinguisher useful, and if you have a chip pan or deep fat fryer in your kitchen a wet chemical extinguisher is perfect.

Do I need a fire extinguisher for my work vehicle?

Business vehicles are not legally required to carry a fire extinguisher. However, if your legally mandated fire risk assessment flags your work vehicle as a risk then you will need to comply. Car extinguishers are a compact way of keeping your work vehicles safe. Exceptions do apply- for taxis and vehicles for hire local authorities can require a fire extinguisher to be kept on hand.

Some vehicles comply under the ADR regulations which will then stipulate the type and size of extinguisher required - this is normally when carrying 'risk' classified items. If you have a business of this nature it is worth checking with your relevant local authority to make sure you are within compliance. Vehicles carrying dangerous goods should carry at least one ABC fire extinguisher, with the specific amount determined by the vehicle weight.

Which fire extinguisher for electrical fires, such as a computer in the office?

The CO2 fire extinguisher is suitable for use on fires involving electrical equipment.

Which fire extinguisher for petrol?

ABC Dry Powder (As advised for forecourts)

Which fire extinguisher for material?

Water fire extinguisher / Foam

Which fire extinguisher for waste paper or cardboard?

Water fire extinguisher / Foam

British Standards BS 5306 Part 10 requires all extinguishers to be colour coded to what percentage of the extinguisher?

A minimum of 90% of the extinguisher body must be red. A concession was made in the latest standard for a small zone of colour to be available on the body of the extinguisher to further help identify the contents of the extinguisher. A colour zone of up to 10% of the surface area of the extinguisher (with a minimum of 3%) can be positioned on the top half of the front of the extinguisher body and be visible from a 180 degree angle.

What else do I need to satisfy a fire risk assessment?

Each fire risk assessment is unique, however standard advice is that aside from fire extinguishers you should also have correctly installed and maintained smoke alarms, emergency lighting, and clear signage.

Using a Fire Extinguisher

We've talked a lot about the types of fire extinguishers available and what they're used for but do you know how to use one? You may have one at work, in the home or even in your car, but knowing how to use one is another matter.

All extinguishers will have a guide on how to use that particular product, but in an emergency situation it's always beneficial to have prior knowledge of how an extinguisher works. Most are used in a very similar way, and standards have been adopted. However, appropriate training is always advised prior to the event of using an extinguisher.

Your place of business should have a Responsible Person designated to ensure fire risk assessments are carried out, appropriate equipment is installed and everyone is trained in the use of fire extinguishers and relevant emergency protocol. The appropriate type of fire extinguisher should be installed within a short distance from any reported risks.

Before using a fire extinguisher you should first be adequately trained and must check the coloured panel to ensure that you are using the correct extinguisher for the class of fire, and if a pressure gauge is present check that the needle is in the green area. If this is a fire you are equipped to fight, move to the proper distance from the fire for the extinguisher range, and stand with your back to an exit.

Once you've decided that you are using the correct extinguisher for the type of fire, you've checked that it is pressurised (if a dial is present the needle should be in the green), and you've determined that the fire is small enough to be tackled, you can begin. PASS is the acronym used to remember the process.

P - Pull the pin from the handle, this will then break the seal enabling you to use it

A - Aim the hose of the extinguisher at the fire's base as you'll want to extinguishers the fire at the source

S - Squeeze the lever slowly, applying consistent pressure

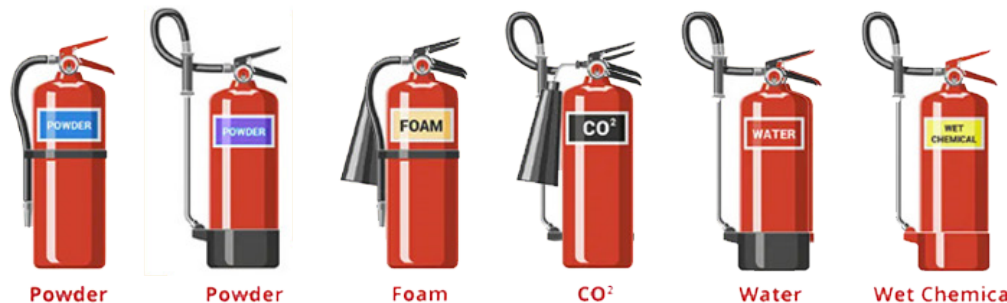
S - Sweep the hose from side to side, covering the source of the fire evenly. Move closer as the fire dies down.

Always ensure you stand a safe distance away from the fire. If the fire is still burning after partaking in the **P.A.S.S** method you should immediately evacuate and contact the fire brigade.

In the event that the flames flare up, back away and repeat. If the flames are not out by the time the extinguishing agent has been fully discharged, leave immediately. If in any event you are unsure of your ability to contain the fire the safest option is to evacuate and let the fire services deal with the situation.

We offer a comprehensive selection of services from fire risk assessments all the way through to extinguisher installation and maintenance. Everything you need to keep you safe. If you have any queries please call 0800 316 1469 and our dedicated staff will help you find what you need.

With this knowledge to hand, you'll be able to act quickly and efficiently should a fire break out at your home or work.



| Fire Type | | Powder | Powder | Foam | CO ² | Water | Wet Chemical |
|-------------------|---|--------|--------|------|-----------------|-------|--------------|
| CLASS A | Solids (e.g. wood, plastic, paper) | ✓ | ✗ | ✓ | ✗ | ✓ | ✓ |
| CLASS B | Flammable Liquids (e.g. solvents, paint, fuels) | ✓ | ✗ | ✓ | ✓ | ✗ | ✗ |
| CLASS C | Gases (e.g. butane, propane, LPG) | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| CLASS D | Metals (e.g. lithium, magnesium) | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ |
| ELECTRICAL | Equipment (e.g. computers, servers, TVs) | ✓ | ✗ | ✗ | ✓ | ✗ | ✗ |
| CLASS F | Cooking Oils (e.g. cooking fat, olive oil) | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ |