

Fire Extinguishers

This resource can help with the following Emergencies areas:

- Stage 5: I know what to do and what not to do in the case of emergencies.
- Stage 6: I know how and when to use different fire extinguishers.

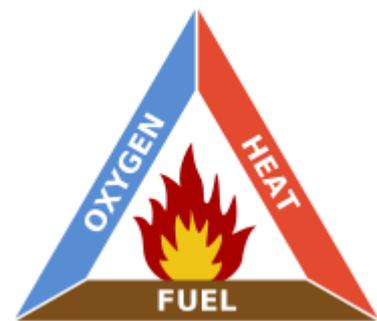
What is Fire?

Fire is a chemical process of combustion which releases heat and light. The flame is the visible portion of the fire which consists of glowing hot gases.

The fire triangle illustrates that a fire requires three elements:*

1. heat
2. fuel
3. oxygen

A fire is prevented or extinguished by removing any one of the elements. For example, heat can be removed by adding water.



Class of Fire

Based on the fuel involved, the fire can be classified. In the European standard EN 3: Portable fire extinguishers, the fires are classified as:

- Class A fire: Ordinary combustibles, such as wood, paper, or textiles
- Class B fire: Flammable liquids and solids which can take a liquid form, such as petrol or oil
- Class C fire: Flammable gases, such as propane and natural gas
- Class D fire: Combustible metals, such as iron and aluminium

A fire involving electrical equipment is not classified by its electrical property. However, if you use a water extinguisher you must isolate the electric supply first as you could be electrocuted. Also, remember that certain electrical appliances maintains a lethal charge for some time after it has been switch off.

In the UK, there is also an additional class

- Class F fire, representing heated oil.

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Fire Extinguishers

A fire extinguisher is a fire protection device used to extinguish or control small fires, often in emergency situations. It is not intended for use on an out-of-control fire, such as one which has reached the ceiling or endangers the user (i.e. potential to block escape route, smoke, explosion hazard, etc.).

Different fire extinguishers are designed to safely remove one of the elements in the fire triangle. Care should be taken to ensure the correct extinguisher is being used for the fire being tackled. For example a CO2 extinguisher will remove the oxygen from a fire, however if used on a liquid fuel, such as fats or oils, it would spread the fire further.

Type	Colour Code	Fire Class
Water	Red	A - wood, paper, or textiles
Foam	Cream	A - wood, paper, or textiles B - Flammable liquids
Dry Powder	Blue	A - wood, paper, or textiles B - Flammable liquids C - Flammable gases Electrical Fires
CO2	Black	B - Flammable liquids Electrical Fires

Before you tackle a fire.

Small fires can be put out safely; however, fires are unpredictable and can expand rapidly. Here is a simple fire code to help you decide whether to put out or get out.

- **Always** put your own and other peoples safety first
- Get everyone out of the building immediately, closing all doors behind you as you go. Then ensure the fire brigade has been called.
- Only tackle a fire in its very early stages.
- Make sure you can escape if you need to and never let a fire block you exit
- Never tackle a fire if it is starting to spread or has spread to other items in the room
- Never tackle a fire if the room is filling with smoke. Around 70% of fire deaths are caused by people being overcome by smoke and fumes
- If you cannot put out the fire or if the extinguisher becomes empty, get out and stay out