

# Choosing the right fire extinguisher

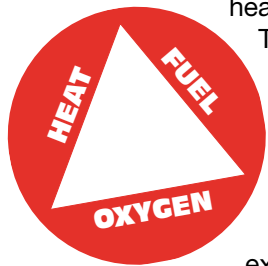


All workplaces are legally required to provide and maintain fire extinguishers dependent on the surrounding risks. You may have been advised by the fire authority, buildings' inspector or your insurers which extinguishers to choose. We hope this short guide answers any questions you may have.

## The theory of fire

Fire is a chemical reaction between heat, oxygen and fuel.

Together they make up the fire triangle and these three elements are necessary for any fire to start and survive. If any one is removed, the fire will be extinguished.



Oxygen is all around us in the air we breathe and the more oxygen a fire gets, the more fiercely it will burn. Fuels are anything that burns, like waste paper, solvents and flammable gases. Sources of heat can be from smoking, electrical heaters, and electrical equipment.

## The classes of fire

It may surprise you to know that depending on what's burning, fires are grouped in to different categories, or classes. Here are the five *main* classes:

Class 'A' fire is a flammable solid, like wood, paper and fabrics.

Class 'B' is for liquids, like solvents, petrol and kerosene.

Class 'C' is for flammable gases, like butane and propane.

Class 'E' is for electrical fires. Though not a 'proper' class of fire but it is useful reminding ourselves of the dangers.

And, last of all, class 'F'. This is a special class of fire just for the oil in deep fat fryers. See our Fact Sheet on Class F Fires for more information.

## How to choose the right extinguisher for the job

Excluding fire blankets, there are four different types of fire extinguishers in common use. Think carefully before tackling even the smallest of fires. Remember - safety first!

Water removes the heat from the fire triangle and is ideal for class A flammable solids, like wood, paper and fabrics. Beware, it conducts electricity and is dangerous to use on flammable liquids like petrol or solvents.

AFFF is a great multipurpose extinguisher ideal for class A flammable solids and especially effective on class B flammable liquid fires. It works by forming a special film layer over the top of burning liquid, removing the oxygen from the fire triangle and smothers the flames.

Dry powder works by removing the oxygen from the fire triangle and is safe to use on all common types of fires, including electrical. They can leave a lot of mess though, so are not ideal for us in confined areas.

Carbon Dioxide, or CO<sub>2</sub> gas, is great because it's totally clean and leaves no mess at all. It works by removing the oxygen from the

fire and is suitable for class B, flammable liquid and electrical fires.

Wet Chemical is a special extinguisher is designed specifically for fires involving deep fat fryers.

## Why are all fire extinguishers now red?

In 1985, an EU Directive required all fire extinguishers to be red in colour with only a small flash of the old British Standard allowed. So, Foam will have a small cream flash of colour; Dry Powder, blue; Carbon Dioxide, black; Wet Chemical, yellow.

## Do we have to replace fire extinguishers in the old British Standard colours?

No. The old colours are fine. When the extinguisher comes to the end of its life, e.g. due to corrosion, it will be replaced by a new red model.

## More help?

Call us anytime on 01472 358222 for more free help and advice.