

Dry Powder Extinguishers



Dry powder fire extinguishers are excellent all-round fire extinguishers, often recommended for use on vehicles and in the home. All powder fire extinguishers are red with a blue panel, are either ABC or BC rated and are safe to be used on fires involving electrical equipment. (Remember to look for the electrical safety pictogram.)

Dry powder extinguishers are not suitable for use in enclosed spaces such as offices, hotels, schools, etc, as the fire-fighting agent creates a cloud that can obscure vision. The contents may also create breathing problems.

How Dry Powder Fire Extinguishers Work

Dry powder fire extinguishers contain an extinguishing agent, which is propelled out of the extinguisher body by a compressed, non-flammable gas. The agent forms a 'blanket' over the fire, smothering it and preventing re-ignition. All used powder residue must be cleaned away and properly disposed of once the fire is extinguished.

Sodium bicarbonate is an effective fire extinguishing agent as it decomposes at 158 degrees F, releasing CO₂ which starves the fire of oxygen.

There Are Three Main Types Of Dry Powder Extinguishers

1. ABC rated or multi-purpose powder, which contain ammonium phosphate
2. BC rated extinguishers, containing potassium bicarbonate or sodium bicarbonate (otherwise known as bicarbonate of soda or baking soda!) Some BC rated powder fire extinguishers contain Monnex. The pressurising gas is usually nitrogen
3. A and D rated graphite powder fire extinguishers are usually used only in Class D fires

Both types of non-graphite dry powder extinguisher are potentially corrosive to soft metal such as aluminium, and can also be abrasive when sprayed.

Dry Powder Extinguishers and Water

Unfortunately, the additional benefit of ABC rated dry powder fire extinguishers being able to tackle flammable gas fires also has a major drawback. Ammonium phosphate can react with any water present to form phosphoric acid, which is corrosive and can seep into even the slightest cracks in equipment.

For this reason, dry chemical ABC rated fire extinguishers should not be used on sensitive electrical equipment such as computers, switch installations, scientific instruments or aircraft, if other fire extinguishing options are available.

Left in place, powder will draw moisture from the air and a common example of corrosion will be the chrome on tools being replaced with rust.

In the event of an emergency when only a dry powder fire extinguisher is available, however, always remember that electrical equipment can be replaced, a human life cannot. If in doubt, get out, stay out and call the fire brigade immediately.