

Portable Fire Extinguishers

Understanding the risk

Fire damage can destroy an organisation with even small fires having the potential to significantly disrupt operations.

The appropriate use of a portable fire extinguisher can prevent a small fire in its early stages from developing into a major incident, protecting personnel and limiting damage to assets and the business.

As per The Regulatory Reform (Fire Safety) Order 2005, the provision of sufficient numbers and suitable types of portable fire extinguishers can be the responsibility of the employer, the building owner or the person who has control of the premises. Where there is joint responsibility, the involved parties will need to co-operate.

It must be noted that the use of an incorrect fire extinguisher on some fire types or insufficient training can exacerbate a fire situation.

Fire Classification

A description of the principal fire classifications is shown in Table 1. On BS EN 3 compliant extinguishers a pictogram will also be displayed showing the corresponding letter.

It should be noted that other classes exist for flammable gas fires (C) and metal fires (D). These are not covered being relatively uncommon.

Fire Class	Detail
A	Fire involving organic solids such as paper or wood
B	Fire involving liquids or liquefiable solids
C	Flammable Gases
D	Metals
(E)	Fire involving live electrical equipment. (Unofficial class – no letter will be displayed but the pictogram will be a downward facing zig-zag arrow representing a bolt of electricity.)
F	Fire involving cooking oils or fats

Table 1 – Common fire classes

Types of Extinguisher

Particular types of extinguisher are best suited for use on certain classes of fire as indicated in Table 2.

All new portable fire extinguishing appliances (FEA) conforming to BS EN 3 are painted at least 95% red with the remaining 5% permitted to be colour coded in order to identify the type of extinguishant, as detailed in Table 2.

Extinguisher Type	Colour Code	Fire Class
Water	Red	A
Foam	Cream	A, B
Dry powder	Blue	A, B, (E)
Carbon dioxide	Black	B, (E)
Wet chemical	Yellow	A, B, F

Table 2 – Fire extinguishing appliance colour coding

It is important to match the type of extinguishing appliance with the local situation. Fuel types and ignition sources will have been identified as a part of the fire risk assessment and the extinguishing appliance should be chosen with this in mind.

Siting of Extinguishers

Extinguishers should be wall mounted on emergency exit routes at similar positions across similar floors, so that they can be easily accessed and operated without undue delay. They must also be located close to special hazards but not so close that if a fire occurs access to the extinguisher becomes dangerous. The coloured zone must be visible through a horizontal arc of 180 degrees.

If impossible to position conspicuously, signage and directional arrows complying with The Health and Safety (Safety Signs and Signals) Regulations 1996 will be required indicating the location of the extinguisher.

All points within a building should be within 30 metres travel distance from an extinguisher. Further guidance is provided by BS 5306: Part 3.

Training

The first time a person uses a fire extinguisher should be in a controlled training situation, not a real life fire.

With suitable training, fire extinguishers will enable people to fight a fire in its early stages limiting property damage and potentially preventing a large scale fire.

As well as concentrating on the importance of matching fire types with the appropriate extinguisher and the safe activation and use of the differing types of extinguisher, training must also reinforce the message that fire fighting should only be undertaken if possible without putting anyone in danger.

Maintenance and Servicing

A plan should be available showing the location of fire points. Extinguishers should be individually identified so that during the annual maintenance it can be confirmed that all extinguishers have been inspected.

BS 5306-3, recommends regular visual inspections of all portable fire extinguishers be carried out not less than monthly, preferably weekly or more frequently if the risk requires it.

Visual inspections should ensure that extinguishers are unobstructed, clearly visible, are not visibly damaged, that tamper seals are in place and that indicators are registering that the pressure is acceptable. The inspection should be recorded.

Full maintenance needs to be carried out every 12 months by a Fire Extinguishing Trades Association (FETA) approved competent contractor with an extended service every 5 years. The maintenance needs to be recorded.

Relevant Standards

Report on a Survey into Portable Fire Extinguishers and their use in the United Kingdom and other member countries of Eurofeu. Survey carried out jointly by FETA (Fire Extinguishing Trades Association) and IFEDA (Independent Fire Engineering & Distributors Association) published in March 2003

The Regulatory Reform (Fire Safety) Order, 2005

BS EN 3: Portable fire extinguishers

The Health and Safety (Safety Signs and Signals) Regulations 1996

BS 5306-3:2017. Fire extinguishing installations and equipment on premises. Commissioning and maintenance of portable fire extinguishers. Code of practice

For further information please contact your local AIG risk engineer.

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