7.0 Fire extinguishers

This guidance highlights the different types of portable fire extinguisher available and their uses.

RISK ADVICE LINE

Having read this guidance should you have any additional questions on this topic or other risk related matters, as a valued Ecclesiastical customer you can contact us through our 'Risk Advice Line' on 0345 600 7531 (Monday to Friday 9am - 5pm, excluding bank holidays) and one of our in-house risk professionals will be able to assist. Alternatively you can email us at **risk.advice@ecclesiastical.com** and one of our experts will call you back within 24 hours.

For queries about your policy cover or claims please contact your insurance broker.

As specialist heritage insurers we are aware of small fires that have been successfully extinguished preventing development into a larger fire.

Clearly, in all situations life safety is a priority over property protection but there may be occasions where the use of a portable fire extinguisher may be appropriate.

For non-domestic premises you will need to complete a fire risk assessment that will enable you to decide on the numbers and types of fire extinguishers required..

For heritage buildings special consideration should be given to the installation of fire extinguishers. In more remote locations it may take significant time for the local brigade to respond to a request for assistance.

Special consideration should be given to the installation of particular types of fire extinguishers as properties may contain historic artefacts such as paintings, china, glass, silver, brass and textiles. The chemicals used in dry powder fire type extinguishers can have a damaging impact on such items. This extinguisher type should not be used inside heritage buildings.

The type and extent of the equipment required can vary from a small number of portable fire extinguishers and fire blankets to fixed hose reels and dry risers in larger sized properties. This guidance note describes the more widely used types of extinguishing equipment and their application.

Number of fire extinguishers

The number of extinguishers required will vary according to the location and will be informed by your fire risk assessment. Generally, it is considered that there should be one 9-litre water extinguisher or equivalent for each 200m^2 of floor area or part thereof, with at least two extinguishers per floor.

Additional extinguishers should be provided in boiler houses or kitchens and in any areas above ground floor level where activities take place.

Selecting the appropriate fire extinguisher

Type	Details	Advantages	Disadvantages
Water	Use 'gases or 'stored' pressure to expel water. Minimum appropriate capacity is 9 litres. Smaller extinguishers are available. By using an additive they have an equivalent rating of 9 litres.	· Most effective agent for extinguishing fires in organic materials e.g. wood, paper or textiles. · Easiest for inexperienced people to use effectively.	· Must never be used in an attempt to extinguish fires involving petrol, paraffin, any oils or hot fat where it can be ineffective and dangerous. · A danger of electric shock to the user if a stream of water is directed on to apparatus containing live electrical circuits so they are not recommended for use near electrical equipment.
Water mist	Extinguisher's nozzle disperses microscopic "dry" water mist particles to suppress fires and extinguish burning materials. Mist cools the fire and reduces the oxygen content of the fire.	· Can be used on most types of fires e.g. wood, paper, textiles, flammable liquids and fat fires. · 6-litre water mist extinguisher as effective as a standard 9-litre water extinguisher.	· None.
Hydrospray	These contain an additive that allows the water to soak into burning materials more effectively. Minimum appropriate capacity 6 litres, which is equivalent to ordinary 9-litre water extinguisher.	· Smaller, lighter and hence easier to use than a standard 9-litre water extinguisher. · If discharged onto electrics, reduced risk of electric shock.	· Restricted use to the same materials as water. · Leaves a small amount of residue after fire extinguished.
Carbon Dioxide (CO_2)	To match the effectiveness of one 9-litre water type, two CO2 extinguishers are needed.	· Suitable where electricity involved. · Leaves no residue so will not cause additional damage to electrical apparatus.	· Less efficient than water against fires in organic materials.

Dry powder	To match the effectiveness of one 9-litre water type, one 4.5-kilogram - dry powder extinguisher is needed.	· Useful against outdoor fires involving petrol, paraffin, oil, etc. · Only to be situated in boiler houses as determined by your fire risk assessment and where adequate ventilation is provided.	· Should generally not be specified for indoor use. · Potential to cause respiratory harm via inhalation of powder in confined spaces without ventilation. · Contains a mixture of abrasive chemicals with potential to cause considerable damage to the building fabric and contents.
Foam (Aspirating)	A 9-litre foam extinguisher is equivalent to a 9-litre water extinguisher.	· Most efficient extinguisher for dealing with fires involving oil or other flammable liquid.	· High possibility of an electric shock if directed on to electrical equipment. · Use only on oil-fired boilers if the electricity supply can be turned off quickly and easily. · Training in the correct use of these extinguishers on flammable liquid fires vital.
Foam (AFFF Spray)	A 9-litre foam extinguisher is equivalent to a 9-litre water extinguisher. Smaller capacity extinguishers may be used, but the numbers should be increased to equate to the number of 9-litre extinguishers required.	· New development for extinguishers, designed as a general-purpose replacement for Halon. · Suitable for use on both flammable liquids e.g. oil in boiler houses and organic materials such as wood, paper or textiles. · Design minimises risk of electric shock if accidently used on electrics.	· Application to flammable liquids is easier than the aspirating foam extinguisher, but will only deal with smaller fires.
Wet chemical	A type of extinguisher specifically designed for fires involving cooking oil.	· More effective than foam, CO_2 or dry powder for cooking oil fires. · Most effective extinguisher for deep fat fryers. · Can be used on wood, paper and textiles.	· Should not be used on electrical fires.

Siting of fire extinguishers

Fire extinguishers should be sited in prominent positions close to where they will be used and not hidden e.g. behind curtains. Preferred locations are near to exits, wall mounted with the carrying handle mounted 1 metre above floor level. Positioning in suitable stands which detail the type of extinguisher and what type of fire they are suitable for is an alternative to wall mounting and has the added advantage of making missing extinguishers easy to identify.

Purchasing recommendations

It is recommended that fire extinguishers should be purchased from firms that are members of the Fire Industry Association (FIA), British Approvals for Fire Equipment (BAFE) or Independent Fire Engineering and Distributors Association (IFEDA).

Such firms can offer expert advice, maintenance facilities and appliances that have been approved by the Loss Prevention Council (LPC). The LPC publishes lists of extinguishers that have been independently tested in accordance with BS EN3 and that are manufactured in accordance with a satisfactory quality assurance scheme.

Details of suppliers of approved extinguishers can be obtained from:

- Fire Industry Association - **www.fia.uk.com**
- British Approvals for Fire Equipment - **www.bafe.org.uk**
- Independent Fire Engineering and Distributors Association - **www.ifeda.org**

Maintenance

All firefighting equipment should be inspected and maintained professionally at least annually by an FIA, BAFE or IFEDA registered firm.

P50 Fire extinguishers

The P50 low-maintenance extinguisher is a recent development in the UK fire extinguisher industry. These extinguishers are certified to EN3 with a 20 year life, requiring no discharge testing or re-fills for 10 years.

The P50 is designed to remove corrosion and reduce maintenance because it only requires a simple visual inspection and checking of the gauges.

If these extinguishers are selected, you should maintain written records of the extinguisher to include purchase date, inspection dates, condition details and any repairs undertaken.

Training

Property owners and staff (and where appropriate, volunteers) should learn how the different types of extinguisher operate. If possible the supplier should provide practical training on use and application.

Kitchens

Before fighting a fat fire, the electricity or gas should be turned off to remove the heat, and a fire blanket used to cover the burning item.

Fire blankets

These are useful appliances and should be provided in all kitchens, staff flats and holiday lets. They can be used in all types of cooking fires and fires involving burning oil and clothing fires. Fire blankets should comply with BS EN 1869: Fire Blankets.

Boiler rooms

The gas supply must be turned off before attempting to tackle any secondary fire.

Further advice

Specific advice about all matters relating to fire prevention can be obtained from your local fire and rescue service.

Key messages

- Life safety is your priority if a fire is discovered at your premises.
- Your fire risk assessment will determine what sort of extinguishers are needed where and how many.
- Portable fire extinguishers should be carefully selected to suit location requirements. The intention would be to extinguish small fires where safe to do so before they can develop into larger fires.
- Dry powder type fire extinguishers should not be used inside a heritage building.

Important Note – For any interventions to your building you will require Listed Building Consent (if a listed building). Also, you should consider any advice given by Historic England, the Amenity Societies and other conservation bodies.

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