Guidance in the Selection of Fire Extinguishers

It is vitally important to select extinguishers that are appropriate to the fire risks and to install enough and in the right places to comply with fire regulations. The purpose of this guide is to give basic advice on selecting extinguishers for you to assess that the cover you already have in place or have been quoted for is appropriate.

Basic scale of extinguisher provision in commercial property and large houses is a minimum of 26 A Class A (flammable solids) coverage which normally equates to two 13A rated water based extinguishers, for a floor area of up to 400m^2. If a property is in single occupancy with floors above the ground being less than 100m2 then the floors above the ground floor need only have one 13A rated extinguisher.

It is important to bear in mind that this is the minimum number of extinguishers recommended by BS5306 part 8:2000. From my experience anyone who has experienced a fire will usually want to increase their level of protection, quite often I have heard people say "you can't have too many extinguishers in a fire!".

Dry powder may in certain situations be deemed a suitable alternative however consideration has to be given to the residual damage from using powder. Extinguishers to cover the other risks e.g. electrical and flammable liquids would be selected to supplement the basic Class A provision.

These are the most common types of extinguishers used in the UK:

Water & Water With Additive Extinguishers

Typically 13A or 21A rated
Suitable only for Class A materials
Not appropriate for use on live electrical equipment

Foam Extinguishers

Typically 8A, 13A or 21A rated
Suitable only for Class A and B materials
Usually safe for accidental use on live electrical equipment

ABC Dry Powder Extinguishers

Typically 5A, 8A, 13A or 21A and B rated
Suitable for Class A,B & C materials
Safe for direct use on live electrical equipment (<1000v)

CO^2 Extinguishers

Typically 34B or 55B rated
Suitable for Class B materials (although not recommended)
Safe for direct use on live electrical equipment

Wet Chemical Extinguishers

Typically 75F and 13A rated
Suitable for Class A & F materials
Usually safe for indirect use on live electrical equipment

Although you can source extinguishers cheaply on the internet and through catalogues what people don't often realise is the complexity in the selection, commissioning, siting and installation and the ramifications of getting it wrong! Insurance companies will be far from understanding if you put in an insurance claim after a fire and the extinguishers were inadequate, inappropriate or did not work. Worse still imagine having to justify your decisions in the wake of a fire to the fire investigator or worse still in court to the coroner if someone was killed in the fire. Apart from compliance it is peace of mind that you are buying when you appoint a professional to select, commission and install your fire equipment.

The table below provides basic guidance on selecting fire extinguishers according to the fire risks.

Fire Class	A	B	C		D METAL	F
Description / **Extinguishant**	Fires involving flammable solid materials, e.g. wood, paper, textiles and other carbonaceous materials.	Fires involving flammable liquids, e.g. petrol, diesel, paraffin, paint and spirits. **Not alcohol or hot cooking oils.**	Fires involving flammable gasses, e.g. propane, butane, acetylene and natural gas.	Fires involving live electrical apparatus e.g. computers, printers, heaters, etc.	Fires involving flammable metals, e.g. magnesium, titanium, sodium and lithium.	Fires involving hot cooking oil and fat, e.g. sunflower oil, maize oil, rapeseed oil and lard.
Water	✓			*		
Foam	✓	✓	✓	*		
ABC Powder	✓	✓	✓	✓		
BC Powder		✓	✓	✓		
Special Purpose Powder					✓	
Carbon Dioxide		✓		✓		
Wet Chemical	✓			*		✓

* SOME of the latest water, water with additive, foam and wet chemical extinguishers often indicate on the front label that they have passed an electrical dielectric test of 35Kva or state they are safe for "inadvertent use" on live electrical equipment. This means that the extinguisher SHOULD be safe if used ACCIDENTALLY on live electrical equipment so is ideal in offices where it is easy to overspray a PC or printer but this does not mean it will replace a dedicated electrically rated extinguisher i.e. CO^2.

Checklist

- Do you have enough Class A rated extinguishers to meet Fire Regulations and satisfy your insurers' minimum requirements?
- Have you identified and provided adequate fire protection for specific fire risks e.g. electrical equipment, hazardous materials, heat processes, etc?
- Are extinguishers routinely serviced by a Competent Person?

If you need further information contact Alan Palmer Secretary at the UKFA on 01932 252306 or email admin@uk-fa.org.