

Ref No 2001 (v7)

Fire Extinguisher Standards (European Standard BSEN3 and BS 5423)

A new harmonised European standard on fire extinguishers - BS EN3 - came into effect on 1st Jan 1997 providing a single standard for fire extinguishers across Europe. It replaced the old British Standard BS 5423, which was withdrawn.

BS EN3 is the standard now used for the specification, manufacturing and purchase of extinguishers in the UK. An additional standard BS 7863 details the revised colour coding system and supplements BS EN3.

BS EN3 is not retrospective and pre-existing extinguishers do not need to be replaced with extinguishers to this new standard. However any replacements as a result of damage, wear or un-serviceability or new extinguishers will need to meet this new, later standard.

The New Standard

The main differences between the old standard and the new are:

- A minimum of 95% of the extinguisher body must be red.
- Zones of colour, indicating the contents of the extinguisher are permitted.
- The markings on the extinguisher must follow a specified layout.
- Pictograms are used indicating the type of fires that the extinguisher is suitable for.
- A minimum body shell thickness is specified.
- Minimum fire performance ratings for the size of extinguisher are specified.
- Operating temperatures of some extinguishers are increased.
- Some discharge times are increased.

Although there are many technical changes and improvements in the new standard, the most noticeable change is to the colour of the extinguisher bodies.

Extinguisher Colours

In the UK we were used to a system of using the colour of the body of the extinguisher to indicate its contents.

However this system has been peculiarly British, with all extinguishers in European countries being coloured completely red.

Since extinguisher colour is not used to identify the type of the extinguisher, it falls to the standard pictograms to illustrate the types of fire that the extinguisher can be used on. These pictograms will be clearly visible on the body of the extinguisher e.g.



Class A fires involving organic solids e.g. wood, paper

Class B fires involving flammable liquids

Class C fires involving flammable gases

Class F fires involving cooking oil and fat

A concession was made in this latest standard for a small zone of colour to be available on the body of the extinguisher to further help identify the contents of the extinguisher. A colour zone of up to 5% of the surface area of the extinguisher can be positioned on the top half of the front of extinguisher body and be visible from 180°.

The British Standard BS 7863 outlines the colours that can be used in this way, and follows the colour coding system that has been used to for many years.

In addition there is now a new colour for the Wet Chemical extinguisher.

The colour codes are:

ZONE COLOUR	EXTINGUISHER TYPE
Red	Water
Cream	Foam
Blue	Powder
Black	Carbon Dioxide
Canary Yellow	Wet Chemical

NB Halon extinguishers, coloured Green, had to be disposed of by an approved contractor by 31/12/2003 in line with the Montreal protocol.

A further effect of the latest standard is that customised colours (most commonly chromed stainless steel) are no longer allowed.

Such extinguishers had been favoured by design-conscious companies, particularly retailers who have preferred the quality look and durability of the stainless steel.

Since the latest standard is not retrospective, there is no need to immediately change these extinguishers and as the stainless steel extinguishers have such a long expected lifetime, stainless steel extinguishers will probably be in use for some considerable time yet.

Replacement of Extinguishers

Even though pre-existing extinguishers do not need to be replaced, the gradual appearance of the new, latest standard extinguishers alongside older types may cause some confusion. The presence of black, blue or cream extinguishers in an area may suggest to some users that the red extinguishers will contain water, but this might not be the case, with potentially serious consequences.

All employees need to know what to do in the event of a fire and this includes being able to select the appropriate type of extinguisher to use. There is clearly a need to ensure that the latest extinguisher identifying system is understood by all.

To reduce the chances of confusion, mixing new and old standard extinguishers in the same building or area should be avoided.

Note also that the British Standard on servicing BS 5306: Part 4 states that all extinguishers installed in any one building or single occupancy should have the same method of operation and if intended for the same function should all be similar in shape, appearance and colour.

Key Action Steps

- Ensure that all new extinguishers obtained comply with BS EN3.
- Ensure that new and existing staff are able to identify the different types of fire extinguisher and their respective use.
- Provide training and information on the colour standards for fire extinguishers.
- Clearly sign extinguishers and their use.
- Do not mix extinguishers conforming to the new and old standards.
- Do not mix extinguishers which have different operating methods.

References

BS EN3: 1996 - Portable fire extinguishers.

BS 7863: 1996 - Recommendations for colour coding to indicate the extinguishing media contained in portable fire extinguishers.

BS 5306: Part 4: 1986 - Fire extinguishing installations and equipment on premises Part 4: carbon dioxide systems

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