

Fact File 81



Fire Industry Association



Fire Extinguishers and Electrical Risks

INTRODUCTION

This Fact File is intended to give information on references relating to fire extinguishers on electrical risks in standards.

APPLICABLE STANDARDS

2.1 European

2.1.1 EN 3-7

Two types of extinguisher (related to conductivity):

1. 'Water-based' and
2. 'all others' (CO₂, powder, clean agent and halon)

Carbon dioxide, powder, clean agent and halon are non-conductive media, therefore a test for conductivity is not needed.

'Water-based' media is conductive, therefore there is a test and Clause 9.2 gives the requirements for testing portable fire extinguishers in contact with electrical risks.

Clause 16.2 gives the marking requirements after testing the extinguishers. It states:

Portable fire extinguishers using water and foam and not tested to, or not meeting the requirements of, Clause 9, shall be marked with the following warning 'WARNING: Do not use on live electrical risks'.

Portable fire extinguishers using other agents and water-based agents, meeting the requirements of Clause 9, shall be marked to indicate that they are suitable for use on live electrical equipment, eg 'suitable for use on live electrical equipment up to 1 000 V at a distance of 1m'.

NOTE: In the UK, the National Standards Committee (FSH/2) took the decision that the UK practice was not to mark the extinguisher if they passed the 35kV test only if they failed.

2.2 UK

2.2.1 BS 5306-8

BS 5306-8 clause 5.4.2 Conductivity states:

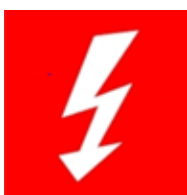
Only non-conductive extinguishing media, such as carbon dioxide, powder or other clean agent, should be specified for use on electrical equipment.

NOTE Some water-based models with a spray type discharge have passed the discharge conductivity test in BS EN 3. This does not necessarily mean that these types can be used directly on fires involving electrical equipment. However, if a spray type extinguisher, being operated in the fashion prescribed by the manufacturer inadvertently splashes onto electrical equipment, then the spray type discharge will afford the user more protection from electrical shock than the discharge from a jet type extinguisher or a spray type which has not passed the BS EN 3 conductivity test.

Responsible persons and potential users should be made aware that electrical equipment needs to be switched off before any extinguisher is discharged onto it.

Some extinguishers carry the pictogram below, alongside the approved pictograms.

A lightning pictogram is not one in EN 3. It has no meaning.



DISCLAIMER

The information set out in this document is believed to be correct in the light of information currently available but it is not guaranteed and neither the Fire Industry Association nor its officers can accept any responsibility in respect of the contents or any events arising from use of the information contained within this document.



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