

Guideline

E-04

CLAP

FORM N°X211

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Directive References: Art. 14 p. 6(c)

Annex I

Subject: ESR on design – Protective devices of portable extinguishers

Question: Shall fire extinguishers be equipped with protective devices against over-pressure?

Answer:

The prevention of danger due to over-pressurization of fire extinguishers shall be achieved for all foreseeable circumstances either by eliminating the hazard by the design, or by providing a protective device.

The risk of external fire shall be adequately considered according to the type of fire extinguisher. Due to the fact that portable extinguishers are very wide-spread and are also consumer products, their possible misuse must be carefully assessed. Written instructions alone cannot be regarded as sufficient.

Examples:

In general the risk of over-filling is significant for cartridge type fire extinguishers with a water based content, which are manually (re-)filled. EN3-8 contains a dedicated overfill pressure test to verify the design for this risk.

External fire will cause high risks for CO₂ fire extinguishers (cylinders) due to the physical behaviour of CO₂ at elevated temperatures. EN3-9 therefore prescribes a bursting disc safety device for this type of extinguisher.