

Small fixed fire extinguishers —

Part 1: Specification for small fixed halon fire extinguishers

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Fire Standards Policy Committee (FSM/-) to Technical Committee FSM/13, upon which the following bodies were represented:

- Association of Metropolitan Authorities
- British Automatic Sprinkler Association
- British Fire Protection Systems Association Ltd.
- British Fire Services' Association
- British Nuclear Fuels Ltd.
- Chief and Assistant Chief Fire Officers Association
- Convention of Scottish Local Authorities
- Department of Health
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property Services Agency)
- Department of Transport (Marine Directorate)
- Electricity Supply Industry in England and Wales
- Engineering Equipment and Materials Users Association
- Fire Brigades Union
- Fire Extinguishing Trades Association
- Health and Safety Executive
- Hevac Association
- Home Office
- Incorporated Association of Architects and Surveyors
- Institution of Fire Engineers
- Lloyds Syndicates Survey Department
- London Fire and Civil Defence Authority
- Loss Prevention Council
- Ministry of Defence
- Royal Institute of British Architects
- Society of Fire Protection Engineers
- Society of Motor Manufacturers and Traders Ltd.
- United Kingdom Atomic Energy Authority
- Warrington Fire Research Centre
- Water Research Centre

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Foreword

This Part of BS 7327 has been prepared under the direction of the Fire Standards Policy Committee. It is intended to cover certain types of fire extinguishing devices which are of relatively small size and extinguishing performance, and which are intended for installation by the owner rather than specialist installation engineers. In this respect they differ from the types of fixed fire extinguishing system covered by Parts 2, 4 and 5 of BS 5306. This specification may be considered as being complementary to those Parts of BS 5306. Some use has been made of BS 5423 in the drafting with requirements modified where necessary because of the different design functions.

Although only new, and not recharged, fixed fire extinguishers are covered, the committee considers that some account could usefully be taken of the appropriate requirements and recommendations of this British Standard in respect of the recharging of discharged extinguishers.

Attention is drawn to BS 6535-2.2 which covers procedures for the transfer of halons from one container to another which will reduce the emissions of halons to the atmosphere. The procedures can be applied to the filling and emptying of fixed halon fire extinguishers and the recovery of halons from extinguishers returned for scrapping, cleaning or examination.

Fixed fire extinguishers are installed singly to cover one or more fire hazards. Although more than one may be installed in the same area to cover separate hazards, the linking, mechanically or electrically, of fixed fire extinguishers is not covered in this specification. Reference should be made to the appropriate Part of BS 5306 if such linking is considered.

Fixed fire extinguishers of the halon type may be installed to cover hazards where class B (according to the classification of BS 4547) fires (except deep fat fires, for example in fryers), or class A (according to the classification of BS 4547) fires which will not become deep-seated, may occur. Since halons have very low electrical conductivity and leave no residue they are often used where fires may occur in or near electrical equipment.

It is intended to prepare other Parts of BS 7327 which will cover extinguishers containing media other than halons.

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing surveillance, which may be coupled with assessment of a supplier's quality systems against the appropriate Part of BS 5750.

Enquires as to the availability of third party certification schemes will be forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 14, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Section 1. General

1.1 Scope

This Part of BS 7327 specifies manufacturing requirements for rechargeable and non-rechargeable metal-bodied small fixed fire extinguishers of the stored pressure type containing either halon 1211 or halon 1301. It relates only to fixed fire extinguishers for separate installation, i.e. not mechanically or electrically linked to any other extinguisher.

It does not specify installation requirements or recommendations for safe use. Information on the safe use of halons is given in BS 5306-5, and HSE Guidance Note GS 16.

NOTE 1 All pressures in this standard are gauge pressures expressed in bar.

1 bar = 10^5 N/m² = 100 kPa.

NOTE 2 The titles of the publications referred to in this standard are listed on the inside back cover.

1.2 Definitions

For the purposes of this Part of BS 7327, the following definitions apply.

1.2.1

automatic operation

operation of the extinguisher which does not require human intervention

1.2.2

body

the metal shell of an extinguisher, excluding all closures, safety devices and pressure indicators, designed to contain the extinguishing medium, and including any skirt

1.2.3

charge

the mass of the extinguishing medium contained in the extinguisher expressed in kilograms

1.2.4

closure

a component, other than a safety device or pressure indicator, subject to the working pressure and used to close off and seal the filling or pressurizing openings, or both, in the body

1.2.5

high pressure extinguisher

an extinguisher whose working pressure (P_s) (see 1.2.18) exceeds 25 bar

1.2.6

low pressure extinguisher

an extinguisher whose working pressure (P_s) (see 1.2.18) does not exceed 25 bar

1.2.7

non-rechargeable (disposable) extinguisher

an extinguisher designed not to be recharged in the field or at the factory, but intended to be discarded after use

1.2.8

rechargeable extinguisher

an extinguisher designed to be recharged after use

1.2.9

stored pressure extinguisher

an extinguisher in which the propellant gas is stored with the extinguishing medium in the body as a whole and the extinguisher body is permanently pressurized

1.2.10

filling density

the mass in kilograms of charge per litre of container volume, as fitted for use, i.e. complete with valve and internal fittings

1.2.11

fixed fire extinguisher (fixed extinguisher)

an appliance containing an extinguishing medium that can be expelled by the action of internal pressure and which, whether or not it is intended for manual operation, does not have provision for manual direction of the discharge

NOTE Throughout this specification this term is usually abbreviated to extinguisher.

1.2.12

halon

a halogenated hydrocarbon used as an extinguishing medium

NOTE Halons are designated by a number in which:

- the first digit is the number of the carbon atoms in the molecule;
- the second digit is the number of fluorine atoms in the molecule;
- the third digit is the number of chlorine atoms in the molecule;
- the fourth digit is the number of bromine atoms in the molecule.

Thus bromochlorodifluoromethane is halon 1211. The halon number does not distinguish between isomers.

1.2.13

head (operating head)

a component that enables the extinguisher to be discharged either manually or automatically or both

1.2.14

manual operation

operation of the extinguisher which requires human intervention