

Glossary of

Terms associated with fire —

Part 4: Fire extinguishing equipment

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Sector Board for Health and Environment (H/-) to Technical Committee FSM/9, upon which the following bodies were represented:

- Chief and Assistant Chief Fire Officers' Association
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Construction Directorate)
- Department of Transport (Marine Directorate)
- Home Office
- Institution of Fire Engineers
- London Fire and Civil Defence Authority
- Loss Prevention Council
- Ministry of Defence
- Royal Institute of British Architects

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Foreword

This Part of BS 4422 has been prepared under the direction of the Sector Board for Health and Environment (H/-). It supersedes BS 4422-4:1975, which is withdrawn. In the preparation of this Part, consideration has been given to ISO 8421-4 *Fire protection — Vocabulary — Part 4: Fire extinction equipment*, published by the International Organization for Standardization (ISO).

Other Parts of BS 4422, either published or in course of preparation, are:

BS 4422, *Glossary of terms associated with fire*.

— *Part 1:1987, General terms and phenomena of fire*; (identical with ISO 8421-1)

— *Part 2:1990, Structural fire protection*;

— *Part 3:1990, Fire detection and alarm*; (identical with ISO 8421-3)

— *Part 5:1989, Smoke control*; (identical with ISO 8421-5)

— *Part 6:1988, Evacuation and means of escape*; (identical with ISO 8421-6)

— *Part 7:1988, Explosion detection and suppression means*; (identical with ISO 8421-7)

— *Part 8, Terms specific to firefighters and rescue services*¹⁾;

— *Part 9:1990, Marine terms*.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, 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.

¹⁾ In preparation.

Glossary

NOTE 1 Each term has a number containing the prefix “4” to denote the Part number of BS 4422.

NOTE 2 Defined terms used in definitions are printed in italics.

No.	Term	Definition
4.1 Foams		
4.1.1	alcohol resistant foam concentrate	<i>Foam concentrate</i> used to make <i>foams</i> suitable for extinguishing fires involving water miscible fuels and fires involving other fuels destructive to ordinary <i>foams</i> .
4.1.2	aqueous film-forming foam (AFFF) concentrate	<i>Foam concentrate</i> which produces a <i>foam</i> capable of forming an aqueous film that under defined conditions will float on the surface of hydrocarbons.
4.1.3	burn back time	Time taken for the complete or partial burn back of a fire covered by <i>foam</i> .
4.1.4	compatibility	Suitability of a <i>foam concentrate</i> for mixing or use with other <i>foam concentrates</i> . NOTE The term “foam compatibility” is applied to other media to indicate their suitability for use in conjunction with <i>foam</i> .
4.1.5	concentration (ratio)	Ratio of the volume of <i>foam concentrate</i> to the volume of <i>foam solution</i> . NOTE <i>Concentration</i> is usually expressed as a percentage by volume.
4.1.6	critical shear stress	The minimum shear stress between individual bubbles in a <i>foam</i> which is necessary to affect foam viscosity, stability and spreading characteristics.
4.1.7	drainage time of foam	Time necessary to drain a given percentage of the liquid from a <i>foam</i> .
4.1.8	expansion (ratio)	Ratio of the volume of <i>foam</i> to the volume of <i>foam solution</i> from which it is made.
4.1.9	fluoroprotein foam concentrate	Protein <i>foam concentrate</i> to which has been added a surface active fluoro-chemical.
4.1.10	foam	Extinguishing medium consisting of an aggregate of air or gas-filled bubbles in an aqueous solution.
4.1.11	foam concentrate	Substance which, when mixed with water in the appropriate concentration, gives a <i>foam solution</i> .
4.1.12	foam solution	Homogeneous mixture of <i>foam concentrate</i> and water in the appropriate proportion for making <i>foam</i> .
4.1.13	high-expansion foam	<i>Foam</i> having an <i>expansion</i> of between 201 and 1 000.
4.1.14	low-expansion foam	<i>Foam</i> having an <i>expansion</i> of 20 or less.
4.1.15	medium-expansion foam	<i>Foam</i> having an <i>expansion</i> of between 21 and 200.
4.1.16	protein foam concentrate	<i>Foam concentrate</i> made mainly from hydrolysed proteins.
4.1.17	rate of application	The rate at which <i>foam solution</i> is applied per unit area of fire, generally expressed in litres per square metre per minute.
4.1.18	rate of application, critical	The minimum theoretical <i>rate of application</i> of <i>foam solution</i> to a fire which will extinguish the fire.
4.1.19	rate of application, practical	The <i>rate of application</i> recommended by safety codes or manufacturers. NOTE This rate is always higher than the <i>critical rate of application</i> .