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Fire extinguishing media – Foam concentrates – Part 4: Specification for low expansion foam concentrates for surface application to water-miscible liquids



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Denna standard ersätter SS-EN 1568-4:2008, utgåva 2 och SS-EN 1568-4:2008/AC:2010, utgåva 1.

The European Standard EN 1568-4:2018 has the status of a Swedish Standard. This document contains the official version of EN 1568-4:2018.

This standard supersedes the Swedish Standard SS-EN 1568-4:2008, edition 2 and SS-EN 1568-4:2008/AC:2010, edition 1.

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Denna standard är framtagen av kommittén för Fasta släckmedel, Sprinkler och Gassläcksystem, SIS/TK 360/AG 03.

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EUROPEAN STANDARD

EN 1568-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2018

ICS 13.220.10

Supersedes EN 1568-4:2008

English Version

Fire extinguishing media - Foam concentrates - Part 4: Specification for low expansion foam concentrates for surface application to water-miscible liquids

Agents extincteurs - Émulseurs - Partie 4 :
Spécifications pour les émulseurs bas foisonnement
destinés à une application à la surface de liquides ayant
une affinité pour l'eau

Feuerlöschmittel - Schaummittel - Teil 4:
Anforderungen an Schaummittel zur Erzeugung von
Schwerschaum zum Aufgeben auf mit Wasser
mischbare Flüssigkeiten

This European Standard was approved by CEN on 18 September 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 1568-4:2018) has been prepared by Technical Committee CEN/TC 191 “Fixed firefighting systems”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2018, and conflicting national standards shall be withdrawn at the latest by November 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1568-4:2008.

In comparison with the previous edition, the following significant changes have been made:

- the interfacial tension and spreading coefficient test was removed;
- the freezing point test was introduced;
- the stability/separation test of foam concentrate was introduced;
- the occupational health and ecotoxicological testing was introduced;
- an example of technical data sheet was included; and
- setting-up procedures of foam nozzle for the determination of expansion and drainage times have been modified in the light of ISO 7203.

This document is Part 4 of EN 1568 which has the general title *Fire extinguishing media — Foam concentrates*. The other parts are:

- *Part 1: Specification for medium expansion foam concentrates for surface application to water-immiscible liquids;*
- *Part 2: Specification for high expansion foam concentrates for surface application to water-immiscible liquids;*
- *Part 3: Specification for low expansion foam concentrates for surface application to water-immiscible liquids.*

This European Standard is one of a series of standards specifying requirements for fire extinguishing media in common use. This series includes the following standards:

- EN ISO 5923, *Equipment for fire protection and fire fighting — Fire extinguishing media — Carbon dioxide (ISO 5923);*
- EN 27201-1, *Fire protection — Fire extinguishing media — Halogenated hydrocarbons — Part 1: Specifications for halon 1211 and halon 1301 (ISO 7201-1:1989);*
- EN 27201-2, *Fire protection — Fire extinguishing media — Halogenated hydrocarbons — Part 2: Code of practice for safe handling and transfer procedures (ISO 7201-2:1991);*

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— EN 615, *Fire protection — Fire extinguishing media — Specifications for powders (other than class D powders)*.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

As fire-fighting foams are chemical agents or chemical preparations, Commission Directive 2006/60/CE [1] and Regulations (EC) No 1272/2008 (CLP) [2] and No 1907/2006 (REACH) [3] apply and need to be taken into account.

Fire are classified in EN 2 [4] as follows:

- Class A: fires involving solid materials, usually of an organic nature, in which combustion normally takes place with the formation of glowing embers;
- Class B: fires involving liquids or liquefiable solids;
- Class C: fires involving gases;
- Class D: fires involving metals;
- Class F: fires involving cooking media (vegetable or animal oils and fats) in cooking appliances.

Fire-fighting foams are widely used to control and extinguish Class B fires and to inhibit re-ignition. These foams can also be used for prevention of ignition of flammable liquids and, in certain conditions, to extinguish Class A fires.

Foams can be used in combination with other extinguishing media, particularly gaseous media and powders, which are the subject of other European Standards (see the European foreword).

These specifications have been designed to ensure that fire extinguishing media have the minimum useful fire fighting capability. The user should ensure that the foam concentrates are used accurately at the concentration recommended by the manufacturer. Fire performances indicated by this standard cannot replicate practical fire situations.

Foam concentrates of different types and manufacture should not be mixed.

Some combinations of extinguishing powder and foam can lead to unacceptable loss of efficiency, caused by unfavourable interaction of the chosen media when applied simultaneously or successively to the fire.

It is extremely important that the foam concentrate after dilution with water to the recommended concentration does not in normal usage present a significant toxic hazard to life in relation to the environment. Commission Directive 2006/60/CE [1] and Regulations (EC) No 1272/2008 (CLP) [2] and No 1907/2006 (REACH) [3] apply when considering the testing of ecotoxicological properties and safety in the work environment.

Special quality characteristic is the type test conducted by an independent testing laboratory accredited to EN ISO/IEC 17025 [5].