BS EN 1568-2:2018

BSI Standards Publication

Fire extinguishing media - Foam concentrates

Part 2: Specification for high expansion foam concentrates
for surface application to water-immiscible liquids

bsi.

National foreword

This British Standard is the UK implementation of EN 1568-2:2018. It supersedes BS EN 1568-2:2008, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee FSH/18/7, Foam/Media Systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Published by BSI Standards Limited 2018

ISBN 978 0 580 86814 6

ICS 13.220.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2018.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1568-2

February 2018

ICS 13.220.10

Supersedes EN 1568-2:2008

English Version

Fire extinguishing media - Foam concentrates - Part 2: Specification for high expansion foam concentrates for surface application to water-immiscible liquids

Agents extincteurs - Émulseurs - Partie 2 : Spécifications pour les émulseurs haut foisonnement destinés à une application à la surface des liquides n'ayant pas d'affinité pour l'eau

Feuerlöschmittel - Schaummittel - Teil 2: Anforderungen an Schaummittel zur Erzeugung von Leichtschaum zum Aufgeben auf mit Wasser nicht mischbaren Flüssigkeiten

This European Standard was approved by CEN on 8 October 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

Contents

Page

European foreword

This document (EN 1568-2:2018) 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 July 2018, and conflicting national standards shall be withdrawn at the latest by October 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 1568-2:2008.

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

— Interfacial tension and spreading coefficient test removed;

— Freezing point test introduced;

— Stability/Separation test of foam concentrate introduced;

— Occupational health and ecotoxicological testing introduced;

— Example of technical data sheet included.

This document is Part 2 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 3: Specification for low expansion foam concentrates for surface application to water-immiscible liquids;*

— *Part 4: Specification for low expansion foam concentrates for surface application to water-miscible 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;

— EN 27201-1, Fire protection — Fire extinguishing media - Halogenated hydrocarbons — Part 1: Specifications for halon 1211 and halon 1301 (ISO 7201-1);

— EN 27201-2, Fire protection — Fire extinguishing media — Halogenated hydrocarbons — Part 2: Code of practice for safe handling and transfer procedures (ISO 7201-2);

— 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 organisations 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 2000/60/CE and Regulations (EC) No 1272/2008 (CLP) and No 1907/2006 (REACH) apply and should be taken into account.

Classes of fire are defined in EN 2 as follows:

a) Class A: fires involving solid materials, usually of an organic nature, in which combustion normally takes place with the formation of glowing embers;

b) Class B: fires involving liquids or liquefiable solids;

c) Class C: fires involving gases;

d) Class D: fires involving metals;

e) 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 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 manufacturers should not be mixed.

It should be noted that 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 should not in normal usage present a significant toxic hazard to life in relation to the environment. The current version of Commission Directive 2000/60/CE, Regulations (EC) No 1272/2008 (CLP) and No 1907/2006 (REACH) apply when considering the testing of ecotoxicological properties and safety in the work environment.

A special quality characteristic is the type test conducted by an independent testing laboratory accredited to EN ISO/IEC 17025.

1 Scope

This European Standard specifies requirements for chemical and physical properties, and minimum performance requirements of high expansion foams suitable for surface application to water-immiscible liquids. Requirements are also given for marking.

WARNING - Any type approval according to this standard is invalidated by any change in composition of the approved product.

Some concentrates conforming to this part of EN 1568 can also conform to other parts and therefore can also be suitable for application as low and/or medium expansion foams.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1568-1, *Fire extinguishing media - Foam concentrates - Part 1: Specification for medium expansion foam concentrates for surface application to water-immiscible liquids*

EN 1568-3, *Fire extinguishing media - Foam concentrates - Part 3: Specification for low expansion foam concentrates for surface application to water-immiscible liquids*

EN 1568-4, *Fire extinguishing media - Foam concentrates - Part 4: Specification for low expansion foam concentrates for surface application to water-miscible liquids*

EN ISO 3104, *Petroleum products - Transparent and opaque liquids - Determination of kinematic viscosity and calculation of dynamic viscosity (ISO 3104)*

EN ISO 3219:1994, *Plastics - Polymers/resins in the liquid state or as emulsions or dispersions - Determination of viscosity using a rotational viscometer with defined shear rate (ISO 3219:1993)*

EN ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696)*

EN ISO 11348-2, *Water quality - Determination of the inhibitory effect of water samples on the light emission of Vibrio fischeri (Luminescent bacteria test) - Part 2: Method using liquid-dried bacteria (ISO 11348-2)*

EN ISO 23753-1, *Soil Quality - Determination of dehydrogenase activity in soil - Part 1: Method using triphenyltetrazolium chloride (TTC) (ISO 23753-1)*

ISO 304, *Surface active agents — Determination of surface tension by drawing up liquid films*

ISO 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

OECD 201, *Test No. 201: Freshwater Alga and Cyanobacteria, Growth Inhibition Test*

OECD 202, *Test No. 202: Daphnia sp. Acute Immobilisation Test*

OECD 203, *Test No. 203: Fish, Acute Toxicity Test*

OECD 301, *Test No. 301: Ready Biodegradability*

OECD 404, *Test No. 404: Acute Dermal Irritation/Corrosion*