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Fixed firefighting systems - Foam systems - Part 1:
Requirements and test methods for components

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13565-1:2019 sisaldab Euroopa standardi EN 13565-1:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 13565-1:2019 consists of the English text of the European standard EN 13565-1:2019.
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English Version

**Fixed firefighting systems - Foam systems - Part 1:
Requirements and test methods for components**

Installations fixes de lutte contre l'incendie - Systèmes
à émulseurs - Partie 1 : Exigences et méthodes d'essais
relatives aux composants

Ortsfeste Brandbekämpfungsanlagen -
Schaumlöschanlagen - Teil 1: Anforderungen und
Prüfverfahren für Bauteile

This European Standard was approved by CEN on 8 February 2019.

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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 13565-1:2019) 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of an identical text or by endorsement, at the latest by November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.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 will supersede EN 13565-1:2003+A1:2007.

Compared to the previous edition, the following changes have been made:

- 1) the foreword has been updated;
- 2) normative references have been updated;
- 3) 4.1 revised;
- 4) 4.4 revised;
- 5) 4.5 revised;
- 6) 4.6 revised;
- 7) 4.9 replaces Clause 8;
- 8) 4.10 replaces Clause 9;
- 9) 4.11 replaces Clause 10;
- 10) Clause 5 changed to 'performance characteristics of foam components';
- 11) Clause 6, new clause 'documentation';
- 12) Clause 7 replaces Clause 11;
- 13) Clause 8 replaces Clause 12;
- 14) Annex A revised;
- 15) Annex E requirements clause reference added;
- 16) Annex F requirements clause reference added.
- 17) Annex G revised;

- 18) Annex H revised;
- 19) Annex I revised;
- 20) Annex J revised;
- 21) Annexes K, L, M, N added.

EN 13565, *Fixed firefighting systems — Foam systems*, is currently composed with the following parts:

- *Part 1: Requirements and test methods for components;*
- *Part 2: Design, construction and maintenance.*

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.

1 Scope

The requirements of this document set out the materials, construction, and performance of components intended for use in fixed foam fire fighting systems, and using foam concentrates conforming to EN 1568-1 to EN 1568-4. The components covered are: proportioners, sprayers, semi-subsurface hose units, branchpipes, low/medium expansion foam generators, high expansion foam generators, foam chambers, tanks and pressure vessels. Methods of test are given in Annex A to Annex K.

Requirements are also given for the provision of the characteristic data needed for correct application of components.

NOTE 1 Unless otherwise stated pressures are gauge pressures expressed in bar.

The requirements of this document do not cover, except where stated, the use of combinations of components to form part, or the whole, of a fire fighting system.

NOTE 2 Components conforming to this document are not necessarily compatible one with another.

Requirements for pumps, motors and the functioning of mechanical components (i.e. remote control turrets) are outside the scope of this document.

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 1568-1:2018, *Fire extinguishing media — Foam concentrates — Part 1: Specification for medium expansion foam concentrates for surface application to water-immiscible liquids*

EN 1568-2:2018, *Fire extinguishing media — Foam concentrates — Part 2: Specification for high expansion foam concentrates for surface application to water-immiscible liquids*

EN 1568-3:2018, *Fire extinguishing media — Foam concentrates — Part 3 Specification for low expansion foam concentrates for surface application to water-immiscible liquids*

EN 1568-4:2018, *Fire extinguishing media — Foam concentrates — Part 4: Specification for low expansion foam concentrates for surface application to water-miscible liquids*

EN 12259-1:1999+A1:2001, *Fixed fire fighting systems — Components for sprinkler and water spray systems — Part 1: Sprinklers*

EN 1092-1, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 1: Steel flanges*

EN 12542, *LPG equipment and accessories — Static welded steel cylindrical tanks, serially produced for the storage of Liquefied Petroleum Gas (LPG) having a volume not greater than 13 m³ — Design and manufacture*

EN ISO 225, *Fasteners — Bolts, screws, studs and nuts — Symbols, designations and dimensions (ISO 225)*

EN ISO 175, *Plastics — Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175)*

EN ISO 179-1, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test (ISO 179-1)*

EN ISO 180, *Plastics — Determination of Izod impact strength (ISO 180)*

EN ISO 527-1, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1)*

EN ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread (ISO 898-1)*

EN ISO 898-2, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes — Coarse thread and fine pitch thread (ISO 898-2)*

ISO 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 888, *Fasteners — Bolts, screws and studs — Nominal lengths and thread lengths*

ISO 4633, *Rubber seals — Joint rings for water supply, drainage and sewerage pipelines — Specification for materials*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

Nordtest method NT Fire 042 Foam Concentrate Proportioner Performance Test

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

component

item or piece of equipment intended for use in a fixed foam fire extinguishing system

3.2

aspirating component

component within which air and foam solution are mixed to make foam