

**Paiksed tulekustutussüsteemid.
Pulberkustutussüsteemide
komponendid. Osa 1: Nõuded ja
katsemeetodid KONSOLIDEERITUD
TEKST**

Fixed firefighting systems - Powder systems - Part
1: Requirements and test methods for components
CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12416-1:2001+A2:2007 sisaldab Euroopa standardi EN 12416-1:2001+A2:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 21.08.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12416-1:2001+A2:2007 consists of the English text of the European standard EN 12416-1:2001+A2:2007.</p> <p>This document is endorsed on 21.08.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This European Standard specifies requirements and test methods for materials, construction and performance of components intended for use in powder firefighting systems complying with prEN 12416-2:2000. The components covered are as follows: - powder containers - expellant gas container assemblies - pressure regulators and gauges - actuators - main isolating valves and selector valves - nozzles</p>	<p>Scope:</p> <p>This European Standard specifies requirements and test methods for materials, construction and performance of components intended for use in powder firefighting systems complying with prEN 12416-2:2000. The components covered are as follows: - powder containers - expellant gas container assemblies - pressure regulators and gauges - actuators - main isolating valves and selector valves - nozzles</p>
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Võtmesõnad: co, definitions, dry powder extinguishers, fire extinguishers, fire extinguishers (built-in), fire fighting, firefighting, firefighting equipment, fixed extinguishers, powder fire extinguishers, specification, specification (approval), specifications, testing

English Version

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

Installations fixes de lutte contre l'incendie - Systèmes
d'extinction à poudre - Partie 1: Exigences et méthodes
d'essais des éléments constitutifs

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

This European Standard was approved by CEN on 18 January 2001 and includes Amendment 1 approved by CEN on 17 March 2004, and Amendment 2 approved by CEN on 16 May 2007.

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 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 Management Centre has the same status as the official versions.

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



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Foreword

This document (EN 12416-1:2001+A2:2007) has been prepared by Technical Committee CEN/TC 191 "Fixed firefighting systems", the secretariat of which is held by BSI.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2007 and conflicting national standards shall be withdrawn at the latest by December 2007.

This document includes Amendment 1 approved by CEN on 2004-03-17 and Amendment 2 approved by CEN on 2007-05-16.

This document supersedes EN 12416-1:2001.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1 and A2 A2.

A2 *deleted text* A2

This European Standard has the general title "Fixed firefighting systems - Powder systems" and consists of the following two parts:

Part 1 : Requirements and test methods for components
Part 2 : Design, construction and maintenance

Annex A to annex N are normative annexes.

This European Standard is included in a series of European Standards planned to cover also:

- a) gas extinguishing systems (EN 12094);
- b) sprinkler systems (EN 12259 and EN 12845);
- c) smoke control systems (EN 12101);
- d) explosion protection systems (EN 26184);
- e) foam systems (EN 13565);
- A2 f) hose systems (EN 671);
- g) water spray systems (EN 14816). A2

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

It has been assumed in the preparation of this standard that the execution of its provisions is entrusted to appropriately qualified and experienced people.

1 Scope

This European Standard specifies requirements and test methods for materials, construction and performance of components intended for use in powder firefighting systems complying with prEN 12416-2:2000.

The components covered are as follows:

- powder containers
- expellant gas container assemblies
- pressure regulators and gauges
- actuators
- main isolating valves and selector valves
- nozzles.

The components are suitable for powder firefighting systems for general use in buildings and other construction works. In areas with a risk of explosion, earthquake zones, extreme environmental conditions e.g. marine, offshore, mining or aircraft additional considerations apply.

This standard covers components for use in powder extinguishing systems complying with prEN 12416-2:2000. It does not cover, for example, pipes and fittings which are covered by more general standards for which requirements and recommendations are given in prEN 12416-2:2000. Nor does it cover fire detectors or electrical control and indicating equipment.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited in the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications, apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 2, *Classification of fires*

EN 286-1:1998, *Simple unfired pressure vessels designed to contain air or nitrogen - Part 1: Pressure vessels for general purposes*

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

Ⓐ₂ deleted text Ⓐ₂

EN 1964-1, *Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless steel gas cylinders of water capacities from 0,5 litre up to and including 150 litres - Part 1: Cylinders made of seamless steel with an R_m value of less than 1100MPa*

Ⓐ₁ EN 1964-2 Ⓐ₁, *Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless steel gas cylinders from 0,5 litre up to and including 150 litres - Part 2: Tensile strength (R_m max.) $\geq 1100 \text{ N/mm}^2$*

EN 1964-3, *Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless steel gas cylinders of water capacities from 0,5 litre up to and including 150 litres - Part 3: Cylinders made of seamless stainless steel with an R_m value of less than 1100MPa*

Ⓐ₂ EN 12094-4, *Fixed firefighting systems - Components for gas extinguishing systems - Part 4: Requirements and test methods for container valve assemblies and their actuators* Ⓐ₂

Ⓐ₂ EN 12094-5, *Fixed firefighting systems - Components for gas extinguishing systems - Part 5: Requirements and test methods for high and low pressure selector valves and their actuators* Ⓐ₂

EN 12094-8, Ⓐ₂ *Fixed firefighting systems - Components for gas extinguishing systems - Part 8: Requirements and test methods for connectors* Ⓐ₂

Ⓐ₂ EN 12094-13 Ⓐ₂, *Fixed firefighting systems - Components for gas extinguishing systems - Part 13: Requirements and test methods for check valves and non-return valves*

EN 60068-2-6, *Environmental testing - Part 2: Tests - Test Fc: Vibration (sinusoidal)* (IEC 60068-2-6:1995 + Corrigendum 1995)

EN 60529, *Degrees of protection provided by enclosures (IP Code)* (IEC 60529:1989)

EN ISO 4126-1, *Safety devices for protection against excessive pressure - Part 1: Safety valves* (ISO 4126-1:2004)

ISO 4126-2, *Safety devices for protection against excessive pressure - Part 2: Bursting disc safety devices* (ISO 4126-2:2003)

EN ISO 10297, *Transportable gas cylinders - Cylinder valves - Specification and type testing* (ISO 10297:2006)

ISO 3864-1, *Graphical symbols - Safety colours and safety signs - Part 1: Design principles for safety signs in workplaces and public areas*

3 Terms and definitions

For the purposes of this European Standard the following terms and definitions apply:

3.1

actuator

component which when receiving a signal operates another component

3.2

bursting disc

diaphragm designed to burst at a predetermined pressure difference

3.3

calculation zone

zone for which the design quantity of the extinguishing media required is calculated separately

3.4

diptube (of the powder container)

tube through which powder from the lower part of the container is transported into the piping

3.5

equipment fire

fire of three dimensional objects, also subject to leakage, dripping or splashing

3.6

expellant gas container

high pressure container to store the expellant gas

3.7

expellant gas container valve

valve which retains the expellant gas in the expellant gas container, and which releases it when actuated

3.8

fill ratio (of the expellant gas container)

mass of an expellant gas relative to the net capacity of the expellant gas container, expressed in kilograms per litre (kg/l)

3.9

flooding zone

zone comprising all calculation zones to be flooded simultaneously with the extinguishing media via one selector valve

3.10

local application system

system to protect separate objects