



# SLOVENSKI STANDARD

## SIST EN 3-1:1996

01-maj-1996

---

**Prenosni gasilniki - 1. del: Opis, trajanje gašenja, požarna preskusa razredov A in B**

Portable fire extinguishers - Part 1: Description, duration of operation, class A and B fire test

Tragbare Feuerlöscher - Teil 1: Benennung, Funktionsdauer, Prüfobjekte der Brandklassen A und B

Extincteurs d'incendie portatifs - Partie 1: Appellation, durée de fonctionnement, foyers-type des classes A et B

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**  
<https://standards.iteh.ai/catalog/standards/sist/06dd265a-3400-49b2-a7d3-e0ec0fbf9546/sist-en-3-1-1996>

**Ta slovenski standard je istoveten z: EN 3-1:1996**

---

**ICS:**

13.220.10      Gašenje požara      Fire-fighting

**SIST EN 3-1:1996**      **en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 3-1:1996

<https://standards.iteh.ai/catalog/standards/sist/06dd265a-3400-49b2-a7d3-e0ec0fbf9546/sist-en-3-1-1996>

EUROPEAN STANDARD

EN 3-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 1996

ICS 13.220.30

Supersedes EN 3-1:1975

Descriptors: fire fighting, fire equipment, fire extinguishers, movable extinguishers, portable equipment, designation, loads, forces, operating time, standard fire places, tests, effectiveness, testing conditions

English version

### Portable fire extinguishers - Part 1: Description, duration of operation, class A and B fire test

Extincteurs d'incendie portatifs - Partie 1:  
Appellation, durée de fonctionnement,  
foyers-type des classes A et B

Tragbare Feuerlöscher - Teil 1: Benennung,  
Funktionsdauer, Prüfobjekte der Brandklassen A  
und B

**STANDARD PREVIEW**  
(standards.iteh.ai)

SIST EN 3-1:1996

<https://standards.iteh.ai/catalog/standards/sist/06dd265a-3400-49b2-a7d3-e0ec0fbf9546/sist-en-3-1-1996>

This European Standard was approved by CEN on 1995-09-14. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

## CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

CONTENTS		page
	Foreword	3
1	Scope	4
2	Normative references	4
3	Definitions	4
3.1	Extinguisher	4
3.2	Portable extinguisher	4
3.3	Extinguishing medium	4
3.4	Charge of an extinguisher	4
3.5	Duration of operation	4
4	Description of an extinguisher	5
5	Specifications and tests of extinguishers	5
6	Duration of operation and residual charge	5
6.1	Duration of operation	5
6.2	Residual charge	6
6.3	Commencement of discharge	6
7	Efficiency Tests	6
7.1	General	6
7.2	Class A Fire Tests	6
7.3	Class B Fire Tests	6
Annex A (normative) : Duration of operation test		7
Annex B (normative) : Test fire		8
Annex C (normative) : Measurement of moisture content of wood		16

iTeh STANDARD PREVIEW

(standards.iteh.ai)

[SIST EN 3-1:1996](https://standards.iteh.ai/catalog/standards/sist/06dd265a-3400-49b2-a7d3-e0ec0fbf9546/sist-en-3-1-1996)<https://standards.iteh.ai/catalog/standards/sist/06dd265a-3400-49b2-a7d3-e0ec0fbf9546/sist-en-3-1-1996>

## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 70 "Manual means of fire fighting equipment", the secretariat of which is held by IBN.

This European Standard supersedes EN 3-1:1975.

This European Standard is one part of EN 3 prepared by CEN/TC 70.

This European Standard EN 3 consist of 6 Parts and has the generic title "Portable fire extinguishers" and the following different subtitles :

- Part 1 : Description, duration of operation, class A and B fire test
- Part 2 : Tightness, dielectric test, tamping test, special provision
- Part 3 : Construction, resistance to pressure, mechanical tests
- Part 4 : Charges, minimum required fires
- Part 5 : Specifications and supplementary tests
- Part 6 : Provisions for the attestation of conformity of portable fire extinguishers in accordance with EN 3 Part 1 to Part 5

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 1996, and conflicting national standards shall be withdrawn at the latest by January 1997.

SIST EN 3-1:1996

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Page 4  
EN 3-1:1996

## 1 Scope

This standard specifies the characteristics of description, of duration of operation, of residual charge and of the efficiency test applicable to portable fire extinguishers.

## 2 Normative references

This European Standard incorporates by dated or undated references, provisions from other publications. These normative references are cited at 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 reference the latest edition of the publication referred to applies.

EN 3-2:1995	Portable fire extinguisher - Part 2 : Tightness, tamping test, special provisions
EN 3-4:1995	Portable fire extinguisher - Part 4 : Charges, minimum required fire
EN 3-5:1995	Portable fire extinguisher - Part 5 : Specifications and supplementary tests
ISO 657-1:1989	Hot rolled steel sections - Part 1 : Equal leg angles, Dimensions
ISO 4470:1981	Sawn timber : determination of the average moisture content of a lot

## 3 Definitions

SIST EN 3-1:1996

<https://standards.iteh.ai/catalog/standards/sist/06dd265a-3400-49b2-a7d3->

For the purposes of this standard, the following definitions apply:

- 3.1 **extinguisher** : Appliance containing an extinguishing agent which can be expelled by the action of internal pressure and be directed on to a fire. This pressure may be stored pressure or by the release of an auxiliary gas.
- 3.2 **portable extinguisher** : Extinguisher which is designed to be carried and operated by hand and which in working order has a mass of not more than 20 kg.
- 3.3 **extinguishing medium** : The substance contained in the extinguisher which causes extinction.
- 3.4 **charge of an extinguisher** : Mass or volume of the extinguishing agent contained in the extinguisher. The charge of appliances based on water is expressed in volume (litres) and that of other appliances in mass (kilograms).
- 3.5 **duration of operation** : The time during which the extinguishing agent is discharged, without any interruption in the discharge and with valve fully opened not including the residual propellant gas.

#### 4 Description of an extinguisher

An extinguisher shall be described by the type of extinguishing medium it contains. At present, there are :

- water type extinguishers
- foam type extinguishers
- powder type extinguishers
- carbon dioxide type extinguishers
- halogenated hydrocarbon type extinguishers.

Halons employed in extinguishers shall comply with the regulations in force in the country in which the appliances are to be used.

#### 5 Specifications and tests of extinguishers

Extinguishers for testing shall be stored for at least 24 h at a temperature of  $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$  before the tests are carried out and shall be maintained within this temperature range until tested.

Prior to this storage period, all powder type extinguishers shall be prepared in accordance with clause 5 of EN 3-2:1995, except for the tests defined in clause 3 of EN 3-5:1995.

#### 6 Duration of operation and residual charge

##### 6.1 Duration of operation

##### 6.1.1 Minimum duration

The duration of operation shall be greater than or equal to the appropriate value given in table 1 when the extinguisher is tested according to annex A.

Table 1

Charge (X) of the extinguishing medium contained kg or l	Minimum duration of operation s
$X \leq 3$	6
$3 < X \leq 6$	9
$6 < X \leq 10$	12
$10 < X$	15

NOTE : see table 4 EN 3-4:1995, for minimum duration requirements related to fire rating.

##### 6.1.2 Spread of measurements

The duration of operation of each extinguisher shall not be less than  $\pm 15\%$  of the mean value when three extinguishers are tested in accordance with annex A.

Page 6  
EN 3-1:1996

## 6.2 Residual charge

The residual charge of extinguishing medium shall not be more than 10 % of the nominal charge when tested in accordance with annex A.

## 6.3 Commencement of discharge

For stored pressure units, the discharge of the extinguishing medium agent shall commence within 1 s of the control-valve being opened.  
For extinguishers which are activated by a single operation (in accordance with 4.1 of EN 3-5:1995) of the control valve. The discharge of the extinguishing medium shall commence within 4 s of the control valve being opened.

## 7 Efficiency Tests

### 7.1 General

An extinguisher satisfies the requirements when two fire tests of a series are extinguished. A series is complete after three fires, or when the first two fires are extinguished or not. Each series shall be completed before the next is commenced. There is no restriction on the number of series that may be carried out on the same type of extinguisher without modifications, but a series consists of consecutive fires and results shall not be discounted (see B.1).

### 7.2 Class A Fires Test

The class A fire test rating shall be determined in accordance with B.2.

Prior to the fire test, the moisture content of the wood shall be checked in accordance with annex C.

### 7.3 Class B Fire Tests

Class B fire test shall be achieved in accordance with B.3.



**Annex A (normative)****Duration of operation test**

NOTE : see 6.1.1

**A.1 Method of Test**

Hold the extinguisher in its normal working position (i.e. hand-held) and keep it immobile for the duration of the test.

For those extinguishers supplied with a trigger and an independent activation system, pressurise when the trigger is closed. Open this trigger 6 s after the commencement of pressurization of the equipment.

For extinguishers which are activated by a single operation (See 4.1 of prEN 3-5:1995) of the control valve, open the control valve and leave open for the duration of the test.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 3-1:1996

<https://standards.iteh.ai/catalog/standards/sist/06dd265a-3400-49b2-a7d3-e0ec0fbf9546/sist-en-3-1-1996>