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Portable fire extinguishers - Part 10: Provisions for evaluating the conformity of a portable fire extinguisher to EN 3 part 7

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Portable fire extinguishers - Part 10: Provisions for evaluating the conformity of a portable fire extinguisher to EN 3 part 7

Extincteurs d'incendie portatifs - Partie 10 : Dispositions pour l'évaluation de la conformité d'un extincteur d'incendie portatif à la partie 7 de l'EN 3

Tragbare Feuerlöscher - Teil 10: Festlegungen für die Bestätigung der Konformität tragbarer Feuerlöscher nach EN 3-7

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 70.

If this draft becomes a European Standard, 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.

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

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Foreword

This document (prEN 3-10:2006) has been prepared by Technical Committee CEN/TC 70 "Manual means of fire fighting equipment", the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 3-6:1995.

EN 3 consists of the following parts, under the general title "Portable fire extinguishers"

— *Part 7[1]: Characteristics, performance requirements and test methods*

— *Part 8[2]: Construction resistance to pressure and mechanical tests for extinguishers with a maximum allowable pressure equal or lower than 30 bar*

— *Part 9[2]: Additional requirements for CO_2 extinguishers*

— *Part 10[3]: Provisions for evaluating the conformity of a portable fire extinguisher to EN 3 part 7*

Annexes A is informative and Annexes B and C are normative.

1) Replacing EN 3-1, EN 3-2, EN 3-4 and EN 3-5.
2) In preparation. EN 3-8 and EN 3-9 update and amend EN 3-3 on publication of these, EN 3-3 will be withdrawn.
3) EN 3-10 updates and amends EN 3-6, on publication of EN 3-10 EN 3-6 will be withdrawn.

1 Scope

This standard specifies the minimum requirements for attesting the conformity of portable fire extinguishers to EN 3-7, as well as the requirements for the quality and production control of the fire extinguishers.

It specifies the documentation to be provided regarding:

— identification of the applicant;

— identification of the manufacturer, if not the applicant;

— identification of subcontractor(s), if applicable;

— identification of the extinguisher;

— documents provided with the extinguisher;

— CE marking;

— quality Management System;

— extinguishing media toxicological information.

It specifies methods for:

— type testing;

— factory assessment;

— controls during production.

A positive test report and a satisfactory audit supporting documentation may form the basis for a applicant to request a certification of his product from an EA accredited certification body.

Where appropriate, component family testing may be applied.

Additional requirements may be made by national regulations and/or quality marks.

2 Normative references

The following referenced documents are indispensable for the application 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 3-7:2004, *Portable fire extinguishers — Part 7: Characteristics, performance requirements and test methods.*

ISO/TR 8550:1994, *Guide for the selection of AN acceptance sampling system, scheme or plan for inspection of discrete items in lots.*

EN ISO 9001, *Quality management systems — Requirements.*

EN ISO/CEI 17020, *General criteria for the operation of various types of bodies performing inspection.*

ISO/CEI 17025, *General requirements for the competence of testing and calibration laboratories.*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 3-7 and the following apply.

3.1
EA accredited certification body
an accredited certification body is a independent third party, EA accredited, in accordance with EN ISO 17026 for the purpose of portable fire extinguishers certification

3.2
surveillance body
a surveillance body is an inspection body third party, independent from the manufacturer, EA accredited in accordance with EN ISO 17020

3.3
testing laboratory
a testing laboratory is a third party independent from the manufacturer, performing tests in accordance with EN 3-7, EA accredited in accordance with EN ISO 17025

3.4
manufacturer
a manufacturer is a legal entity that fills and assembles the fire extinguisher

normally, the manufacturer designs and manufactures the extinguisher

the manufacturer may subcontract some or all of the following: manufacturing of components, assembling and packing

3.5
sub contractor
a sub-contractor is a legal entity that produces on behalf of the manufacturer specific tasks formally described in a sub-contract agreement

3.6
applicant
the applicant is a legal entity, who places the extinguisher on the market

the applicant is the manufacturer or its representative and shall be registered in one of the EU or EFTA countries

the applicant shall assume full product responsibility

4 Symbols and abbreviations

For the purposes of this document, the following symbols and abbreviations apply.

EA	European Accreditation
PED	Pressure Equipment Directive (97/23/EC)
QMS	Quality Management System
FPC	Factory Production Control
EU	European Union
EFTA	European Free Trade Association
TDS	Technical Data Sheet

5 Documentation for type testing and audits

All the following documentation shall be provided.

5.1 Identification of the manufacturer

Identification shall contain an extract from any EU or EFTA company register.

All locations directly controlled by the manufacturer and involved in the extinguisher's manufacture shall be identified.

5.2 Identification of the extinguisher

Identification of the extinguisher shall contain:

— complete set of drawings in accordance clearly characterising the model. Drawing shall enable each component to be identified. All parts involved in the extinguishing medium way and / or performances shall be given with all tolerances;

— TDS (see model in Annex B).

5.3 Documents provided with the extinguisher

— Storage, installation, use and maintenance instructions.

5.4 CE marking

PED EC approval certificate(s) for fire extinguisher's assembly covering both, type and production, from a PED notified body shall be provided.

Clear link shall be made between EC type approval and the model of extinguisher.

5.5 Quality Management System

EN ISO 9001 certificate from a EA accredited certification body covering fire extinguishers production activity or other QMS documentation giving an equivalent quality confidence.

Equivalency is subjected to certification body's appreciation.

5.6 Extinguishing media toxicological information

Safety data sheet in accordance with European Directive 91/155/CEE including its modifications.

6 Initial type testing

The applicant shall make available to an accredited laboratory for assessment to EN 3-7:

— a batch of 50 extinguishers from which the number of extinguishers necessary for the verification shall be taken. The extinguishers selected shall be regarded as prototypes;

— full documentation (drawings, technical file, etc.) of the extinguisher to be tested;

— a documentation relating to the extinguishing media;

— a technical data sheet of the extinguisher to be tested in accordance with Annex B.

The accredited laboratory shall issue a laboratory test report in accordance with Annex C. For this, it shall carry out the complete listed tests and checks program.

Where unified test procedures exists (prepared by CEN TC 70/WG 1), laboratory shall use them. Laboratory's accreditation shall take these procedures into consideration.

NOTE The laboratory test report is not a product certification approval.

7 Factory assessment

7.1 Requirements originated from ISO 9001

The FPC system shall fulfil the requirements described in the following clauses of EN ISO 9001:2000, where applicable:

4.2	(Documentation requirements), except 4.2.1 a).
5.1 e)	(Ensuring the availability of resources).
5.5.1	(Responsibility and authority).
5.5.2	(Management representative).
6	(Resource management).
7.1	(Planning of product realisation) except 7.1 a).
7.2.3 c)	(Customer communication, information coming back from customers and customer complaints).
7.4	(Purchasing).
7.5	(Production and service provision).
7.6	(Control of monitoring and measuring devices).
8.2.3	(Monitoring and measurement of processes).
8.2.4	(Monitoring and measurement of product).
8.3	(Control of non conforming product).
8.5.2	(Corrective action).

The above requirements cover amongst others: calibration, training, records, complains and requirements of subclause 9 of this standard.

The FPC system may be part of a Quality Management system, e.g. in accordance with EN ISO 9001:2000.

NOTE Where a current ISO 9001 certified QMS is existing, it shall be taken into consideration.

7.2 Additional requirements

a) Means for manufacturing extinguishers and/or extinguisher's components shall be available;

b) means for performing required controls shall be available and regularly calibrated;

c) product traceability records shall be available.

8 Approval numbering and labelling

Upon successful completion of all tests and controls, an approval number can be issued by a EA accredited certification body or a national ministry.

This approval number shall be marked on the extinguisher as described in EN 3-7 subclause 16.2.

It shall contain the wording EN 3-10.

Extinguisher's marking shall comply with EN 3-7 subclause 16.2

9 Items to be regularly checked and recorded during production:

Items listed in Table 1 shall be regularly checked and recorded as a minimum:

Table 1 — Controls, tests and frequency

Item nr as per test report (see Annex C)	EN 3-7 Clause	Title	Frequency during manufacture
1	4.2	Control of discharge	N/R
2	4.3	Operation position	N/R
3	4.4	Hose assembly	Periodically (*)
4	4.5	Propellants	Based on documentation
5	4.6	Means of checking pressure for stored pressure extinguishers	N/R
6	6.1	Nominal charges	N/R
7	6.2	Filling tolerances	Periodically (*)
8	6.3	Design of filling opening	N/R
9	7.1.1	Duration of operation, minimum duration	Periodically (*) Manufacturer shall define acceptable limits
10	7.1.2	Duration of operation, spread of measurements	N/R
11	7.2	Residual charge	Periodically (*)
12	7.3	Commencement of discharge	Periodically (*)
13	7.4	Temperature cycling	N/R
14	8.1	Retention of propellant	N/R
15	8.2	Leakage acceptance level	see subclause 8.3 of EN 3-7
16	9.2	Dielectric test, for water based extinguishers	N/R
17	10.1	General requirement for use of extinguishers	N/R
18a	10.2	Operating force for C02 extinguishers	Periodically (*)
18b	10.2	Operating force for other extinguishers - 1st device	Periodically (*)
18c	10.2	Operating force for other extinguishers - 2nd device	Periodically (*)
19	10.3	Safety devices	Periodically (*)
20	10.4	Filter for water based extinguishers	N/R
21a	10.5	Hose and coupling systems, for C02 extinguishers	Periodically (*)
21 b	10.5	Hose and coupling systems, for other extinguishers	Periodically (*)
22a	10.6	Control valve, for C02 extinguishers	N/R
22b	10.6	Control valve, for 1 and 2 kg powder extinguishers	N/R

"to be continued"

Table 1 *(end)*

Item nr as per test report (see Annex C)	EN 3-7 Clause	Title	Frequency during manufacture
22c	10.6	Control valve, for other extinguishers	N/R
23	11.1.1	Pressure gauge	N/R
24	11.1.2	Pressure gauge scale	N/R
25	11.1.3	Pressure gauge error after cycling	N/R
26	11.1.4	Compability of pressure gauge materials	N/R
27	11.2	Pressure indicator	N/R
28	12.1	Horn / hose for C02 extinguishers	N/R
29	12.2	Horn resistance to static load	N/R
30	12.3	Security of horn / hose fixing	Periodically (*)
31	12.4	Horn resistance to temperature	N/R
32	13	Mounting bracket	N/R
33	14.1	Resistance to external corrosion	N/R
34	14.2	Resistance to internal corrosion	N/R
35	15.2	Class A fire rating	N/R
36	15.3	Class B fire rating	N/R
37	16.1	Extinguisher identification, colour	Periodically (*)
38	16.2	Marking	Periodically (*)
A		Conformity to TDS	Periodically (*)
B		Conformity to documents for components used including extinguishing media	Periodically (*)
C		MAP percentage for ABC powder;	Periodically (*)
D		Physical and chemical characteristics for additives used in water based extinguishers according to manufacturer's specification	Periodically (*)
E		Internal volume.	Periodically (*)
F		External painting: adhesion / thickness (compared to the minimum declared)	Periodically (*)
G		Internal lining (where applicable): controlled according to manufacturer's specification.	Periodically (*)
H		Torque (Body/valve)	Periodically (*)
I		Propellant pressure or weight where appropriate	Periodically (*)

N/R: not required (but listed to follow EN 3-7 requirements).

(*) Frequency shall be established by the manufacturer and shall be relevant with the checked item and quantity produced. Requirements of ISO/TR 8550 shall be taken into consideration.

Tests relating to pressure resistance (PED requirements) shall be performed and recorded according to PED Notified Body's satisfaction. Audit reports shall be available.

10 Surveillance

The manufacturer is subjected to the surveillance described in Annex A of this standard.

This clause also applies to sub contractors where they fill or assemble the fire extinguisher.