



SLOVENSKI STANDARD
SIST EN 13911:2004

01-julij-2004

Zaščitna obleka za gasilce - Zahteve in preskusne metode za zaščitne kapuce za gasilce

Protective clothing for firefighters - Requirements and test methods for fire hoods for firefighters

Schutzkleidung für die Feuerwehr - Anforderungen und Prüfverfahren für Feuerschutzhauben für die Feuerwehr

Vêtements de protection pour les sapeurs-pompiers - Exigences et méthodes d'essai pour les cagoules de protection contre le feu pour sapeurs-pompiers

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ICS:

13.220.10	Gašenje požara	Fire-fighting
13.340.10	Varovalna obleka	Protective clothing

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13911

April 2004

ICS 13.340.10

English version

Protective clothing for firefighters - Requirements and test methods for fire hoods for firefighters

Vêtements de protection pour les sapeurs-pompiers -
Exigences et méthodes d'essai pour les cagoules de
protection contre le feu pour sapeurs-pompiers

Schutzkleidung für die Feuerwehr - Anforderungen und
Prüfverfahren für Feuerschutzhauben für die Feuerwehr

This European Standard was approved by CEN on 2 February 2004.

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.

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 Central Secretariat has the same status as the official versions.

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

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

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Foreword

This document (EN 13911:2004) has been prepared by Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets", the secretariat of which is held by DIN.

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 October 2004, and conflicting national standards shall be withdrawn at the latest by October 2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

Annex A is normative and contains the donning and doffing and shape retention test.

Annex B is normative and sets out the practical performance test.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Introduction

This standard specifies the minimum safety requirements and test methods for a firehood worn by a firefighter following a user risk assessment. When worn with protective clothing, breathing apparatus and helmet the design features and performance requirements of the hood are intended to provide protection to the exposed areas of the head and neck against heat and flame.

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1 Scope

This standard specifies minimum safety requirements and test methods for a firehood to be worn during firefighting operations and associated activities. This standard only applies in situations when protective clothing (EN 469), breathing apparatus (EN 136 and EN 137), and helmet (EN 443) are also worn.

2 Normative references

This European Standard incorporates, by dated or undated reference, 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 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 136, *Respiratory protective devices — Full face masks — Requirements, testing, marking.*

EN 137, *Respiratory protective devices — Self-contained open-circuit compressed air breathing apparatus — Requirements, testing, marking.*

EN 168, *Personal eye-protection — Non-optical test methods.*

EN 340:2003, *Protective clothing — General requirements.*

EN 367, *Protective clothing — Protection against heat and fire — Method of determining heat transmission on exposure to flame.*

EN 443, *Helmets for firefighters.*

EN 469, *Protective clothing for firefighters — Requirements and test methods for protective clothing for firefighting.*

EN 533, *Protective clothing — Protection against heat and flame — Limited flame spread materials and material assemblies.*

EN 13274-2:2001, *Respiratory protective devices — Methods of test — Part 2: Practical performance tests.*

EN 25077, *Textiles — Determination of dimensional change in washing and drying (ISO 5077:1984).*

EN ISO 6330, *Textiles - Domestic washing and drying procedures for textile testing (ISO 6330:2000)*

EN ISO 6942, *Protective clothing — Protection against heat and fire — Method of test: Evaluation of materials and material assemblies when exposed to a source of radiant heat (ISO 6942:2002).*

EN ISO 13938-1, *Textiles — Bursting properties of fabrics — Part 1: Hydraulic method for determination of bursting strength and bursting distension (ISO 13938-1:1999).*

EN ISO 15025, *Protective clothing — Protection against heat and flame — Method of test for limited flame spread (ISO 15025:2000).*

ISO 17493, *Clothing and equipment for protection against heat — Test method for convective heat resistance using a hot air circulating oven.*

EN 13911:2004 (E)**3 Terms and definitions**

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

- 3.1
firehood**
garment worn in contact with the head and covering the head of the breathing apparatus face piece and interfacing with the facemask to protect all areas of the head and neck not covered by protective clothing, breathing apparatus and helmet
- 3.2
garment**
single item of clothing which may consist of single or multiple layers of material which has flexibility and elasticity
- 3.3
component assembly**
combination of all materials of a multi layer garment presented exactly as the finished garment construction
- 3.4
interface area**
area where items of PPE meet and/or overlap
- 3.5
seam**
any method of permanent fastening between two or more pieces of material in a garment
- 3.6
yoke**
area of the firehood interfacing with the protective clothing covering the upper torso
- 3.7
facial opening**
opening in front of the firehood interfacing with the breathing apparatus facemask
- 3.8
elasticity**
property of a material by which it tends to recover its original size and shape immediately after the removal of the force causing deformation

4 Design and Materials**4.1 Introduction**

Materials used in the construction of the firehood which are likely to come into contact with the skin of the wearer shall comply with 4.2 of EN 340:2003.

The design requirements specified shall be verified by visual inspection during the procedures in annex A and annex B, unless otherwise specified in 4.2. The manufacturer shall provide information to users on how compatibility with other items of PPE is achieved.

4.2 General

The firehood shall be close fitting and able to be worn without discomfort or significant restriction to head movement. The firehood shall fit around the breathing apparatus facemask for which compatibility is claimed without reducing the field of view or interfering with the breathing function of the mask. Test according to annex B.

Labels and closure systems or accessories shall be selected so as to react to heat and flame comparably to the other materials forming the firehood when tested according to the principles of EN ISO 15025 method A and 6.1.6 .

NOTE 1 Overstretching will reduce the heat protective performance of the hood and should be avoided by design.

NOTE 2 Excess material in the construction of the firehood may hamper the wearer and compromise the wearing of other personal protective equipment.

4.3 Facial opening

The firehood shall have a facial opening designed to fit around a breathing apparatus facemask for which compatibility is claimed. Assess by visual observation.

4.4 Yoke interface area

The firehood shall have a yoke creating an interface with the protective clothing. Assess by visual inspection.

4.5 Sizing

The firehood shall be manufactured in various sizes or be sufficiently elastic to be compatible with various head sizes and shapes. Assess by visual inspection.

4.6 Labels

The label(s) shall be positioned in the area defined as the yoke of the firehood. Assess by visual inspection.

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5 Sampling and pre-treatment

5.1 The number and size of specimens for the different tests shall be in accordance with the respective standard.

5.2 The material or component assembly shall be pre-treated by washing and drying 5 times in accordance with procedures 3A (at 60 ± 3)°C and E of EN ISO 6330.

6 Performance requirements

6.1 Performance requirements - Material or component assembly

6.1.1 General

The following requirements shall be satisfied after sampling specified in 5.1 and pre-treatment specified in 5.2.

6.1.2 Flame spread

The material, component assembly, closure system or accessory shall be tested for flame spread in accordance with EN ISO 15025 method A and a limited flame spread index 3 of EN 533 shall be achieved and no specimen shall give hole formation in any layer.