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Protective clothing for fire-fighters - Test methods and requirements for reflective clothing for specialised fire-fighting

**EESTI STANDARDI EESSÕNA****NATIONAL FOREWORD**

<p>Käesolev Eesti standard EVS-EN 1486:2008 sisaldab Euroopa standardi EN 1486:2007 ingliskeelset teksti.</p>	<p>This Estonian standard EVS-EN 1486:2008 consists of the English text of the European standard EN 1486:2007.</p>
<p>Standard on kinnitatud Eesti Standardikeskuse 28.01.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p>	<p>This standard is ratified with the order of Estonian Centre for Standardisation dated 28.01.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p>
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ICS 13.340.10

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ICS 13.340.10

English Version

## Protective clothing for fire-fighters - Test methods and requirements for reflective clothing for specialised fire-fighting

Vêtements de protection pour sapeurs-pompiers -  
Méthodes d'essai et exigences relatives aux vêtements  
réfléchissants pour opérations spéciales de lutte contre  
l'incendie

Schutzkleidung für die Feuerwehr - Prüfverfahren und  
Anforderungen für reflektierende Kleidung für die spezielle  
Brandbekämpfung

This European Standard was approved by CEN on 26 August 2007.

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## Foreword

This document (EN 1486:2007) 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of an identical text or by endorsement, at the latest by April 2008, and conflicting national standards shall be withdrawn at the latest by April 2008.

This document supersedes EN 1486:1996.

Annex A provides details of significant technical changes between this European Standard and the previous edition: EN 1498:1996

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 89/686/EEC.

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

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

This European Standard specifies reflective protective clothing, which provide higher levels of protection against radiant heat than the non-reflective clothing specified in EN 469. This reflective clothing may be used in certain techniques of specialised fire-fighting.

However, protective clothing conforming to EN 469 may also be used with different specialised fire-fighting techniques. The type of protective clothing employed should be appropriate for the fire-fighting tactics.

A risk assessment shall be used to determine if the clothing covered by this European Standard is suitable for the intended use for the expected exposure. The risk assessment should include consideration of any respiratory protection that may also be required.

Fire-fighters shall be trained in the use, care and maintenance of the protective clothing covered by this European Standard, including an understanding of its limitations and of the necessity to remove PPE as soon as possible after an incident.

Subject to risk assessment, the clothing covered by this European Standard may be suitable for use in activities other than those considered by this European Standard. Nothing in this European Standard is intended to restrict any jurisdiction, purchaser or manufacturer from exceeding these minimum requirements.

## 1 Scope

This European Standard considers requirements for the protection of the whole body including head, hands and feet. Clothing for head and feet according to this European Standard, however, may only provide sufficient protection when worn together with such basic PPE specified in the relevant standards as noted in paragraphs 4.2 and 4.4 of this European Standard.

This European Standard specifies test methods and minimum performance requirements for reflective protective clothing used in specialised fire-fighting.

This clothing provides protection against flame lick and intense radiant heat and is worn for short periods only, to enable the fire-fighter to enter specific high-risk fire-fighting and fire rescue situations which also require the use of breathing apparatus.

This European Standard only covers protective clothing that relies upon the ability of the outer material to reflect intense radiant heat. This type of reflective clothing may also be used for industrial applications involving high levels of radiant heat.

The reflective clothing specified in this European Standard is not covered in EN 469.

## 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 136:1998, *Respiratory protective devices — Full face masks — Requirements, testing, marking*

EN 166:2001, *Personal eye-protection — Specifications*

EN 171:2002, *Personal eye-protection — Infrared filters — Transmittance requirements and recommended use*

EN 340, *Protective clothing — General requirements*

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

EN 397, *Industrial safety helmets*

EN 420:2003, *Protective gloves — General requirements and test methods*

EN 443, *Helmets for firefighters*

EN 702, *Protective clothing — Protection against heat and flame — Test method: Determination of the contact heat transmission through protective clothing or its materials*

EN 14052, *High performance industrial helmets*

EN 15090, *Footwear for firefighters*

EN 24920, *Textiles — Determination of resistance to surface wetting (spray test) of fabrics*

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



EN ISO 1421:1998, *Rubber- or plastics-coated fabrics — Determination of tensile strength and elongation at break (ISO 1421:1998)*

EN ISO 4674-1:2003, *Rubber- or plastics-coated fabrics — Determination of tear resistance — Part 1: Constant rate of tear methods (ISO 4674-1:2003)*

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 13934-1, *Textiles — Tensile properties of fabrics — Part 1: Determination of maximum force and elongation at maximum force using the strip method (ISO 13934-1:1999)*

EN ISO 13934-2, *Textiles — Tensile properties of fabrics — Part 2: Determination of maximum force using the grab method (ISO 13934-2:1999)*

EN ISO 13935-2, *Textiles — Seam tensile properties of fabrics and made-up textile articles — Part 2: Determination of maximum force to seam rupture using the grab method (ISO 13935-2:1999)*

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)*

EN ISO 20345, *Personal protective equipment — Safety footwear (ISO 20345:2004)*

ISO 7000, *Graphical symbols for use on equipment — Index and synopsis*

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