

საქართველოს ეროვნული სტანდარტი

დამცავი სპეცსამოსი მუხანაძეებისთვის. ხანძარსაწინააღმდეგო
დამცავი სპეცსამოსის სამუშაოათმადგომლობის მახასიათებლები

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

საქართველოს სტანდარტების, ტექნიკური რეგლამენტების
და მეტროლოგიის ეროვნული სააგენტო
თბილისი

საინფორმაციო მონაცემები

1 **შემუშავებულია** საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს სტანდარტებისა და ტექნიკური რეგლამენტების დეპარტამენტის მიერ

2 **დამტკიცებულია და შემოღებულია** სამოქმედოდ საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს 2009 წლის 23 დეკემბრის № 54 “ს” განკარგულებით

3 მიღებულია გარეკანის მეთოდით სტანდარტიზაციის საერთაშორისო ორგანიზაციის სტანდარტი ISO 26 469 : 2005 “დამცავი სპეცსამოსი მესხანძრეებისთვის. ხანძარსაწინააღმდეგო დამცავი სპეცსამოსის საექსპლოატაციო მახასიათებლები”

4 პირველად

5 **რევიზირებულია** საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2009 წლის 28 დეკემბერი №268-1.3-3518

წინამდებარე სტანდარტის სრული ან ნაწილობრივი აღწარმოება, ტირაჟირება და გავრცელება საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს ნებართვის გარეშე არ დაიშვება

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

English Version

Protective clothing for firefighters - Performance requirements
for protective clothing for firefighting

Vêtements de protection pour sapeurs pompiers -
Exigences de performance pour les vêtements de
protection pour la lutte contre l'incendie

Schutzkleidung für die Feuerwehr -
Leistungsanforderungen für Schutzkleidung für die
Brandbekämpfung

This European Standard was approved by CEN on 22 July 2005.

CEN members are bound to comply with the CEN/GENELEC 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.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	Page
Foreword	4
Introduction	5
1 Scope	6
2 Normative References	7
3 Terms and definitions	7
4 General clothing design	9
4.1 General	9
4.2 Size designation	9
4.3 Type of clothing	9
4.4 Combination of garments	9
4.5 Outer two piece suit	10
4.6 Anti-wicking barrier	10
4.7 Hardware	10
4.8 Integrated personal protective equipment (PPE)	10
5 Sampling and pre-treatment	10
6 Requirements	10
6.1 Flame spread	10
6.2 Heat transfer – Flame	11
6.3 Heat transfer – Radiation	11
6.4 Residual tensile strength of material when exposed to radiant heat	12
6.5 Heat resistance	12
6.6 Tensile strength	12
6.7 Tear strength	12
6.8 Surface wetting	12
6.9 Dimensional change	12
6.10 Resistance to penetration by liquid chemicals	13
6.11 Resistance to water penetration	13
6.12 Water vapour resistance	14
6.13 Ergonomic performance	14
6.14 Visibility	14
6.15 Optional test - whole garment testing	14
7 Marking	14
8 Information supplied by the manufacturer	15
Annex A (normative) Uncertainty of measurement	16
Annex B (normative) Requirements for visibility	17
Annex C (informative) Prediction of burn injury using an instrumented manikin	18
Annex D (informative) Checking of basic ergonomic features of protective clothing Practical performance tests	20
Annex E (informative) Test method for complete garments	22
Annex F (informative) Physiological / heat stress hazards	36
Annex G (informative) Risk assessment guidelines	37
Annex H (informative) Guidelines on electrical hazards	43

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC.....44

Bibliography.....46

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

Foreword

This European Standard (EN 469:2005) 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 March 2006, and conflicting national standards shall be withdrawn at the latest by March 2006.

This European Standard supersedes EN 469:1995.

This European Standard 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 European Standard.

It is one of several standards for clothing that have been developed to protect persons against heat and/or flames. Some examples of other European Standards include:

- prEN ISO 11611:2003, Protective clothing for use in welding and allied processes (ISO/DIS 11611:2003);
- prEN ISO 11612:2003, Clothing to protect against heat and flame (ISO/DIS 11612:2003);
- ISO 11613:1999, Protective clothing for firefighters — Laboratory test methods and performance requirements;
- EN 1486:1996, Protective clothing for firefighters — Test methods and requirements for reflective clothing for specialized fire fighting;
- EN ISO 14460:1999 (and EN ISO 14460/A1:2002), Protective clothing for automobile racing drivers — Protection against heat and flame — Performance requirements and test methods (ISO 14460:1999);
- ISO 15384:2003, Protective clothing for firefighters — Laboratory test methods and performance requirements for wildland firefighting clothing;
- ISO 15538:2001, Protective clothing for firefighters — Laboratory test methods and performance requirements for protective clothing with a reflective outer surface;
- EN 13911:2004, Protective clothing for firefighters — Requirements and test methods for fire hoods for firefighters.

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.

Introduction

The purpose of this European Standard is to provide minimum performance requirements for protective clothing for firefighters, whilst fighting fires. Within this European Standard, two performance levels are given for performance requirements 6.2, 6.3, 6.11 and 6.12 - level 1 is the lower level, level 2, the higher level. The level of personal protection chosen should be based on the outcome of a risk assessment. Annex G lists many of the hazards that may be encountered by firefighters and sets out guidelines for carrying out a risk assessment analysis.

During an incident, hazards other than those against which clothing to this European Standard is intended to protect may be encountered e.g. chemical, biological, radiological, and electrical. If the risk assessment identifies that exposure to such hazards is likely, protection by more appropriate personal protective equipment may be required either instead of or in addition to the protective clothing covered by this European Standard.

In this European Standard, some requirements have an influence on ergonomics and additional informative annexes on ergonomic features and physiological / heat stress hazards are included in the form of guidelines because suitable tests for these requirements have not yet been validated internationally. It is important that further requirements for ergonomic aspects of protective clothing become integrated normative parts of European standards such as this and currently work on this is taking place.

The requirement regarding water vapour resistance in 6.12, level 1, is proposed for an amendment (procedure).

For adequate overall protection against the risks to which firefighters are likely to be exposed, additional personal protective equipment to protect the head, face, hands and feet should also be worn, along with appropriate respiratory protection where necessary.

The specified controlled laboratory tests used to determine compliance with the performance requirements of this European Standard do not replicate the situations to which firefighting personnel may be exposed.

This European Standard sets minimum levels of performance requirements. Nothing in this European Standard is intended to restrict any jurisdiction, purchaser or manufacturer from exceeding these minimum requirements.

NOTE It is essential that firefighters are trained in the selection, use, care and maintenance of all personal protective equipment. Attention is drawn to CEN/TR 14560:2003, which sets out guidelines for selection, use, care and maintenance of protective clothing against heat and flame.