



Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 16689:2017

**Protective clothing for firefighters -
Performance requirements for
protective clothing for technical rescue**

Vêtements de protection pour les
sapeurs-pompiers - Exigences de
performances pour les vêtements de
protection des interventions de secours

Schutzkleidung für Feuerwehrleute -
Leistungsanforderungen für
Schutzkleidung für die technische
Rettung

04/2017



National Foreword

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English Version

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technische Rettung

This European Standard was approved by CEN on 6 February 2017.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 16689:2017) 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of an identical text or by endorsement, at the latest by October 2017, and conflicting national standards shall be withdrawn at the latest by October 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The purpose of this European Standard is to provide minimum performance requirements for protective clothing for technical rescues.

During an incident, hazards other than those against which the 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 in this European Standard.

For adequate overall protection against the risks to which wearers 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 wearers may be exposed.

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

1 Scope

This European Standard specifies the minimum requirements for technical rescue clothing.

Technical rescue involves work associated with the environments, and conditions associated with operational scenarios such as but not limited to those found during road traffic collisions and when working in and around collapsed structures often for extended periods of time after natural disasters (earthquake, landslides, etc.) where protection against mechanical risks, limited heat and flame and conspicuity is needed.

NOTE This could involve heavy workloads, working in confined spaces and require conspicuity in public places.

This European Standard covers the general clothing design, the minimum performance levels of the material used, the methods of test to be used to determine these performance levels, and marking and information supplied by the manufacturer.

Unless combined with other specialized PPE and tested accordingly this standard is not applicable to clothing used to protect against risks encountered in fighting fires, wildland fires or rescue from fire, dealing with hazardous chemicals, working with chainsaws and water and rope rescue.

This European Standard does not cover protection for the head, hands and feet or protection against other hazards e.g. chemical, radiological and electrical hazards. These aspects are covered in other European Standards.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1149-5, *Protective clothing — Electrostatic properties — Part 5: Material performance and design requirements*

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

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

EN ISO 4920, *Textile fabrics — Determination of resistance to surface wetting (spray test) (ISO 4920)*

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

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)*

EN ISO 11092, *Textiles — Physiological effects — Measurement of thermal and water-vapour resistance under steady-state conditions (sweating guarded-hotplate test) (ISO 11092)*

EN ISO 12127-1, *Clothing for protection against heat and flame — Determination of contact heat transmission through protective clothing or constituent materials — Part 1: Contact heat produced by heating cylinder (ISO 12127-1)*

EN ISO 12947-2, *Textiles — Determination of the abrasion resistance of fabrics by the Martindale method — Part 2: Determination of specimen breakdown (ISO 12947-2)*