



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

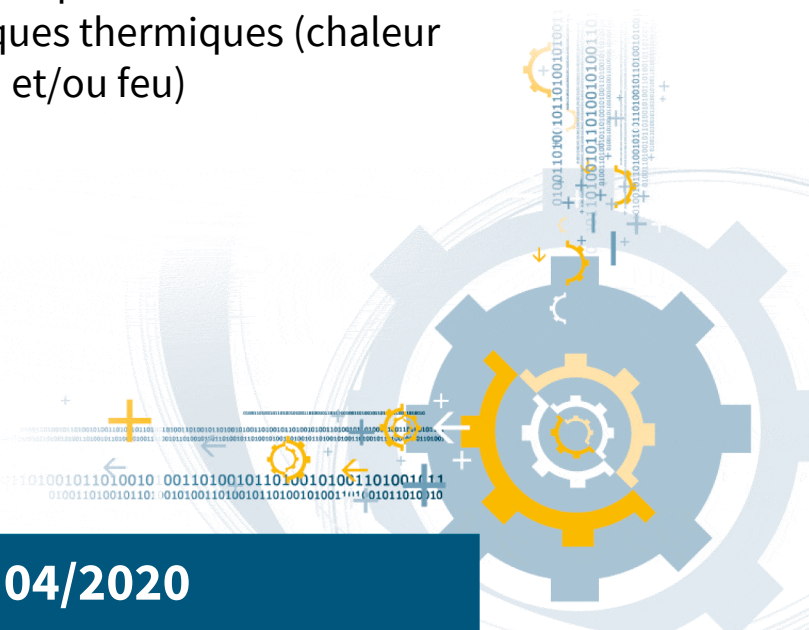
## ILNAS-EN 407:2020

### **Protective gloves and other hand protective equipments against thermal risks (heat and/or fire)**

Schutzhandschuhe und andere  
Handschutzausrüstung gegen  
thermische Risiken (Hitze und/oder  
Feuer)

Gants de protection et autres  
équipements de protection de la main  
contre les risques thermiques (chaleur  
et/ou feu)

04/2020



## National Foreword

This European Standard EN 407:2020 was adopted as Luxembourgish Standard ILNAS-EN 407:2020.

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
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EUROPEAN STANDARD ILNAS-EN 407:2020 **EN 407**  
NORME EUROPÉENNE  
EUROPÄISCHE NORM April 2020

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ICS 13.340.40

Supersedes EN 407:2004

English Version

**Protective gloves and other hand protective equipments  
against thermal risks (heat and/or fire)**

Gants de protection et autres équipements protecteur  
de la main contre les risques thermiques (chaleur  
et/ou feu)

Schutzhandschuhe und andere Handschutzausrüstung  
gegen thermische Risiken (Hitze und/oder Feuer)

This European Standard was approved by CEN on 21 October 2019.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 407:2020) 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 2020, and conflicting national standards shall be withdrawn at the latest by April 2021.

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

This document supersedes EN 407:2004.

The major changes are:

- New tests 6.2, 6.3, 6.4, 6.8;
- Mechanical strength;
- Hand protective equipment;
- New pictogram Figure 7;
- Clause 8 (information supplied by the manufacturer: revised);
- New Annex A;
- New Annex B.

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 Regulation.

For relationship with EU Regulation, see informative Annex ZA, which is an integral part of this document.

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

## Introduction

This document has been developed to cover all type of Personal Protective Equipment protecting the hand, a part of the hand or a part of the arm against thermal risks, no matter where they are used (professional use, consumer, domestic use...).

## 1 Scope

This document specifies requirements, test methods, marking and information for protective gloves and other hand protective equipment's against thermal risks for professional use, consumer, domestic use.

This document is also applicable to arm protective equipment.

It is used for all gloves and other hand protective equipment's which protect the hands or part of the hand against heat and/or fire in one or more of the following forms: flame, contact heat, convective heat, radiant heat, small splashes or large quantities of molten metal.

This document is only applicable in conjunction with EN ISO 21420:2020.

This document does not apply to gloves for fire-fighters or welding that have their own standards.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 348:1992, *Protective clothing — Test method: Determination of behaviour of materials on impact of small splashes of molten metal*

EN ISO 21420:2020, *Protective gloves — General requirements and test methods (ISO 21420:2020)*

EN 659:2003+A1:2008, *Protective gloves for firefighters*

EN ISO 6942:2002, *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 7500-1:2018, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system (ISO 7500-1:2018)*

EN ISO 9151:2016, *Protective clothing against heat and flame — Determination of heat transmission on exposure to flame (ISO 9151)*

EN ISO 9185:2007, *Protective clothing — Assessment of resistance of materials to molten metal splash (ISO 9185)*

EN ISO 12127-1:2015, *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 15025:2016, *Protective clothing — Protection against flame — Method of test for limited flame spread (ISO 15025)*

### 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

#### 3.1

##### **after flame time**

length of time for which a material continues to flame, under the specified test conditions, after the ignition source has been removed

#### 3.2

##### **afterglow time**

time for which a material continues to afterglow, under specified test conditions after cessation of after flaming or after removal of the ignition source

#### 3.3

##### **back of the glove**

back of hand, excluding fingers

#### 3.4

##### **char**

formation of a carbonaceous brittle residue when material is exposed to thermal energy

[SOURCE: EN ISO 15025:2016, 3.4]

#### 3.5

##### **cuff**

part of the glove that extends beyond the opening of glove body to cover the wrist area and sometimes part of the forearm

#### 3.6

##### **debris**

material separating from the specimen during the test procedure and falling from the specimen without flaming

#### 3.7

##### **dripping**

detachment of molten droplets during the melting process

#### 3.8

##### **flaming debris**

material separating from the specimen during the test procedure and igniting the filter paper

#### 3.9

##### **hands protective equipment against thermal risks**

equipment which protect hand and/or areas of the hand intended to be exposed to thermal risks

Note 1 to entry: See examples in Annex A.