

## Külma eest kaitsvad kindad

Protective gloves against cold

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 511:2006 sisaldab Euroopa standardi EN 511:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.06.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 511:2006 consists of the English text of the European standard EN 511:2006.</p> <p>This document is endorsed on 29.06.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p><b>Käsitlusala:</b> This European Standard specifies the requirements and test methods for gloves which protect against convective and conductive cold down to –50 °C. This cold can be linked to the climatic conditions or an industrial activity.</p>	<p><b>Scope:</b> This European Standard specifies the requirements and test methods for gloves which protect against convective and conductive cold down to –50 °C. This cold can be linked to the climatic conditions or an industrial activity.</p>
---	---

ICS 13.340.40

Võtmesõnad:

English Version

## Protective gloves against cold

Gants de protection contre le froid

Schutzhandschuhe gegen Kälte

This European Standard was approved by CEN on 9 March 2006.

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, Romania, 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

<b>Contents</b>	<b>Page</b>
<b>1 Scope .....</b>	<b>4</b>
<b>2 Normative references .....</b>	<b>4</b>
<b>3 General requirements .....</b>	<b>4</b>
<b>4 Performance requirements.....</b>	<b>4</b>
<b>5 Test methods.....</b>	<b>6</b>
<b>6 Marking .....</b>	<b>9</b>
<b>7 Information supplied by the manufacturer.....</b>	<b>9</b>
<b>Annex A (normative) Convective cold — Description of test apparatus .....</b>	<b>10</b>
<b>Annex B (informative) Protection against cold according to the application .....</b>	<b>13</b>
<b>Annex C (informative) Uncertainties of measurement and results interpretation .....</b>	<b>15</b>
<b>Annex D (informative) Significant technical changes between this European Standard and the previous edition .....</b>	<b>16</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC.....</b>	<b>17</b>

## Foreword

This European Standard (EN 511:2006) 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 2006, and conflicting national standards shall be withdrawn at the latest by October 2006.

This European Standard supersedes EN 511:1994.

Annex D provides details of significant technical changes between this European Standard and the previous edition EN 511:1994.

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 89/686/EEC.

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

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## 1 Scope

This European Standard specifies the requirements and test methods for gloves which protect against convective and conductive cold down to  $-50\text{ }^{\circ}\text{C}$ . This cold can be linked to the climatic conditions or an industrial activity. The specific values of the different performance levels are decided by the special requirements for each class of risk or the special areas of application. Product tests may only give performance levels and not levels of protection.

## 2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 388, *Protective gloves against mechanical risks*

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

EN ISO 7854:1997, *Rubber- or plastics-coated fabrics — Determination of resistance to damage by flexing (ISO 7854:1995)*

ISO 4675, *Rubber- or plastics-coated fabrics — Low- temperature bend test*

ISO 5085-1, *Textiles — Determination of thermal resistance — Part 1: Low thermal resistance*

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

ISO 15383, *Protective gloves for firefighters — Laboratory test methods and performance requirements*

## 3 General requirements

These gloves shall meet all the applicable requirements of EN 420.

## 4 Performance requirements

### 4.1 Mechanical requirements

The gloves shall at least comply with performance level 1 of EN 388 in abrasion and tear resistance. This minimum requirement can be different according to the levels of protection against cold (see 4.5 and 4.6).

### 4.2 Flexibility behaviour

When tested in accordance with 5.2 there shall not be any cracks. This test is not necessary for uncoated materials.

### 4.3 Water penetration

The gloves shall be tested according to 5.3.

A level of performance of 1 shall be indicated when no leakage is seen at the end of the testing period. If this requirement is not passed, then a performance level of 0 shall be indicated, and a warning stating that the