

Protective gloves against mechanical risks

The European Standard EN 388:1994 has the status of a
British Standard

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This British Standard, having been prepared under the direction of the Personal Safety Equipment Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 July 1994

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National foreword

This British Standard has been prepared under the direction of the Personal Safety Equipment Standards Policy Committee and is the English language version of EN 388 *Protective gloves against mechanical risks*, published by the European Committee for Standardization (CEN). Together with BS EN 374-1, BS EN 374-2, BS EN 374-3, BS EN 407, and BS EN 420, it supersedes BS 1651:1986 which is withdrawn.

EN 388 was produced as a result of international discussions in which the United Kingdom took an active part.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 16, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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Descriptors: Personal protective equipment, work clothing, accident prevention, protective clothing, gloves, mechanical tests, characteristics, perforating strength, shock resistance, abrasion resistance, tear strength

English version

Protective gloves against mechanical risks

Gants de protection contre les risques
mécaniques

Schutzhandschuhe gegen mechanische Risiken

This European Standard was approved by CEN on 1994-03-16. 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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard was prepared by the Technical Committee CEN/TC 162, Protective clothing including hand and arm protection and lifejackets, the secretariat of which is held by DIN.

It has been prepared under a mandate given to CEN by the Commission of the European Communities and the European Free Trade Association, and supports essential requirements of EC Directive(s).

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 September 1994, and conflicting national standards shall be withdrawn at the latest by September 1994.

Annexes designated “normative” are part of the body of the standard. Annexes designated “informative” are given only for information. In this standard, annex A is normative.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

1 Scope

This European Standard is applicable to all kinds of protective gloves with regards to physical and mechanical aggressions caused by abrasion, blade cut, puncture, tear and impact cut. This standard is not applicable to antivibration gloves.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to is applied.

EN 420, *General requirements for gloves*.

3 Definitions

For the purposes of this standard the following definitions apply.

3.1

equal protection

a glove that is constructed of the same uniform material or materials throughout, and is so constructed as to provide a uniform degree of protection over the whole hand area

3.2

specific protection

a glove that is constructed to provide an area of improved protection for a part of the hand

3.3

glove series

a single glove style or glove type with the same palm material up to the wrist line where the only variants are size, left/right hand, colour or sewing pattern

3.4

volume resistance

the quotient of a direct voltage applied between two electrodes in contact with opposite faces of a test piece, and the current between the electrodes after one or more specified periods of electrification, excluding current along the surface. Possible polarization phenomena at the electrodes are ignored

3.5

volume resistivity

the measured volume resistance calculated to apply to a cube with unit side. This reflects the antistatic properties of the glove. Volume resistivity is expressed in ohm centimetres

4 Requirements

The protective gloves according to this standard shall first of all meet the requirements of EN 420:1993, subclauses 4.1, 4.2, 4.4 and clause 5.

The performance of gloves against abrasion, blade cut, tear and puncture shall be classified according to the minimum requirements for each level shown in Table 1.

Table 1

Test	Level 1	Level 2	Level 3	Level 4	Level 5
6.1 Abrasion resistance (number of cycles)	100	500	2 000	8 000	—
6.2 Blade cut resistance (index)	1,2	2,5	5,0	10,0	20,0
6.3 Tear resistance N	10	25	50	75	—
6.4 Puncture resistance in N	20	60	100	150	—

If required, the requirements in Table 2 shall be met.

Table 2

6.5 Impact cut resistance Height of fall: 150 mm
6.6 Antistatic (Volume resistivity in $\Omega \cdot \text{cm}$) Minimum: 10^6 Maximum: 10^9

5 Sampling and conditioning

5.1 All specimens shall be taken from the palm of different gloves for classification purposes.

5.2 If relevant, additional areas of the protective glove shall be tested.

5.3 Conditioning of samples is as follows:

Temperature (23 ± 2) °C

Relative Humidity (50 ± 5) %

The period of conditioning is 24 h. Preferably tests shall be performed in the above mentioned environment.