



SLOVENSKI STANDARD SIST EN ISO 13997:2000

01-februar-2000

Varovalna obleka – Mehanske lastnosti – Ugotavljanje odpornosti proti urezu z ostrimi predmeti (ISO 13997:1999)

Protective clothing - Mechanical properties - Determination of resistance to cutting by sharp objects (ISO 13997:1999)

Schutzkleidung - Mechanische Eigenschaften - Bestimmung des Widerstandes gegen Schnitte mit scharfen Gegenständen (ISO 13997:1999)

Vêtements de protection - Propriétés mécaniques - Détermination de la résistance à la coupure par des objets tranchants (ISO 13997:1999)

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Ta slovenski standard je istoveten z: **EN ISO 13997:1999**

ICS:

13.340.10 Varovalna obleka Protective clothing

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ICS 13.340

English version

Protective clothing - Mechanical properties - Determination of
resistance to cutting by sharp objects (ISO 13997:1999)

Vêtements de protection - Propriétés mécaniques -
Détermination de la résistance à la coupure par des objets
tranchants (ISO 13997:1999)

Schutzkleidung - Mechanische Eigenschaften -
Bestimmung des Widerstandes gegen Schnitte mit
scharfen Gegenständen (ISO 13997:1999)

This European Standard was approved by CEN on 9 July 1999.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard ISO 13997:1999 has been prepared by Technical Committee ISO/TC 94 "Personal safety - Protective clothing and equipment" in collaboration with 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 February 2000, and conflicting national standards shall be withdrawn at the latest by February 2000.

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 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 13997:1999 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZB (normative).

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**Protective clothing — Mechanical
properties — Determination of resistance to
cutting by sharp objects**

*Vêtements de protection — Propriétés mécaniques — Détermination de la
résistance à la coupure par des objets tranchants*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 13997 was prepared by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 13, *Protective clothing*.

Annexes A and B of this International Standard are for information only.

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Introduction

Although textiles, composites, leather, rubbers and reinforced materials may resist cutting by sharp edges in different ways, a test method for evaluating the resistance to cut of materials in protective clothing needs to be applicable to all materials. The test described in this International Standard provides a method that allows calculations of the downwards (normal) force required to cause a blade drawn across the sample for a fixed distance to cut through the specimen.

The performance of protective clothing materials may be classified using the numerical values obtained from this test.

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Protective clothing — Mechanical properties — Determination of resistance to cutting by sharp objects

1 Scope

This International Standard specifies a cut test method, and related calculations, for use on materials and assemblies designed for protective clothing. The test determines resistance to cutting by sharp edges, such as knives, sheet metal parts, swarf, glass, bladed tools and castings.

This test does not provide data on the resistance to penetration by pointed objects such as needles and thorns. The test described in this International Standard is not considered suitable for testing materials made from chain mail and metal plates. The text of this International Standard does not include provisions for the safeguard of the operator.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, this publication do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 139:1973, *Textiles — Standard atmospheres for conditioning and testing*.

3 Terms and definitions

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

3.1

cut-through

event which has occurred when the blade edge first contacts the conducting material below the test specimen

3.2

cutting force

calculated force that would be required to be applied to a blade of standard sharpness to just cut through a material in a blade stroke of length 20 mm

3.3

cutting stroke length

distance the cutting edge travels before cut-through occurs

4 Requirements

This International Standard describes a method of test for materials and products. When it is cited as a test method in a materials or product standard, that standard shall contain the necessary information to permit the application of ISO 13997 to the particular product. The standard citing ISO 13997 shall include at least the following:

- a) a normative reference to ISO 13997;