SLOVENSKI STANDARD
SIST EN ISO 6529:2002

01-junij-2002

Nadomeġļa:
SIST EN 369:1996

Varovalna obleka - Varovanje pred kemikalijami - Ugotavljanje odpornosti materialov za varovalne obleke proti prepustnosti tekoļin in plinov (ISO 6529:2001)

Protective clothing - Protection against chemicals - Determination of resistance of protective clothing materials to permeation by liquids and gases (ISO 6529:2001)

Schutzkleidung - Schutz gegen Chemikalien - Bestimmung des Widerstands von Schutzkleidungsmaterialien gegen die Permeation von Flüssigkeiten und Gasen (ISO 6529:2001)

Vetements de protection - Protection contre les produits chimiques - Détermination de la résistance des matériaux utilisés pour la confection des vetements de protection a la perméation par des liquides et des gaz (ISO 6529:2001)

Ta slovenski standard je istoveten z: **EN ISO 6529:2001**

ICS:

13.340.10	Varovalna obleka	Protective clothing

SIST EN ISO 6529:2002 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 6529

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ICS 13.340.10

Supersedes EN 369:1993

English version

Protective clothing - Protection against chemicals - Determination of resistance of protective clothing materials to permeation by liquids and gases (ISO 6529:2001)

Vêtements de protection - Protection contre les produits chimiques - Détermination de la résistance des matériaux utilisés pour la confection des vêtements de protection à la perméation par des liquides et des gaz (ISO 6529:2001)

Schutzkleidung - Schutz gegen Chemikalien - Bestimmung des Widerstands von Schutzkleidungsmaterialien gegen die Permeation von Flüssigkeiten und Gasen (ISO 6529:2001)

This European Standard was approved by CEN on 4 October 2001.

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 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 Management Centre 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.

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

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Foreword

This document (ISO 6529:2001) 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 April 2002, and conflicting national standards shall be withdrawn at the latest by April 2002.

This document supersedes EN 369:1993.

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 Directive(s).

For relationship with EU Directive(s), see informative annex ZB, 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, 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 ISO 6529:2001 has been approved by CEN as EN ISO 6529:2001 without any modifications.

NOTE Normative references to International Standards are listed in Annex ZA (normative).

Annex ZA
(normative)

Normative references to international publications with their relevant European publications

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 applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

Publication	Year	Title	EN	Year
ISO 139	1973	Textiles - Standard atmospheres for conditioning and testing	EN 20139	1992
ISO 2286-2	1998	Rubber- or plastics-coated fabrics - Determination of roll characteristics - Part 2: Methods for determination of total mass per unit area, mass per unit area of coating and mass per unit area of substrate	EN ISO 2286-2	1998
ISO 2286-3	1998	Rubber- or plastics-coated fabrics - Determination of roll characteristics - Part 3: Method for determination of thickness	EN ISO 2286-3	1998
ISO 5084	1996	Textiles - Determination of thickness of textiles and textile products	EN ISO 5084	1996

Annex ZB
(informative)

Clauses of this European Standard addressing essential requirements or other provisions of EU Directives

By agreement between ISO and CEN, this CEN annex is included in the DIS and the FDIS but will not appear in the published ISO standard.

This European Standard has been prepared under a mandate given to CEN by the European Commission and supports essential requirements of EU Directive 89/686/EEC, Annex II.

Note Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

Subclause 3.10.2 of this standard is likely to support requirements of EU Directive 89/686/EEC, Annex II.

Compliance with this subclause provides one means of conforming with the specific essential requirements of the Directive concerned.

INTERNATIONAL STANDARD

ISO 6529

Second edition
2001-10-15

Protective clothing — Protection against chemicals — Determination of resistance of protective clothing materials to permeation by liquids and gases

Vêtements de protection — Protection contre les produits chimiques — Détermination de la résistance des matériaux utilisés pour la confection des vêtements de protection à la permeation par des liquides et des gaz

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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.

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

International Standard ISO 6529 was prepared by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 13, *Protective clothing*.

This second edition cancels and replaces the first edition (ISO 6529:1990), which has been technically revised.

Annexes A to D of this International Standard are for information only.

Introduction

Workers involved in the production, use, transportation, and emergency response with liquid and gaseous chemicals can be exposed to numerous compounds capable of causing harm upon contact with the human body. The deleterious effects of these chemicals can range from acute trauma such as skin irritation and burn to chronic degenerative disease, such as cancer. Since engineering controls may not eliminate all possible exposures, attention is often placed on reducing the potential for direct skin contact through the use of protective clothing that resists permeation, penetration and degradation.

These test methods are normally used to evaluate the barrier effectiveness of materials used for protective clothing and specimens from finished items (see Note 1) of protective clothing against permeation of either liquid or gaseous chemicals. Options are provided for conducting this testing under both conditions of continuous or intermittent contact with the chemicals.

These test methods provide various options for reporting test results in terms of breakthrough time, permeation rate and cumulative permeation to allow a comparison of protective clothing material permeation resistance. These parameters are key measures of the effectiveness of a clothing material to act as a barrier to the test chemical. Such information is used in the comparison of clothing materials during the process of selecting clothing for protection from hazardous chemicals. Long breakthrough detection times and normalized breakthrough detection times as well as low permeation rates are characteristic of the best barriers.

Resistance to penetration by liquid chemicals should be determined by using ISO 6530 while resistance to penetration by liquid chemicals under pressure should be determined by using ISO 13994. These International Standards are listed in the Bibliography.

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced people for whose guidance it has been prepared and that appropriate precautions will be taken to avoid injury to health and contamination of the environment.

NOTE 1 Finished items of protective clothing include gloves, arm shields, aprons, suits, hoods, boots, etc. The phrase “specimens from finished items” encompasses seamed and other discontinuous regions as well as the usual continuous regions of protective clothing items.

NOTE 2 At present, no quantitative information exists about acceptable levels of dermal contact. Therefore, the data obtained using this test method cannot be used to infer safe exposure levels.

Protective clothing — Protection against chemicals — Determination of resistance of protective clothing materials to permeation by liquids and gases

1 Scope

This International Standard describes laboratory test methods that enable a determination of the resistance of materials used in protective clothing to permeation by liquid or gaseous chemicals under the conditions of either continuous or intermittent contact.

Method A (see 8.3) is applicable to the testing of liquid chemicals, either volatile or soluble in water, expected to be in continuous contact with the protective clothing material.

Method B (see 8.4) is applicable to the testing of gaseous chemicals expected to be in continuous contact with the protective clothing material.

Method C (see 8.5) is applicable to the testing of liquid chemicals, either volatile or soluble in water, expected to be in intermittent contact with the protective clothing material.

These test methods are only suitable for the testing of air-impermeable protective clothing materials. They assess the permeation resistance of the protective clothing material under laboratory conditions in terms of breakthrough time, permeation rate, and cumulative permeation. These test methods also enable observations to be made of the effects of the test liquid on the protective clothing material under test.

These test methods address only the performance of materials or certain material constructions (e.g. seams) used in protective clothing. These test methods do not address the design, overall construction and components, or interfaces of garments or other factors which may affect the overall protection offered by the protective clothing.

It is emphasized that these tests do not necessarily simulate conditions to which clothing materials are likely to be exposed in practice. The use of test data should therefore be restricted to broad comparative assessment of such material according to their permeation-resistance characteristics.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents 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, *Textiles — Standard atmospheres for conditioning and testing*

ISO 2286-2, *Rubber- or plastics-coated fabrics — Determination of roll characteristics — Part 2: Methods for determination of total mass per unit area, mass per unit area of coating and mass per unit area of substrate*

ISO 2286-3, *Rubber- or plastics-coated fabrics — Determination of roll characteristics — Part 3: Method for determination of thickness*