SLOVENSKI STANDARD
SIST EN ISO 175:2000

01-december-2000

Polimerni materiali - Preskusne metode za ugotavljanje učinkov pri potapljanju v tekoče kemikalije (ISO 175:1999)

Plastics - Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175:1999)

Kunststoffe - Prüfverfahren zur Bestimmung des Verhaltens gegen flüssige Chemikalien (ISO 175:1999)

Plastiques - Méthodes d'essai pour la détermination des effets de l'immersion dans des produits chimiques liquides (ISO 175:1999)

Ta slovenski standard je istoveten z: **EN ISO 175:2000**

ICS:

83.080.01	Polimerni materiali na splošno	Plastics in general

SIST EN ISO 175:2000 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 175

March 2000

ICS 83.080.10

English version

Plastics - Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175:1999)

Plastiques - Méthodes d'essai pour la détermination des effets de l'immersion dans des produits chimiques liquides (ISO 175:1999)

Kunststoffe - Prüfverfahren zur Bestimmung des Verhaltens gegen flüssige Chemikalien (ISO 175:1999)

This European Standard was approved by CEN on 14 February 2000.

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.

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

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

Ref. No. EN ISO 175:2000 E

Foreword

The text of the International Standard from Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

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 2000, and conflicting national standards shall be withdrawn at the latest by September 2000.

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 175:1999 has been approved by CEN as a European Standard without any modification.

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.

Publication	Year	Title	EN	Year
SO 62	1999	Plastics – Determination of water absorption	EN ISO 62	1999
ISO 291	1997	Plastics – Standard atmospheres for conditioning and testing	EN ISO 291	1997
ISO 294-3	1996	Plastics – Injection moulding of test specimens of thermoplastic materials – Part 3: Small plates	EN ISO 294-3	1998
ISO 295	1991	Plastics – Compression moulding of test specimens of thermosetting materials	EN ISO 295	1998
ISO 2818	1994	Plastics – Preparation of test specimens by machining	EN ISO 2818	1996

INTERNATIONAL STANDARD

ISO 175

Second edition
1999-05-01

Plastics — Methods of test for the determination of the effects of immersion in liquid chemicals

Plastiques — Méthodes d'essai pour la détermination des effets de l'immersion dans des produits chimiques liquides

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Contents

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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 175 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 6, *Ageing, chemical and environmental resistance*.

This second edition cancels and replaces the first edition (ISO 175:1981), which has been technically revised.

Annex A forms a normative part of this International Standard. Annex B is for information only.

Introduction

Because of their varied applications, plastics are frequently brought into contact with liquids such as chemical products, motor fuels, lubricants, etc., and, possibly, with their vapours.

Under the action of a liquid, a plastic material may be subjected to several phenomena which may occur simultaneously. On the one hand, absorption of liquid and extraction of constituents soluble in the liquid may occur. On the other hand, a chemical reaction, often resulting in a significant change in the properties of the plastic, may occur. The equilibrium swelling ratio for a crosslinked polymer in a liquid that is a solvent for the same but non-crosslinked polymer is a measure of the degree of crosslinking.

The behaviour of plastics in the presence of liquids can be determined only under arbitrarily fixed conditions aimed at making comparisons between different materials. The choice of test conditions (nature of the liquid, immersion temperature and immersion time), as well as the choice of the properties in which changes are to be measured, depends on the eventual application of the plastic under test.

It is not possible, however, to establish any direct correlation between the experimental results and the behaviour of the plastic in service. These tests do, nevertheless, permit a comparison to be made of the behaviour of different plastic materials under specified conditions, thus allowing an initial evaluation of their behaviour in relation to certain groups of liquids.

NOTE In view of its special importance, the particular case of the determination of the quantity of water absorbed is dealt with in ISO 62. ISO 175 is concerned with the effects of water only where changes in the dimensions and physical properties of the plastic occur as a result of the action of the water.