



SLOVENSKI STANDARD

SIST EN ISO 175:2011

01-november-2011

Nadomešča:
SIST EN ISO 175:2000

Polimerni materiali - Preskusne metode za ugotavljanje učinkov pri potapljanju v tekoče kemikalije (ISO 175:2010)

Plastics - Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175:2010)

Kunststoffe - Prüfverfahren zur Bestimmung des Verhaltens gegen flüssige Chemikalien (ISO 175:2010)

Plastiques - Méthodes d'essai pour la détermination des effets de l'immersion dans des produits chimiques liquides (ISO 175:2010)

Ta slovenski standard je istoveten z: EN ISO 175:2010

ICS:

83.080.01	Polimerni materiali na splošno	Plastics in general
-----------	--------------------------------	---------------------

SIST EN ISO 175:2011

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 175:2011

<https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 175

October 2010

ICS 83.080.01

Supersedes EN ISO 175:2000

English Version

Plastics - Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175:2010)

Plastiques - Méthodes d'essai pour la détermination des effets de l'immersion dans des produits chimiques liquides (ISO 175:2010)

Kunststoffe - Prüfverfahren zur Bestimmung des Verhaltens gegen flüssige Chemikalien (ISO 175:2010)

This European Standard was approved by CEN on 14 October 2010.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, 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.

[SIST EN ISO 175:2011](https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2aba21/sist-en-iso-175-2011)

<https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2aba21/sist-en-iso-175-2011>



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....3

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

SIST EN ISO 175:2011

<https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011>

Foreword

This document (EN ISO 175:2010) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

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 2011, and conflicting national standards shall be withdrawn at the latest by April 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 175:2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, 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 the United Kingdom.

iTeh STANDARD PREVIEW
Endorsement notice
(standards.iteh.ai)

The text of ISO 175:2010 has been approved by CEN as a EN ISO 175:2010 without any modification.

SIST EN ISO 175:2011

<https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 175:2011](#)

<https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011>

INTERNATIONAL STANDARD

ISO 175

Third edition
2010-10-15

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*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 175:2011

[https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-
cde7e2abaf21/sist-en-iso-175-2011](https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011)



Reference number
ISO 175:2010(E)

© ISO 2010

ISO 175:2010(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 175:2011](https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011)

<https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011>

**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction.....	v
1 Scope	1
2 Normative references	1
3 Principle	2
4 General requirements and procedure	2
4.1 Test liquids.....	2
4.2 Test conditions	2
4.3 Immersion time	3
4.4 Test specimens.....	3
4.5 Conditioning	4
4.6 Procedure	4
4.7 Expression of results	5
5 Determination of changes in mass, dimensions and appearance	6
5.1 General	6
5.2 Apparatus	6
5.3 Test specimens.....	7
5.4 Determination of changes in mass	8
5.5 Determination of changes in dimensions	10
5.6 Determination of changes in colour or other appearance attributes	12
6 Determination of changes in other physical properties	13
6.1 General	13
6.2 Apparatus	13
6.3 Test specimens.....	13
6.4 Procedure	13
6.5 Calculation and expression of results	14
7 Precision	14
8 Test report.....	15
Annex A (normative) Types of test liquid.....	16
Annex B (informative) Notes on the absorption of moisture by plastic specimens in equilibrium with a conditioning atmosphere	19
Bibliography.....	20

ISO 175:2010(E)

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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

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

This third edition cancels and replaces the second edition (ISO 175:1999), of which it constitutes a minor revision.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 175:2011

<https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011>

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.

[SIST EN ISO 175:2011](https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011)

<https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 175:2011

<https://standards.iteh.ai/catalog/standards/sist/ff26c9ce-af43-4497-9167-cde7e2abaf21/sist-en-iso-175-2011>