SLOVENSKI STANDARD
SIST EN ISO 179-1:2001

01-junij-2001

Polimerni materiali - Ugotavljanje udarne žilavosti pa Charpyju - 1. del: Preskus udarne žilavosti z neinstrumentalno metodo (ISO 179-1:2000)

Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test (ISO 179-1:2000)

Kunststoffe - Bestimmung der Charpy-Schlageigenschaften - Teil 1: Nichtinstrumentierte Schlagzähigkeitsprüfung (ISO 179-1:2000)

Plastiques - Détermination des caractéristiques au choc Charpy - Partie 1: Essai de choc non instrumenté (ISO 179-1:2000)

Ta slovenski standard je istoveten z: **EN ISO 179-1:2000**

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83.080.01	Polimerni materiali na splošno	Plastics in general

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EUROPEAN STANDARD

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Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test (ISO 179-1:2000)

Plastiques - Détermination des caractéristiques au choc Charpy - Partie 1: Essai de choc non instrumenté (ISO 179-1:2000)

Kunststoffe - Bestimmung der Charpy-Schlageigenschaften - Teil 1: Nichtinstrumentierte Schlagzähigkeitsprüfung (ISO 179-1:2000)

This European Standard was approved by CEN on 3 December 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 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.

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

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Foreword

The text of the International Standard ISO 179-1:2000 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 IBN.

This European Standard supersedes EN ISO 179:1996.

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 June 2001, and conflicting national standards shall be withdrawn at the latest by June 2001.

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 179-1:2000 was 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 (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 291	1997	Plastics - Standard atmospheres for conditioning and testing	EN ISO 291	1997
ISO 294-1	1996	Plastics - Injection moulding of test specimens of thermoplastic materials - Part 1: General principles, and moulding of multipurpose and bar test specimens	EN ISO 294-1	1998
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
ISO 3167	1993	Plastics - Multipurpose-test specimens	EN ISO 3167	1996

INTERNATIONAL STANDARD

ISO 179-1

First edition
2000-12-15

Plastics — Determination of Charpy impact properties —

Part 1: Non-instrumented impact test

Plastiques — Détermination des caractéristiques au choc Charpy — Partie 1: Essai de choc non instrumenté

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Contents

Page

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 part of ISO 179 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 179-1 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 2, *Mechanical properties*.

It cancels and replaces ISO 179:1993, which has been technically revised.

ISO 179 consists of the following parts, under the general title *Plastics — Determination of Charpy impact properties*:

— *Part 1: Non-instrumented impact test*

— *Part 2: Instrumented impact test*

Annexes A and B of this part of ISO 179 are for information only.

Plastics — Determination of Charpy impact properties —

Part 1:
Non-instrumented impact test

1 Scope

1.1 This part of ISO 179 specifies a method for determining the Charpy impact strength of plastics under defined conditions. A number of different types of specimen and test configurations are defined. Different test parameters are specified according to the type of material, the type of test specimen and the type of notch.

1.2 The method is used to investigate the behaviour of specified types of specimen under the impact conditions defined and for estimating the brittleness or toughness of specimens within the limitations inherent in the test conditions. It may also be used for the determination of comparative data from similar types of material.

1.3 The method has a greater range of applicability than that given in ISO 180[1)] and is more suitable for the testing of materials showing interlaminar shear fracture or of materials exhibiting surface effects due to environmental factors.

1.4 The method is suitable for use with the following range of materials:

— rigid thermoplastic moulding and extrusion materials, including filled and reinforced compounds in addition to unfilled types; rigid thermoplastics sheets;

— rigid thermosetting moulding materials, including filled and reinforced compounds; rigid thermosetting sheets, including laminates;

— fibre-reinforced thermosetting and thermoplastic composites incorporating unidirectional or non-unidirectional reinforcements such as mat, woven fabrics, woven rovings, chopped strands, combination and hybrid reinforcements, rovings and milled fibres, sheet made from pre-impregnated materials (prepregs), including filled and reinforced compounds;

— thermotropic liquid-crystal polymers.

1.5 The method is not normally suitable for use with rigid cellular materials and sandwich structures containing cellular material. Also, notched specimens are not normally used for long-fibre-reinforced composites or thermotropic liquid-crystal polymers.

1.6 The method is suited to the use of specimens which may be either moulded to the chosen dimensions, machined from the central portion of a standard multipurpose test specimen (see ISO 3167) or machined from finished or semifinished products such as mouldings, laminates and extruded or cast sheet.

1.7 The method specifies preferred dimensions for the test specimen. Tests which are carried out on specimens of different dimensions or with different notches, or specimens which are prepared under different conditions, may produce results which are not comparable. Other factors, such as the energy capacity of the apparatus, its impact

1) ISO 180:2000, *Plastics — Determination of Izod impact strength*.