SLOVENSKI STANDARD
SIST EN ISO 6603-2:2001

01-junij-2001

Nadomeġļ a:

SIST EN ISO 6603-2:2000

Polimerni materiali - Ugotavljanje prebodne odpornosti togih polimernih materialov - 2. del: Instrumentalna metoda (ISO 6603-2:2000)

Plastics - Determination of puncture impact behaviour of rigid plastics - Part 2: Instrumented puncture test (ISO 6603-2:2000)

Kunststoffe - Bestimmung des Durchstoßverhaltens von festen Kunststoffen - Teil 2: Instrumentierter Schlagversuch (ISO 6603-2:2000)

Plastiques - Détermination du comportement des plastiques rigides perforés sous l'effet d'un choc - Partie 2: Essai de choc instrumenté (ISO 6603-2:2000)

Ta slovenski standard je istoveten z: EN ISO 6603-2:2000

ICS:

83.080.01	Polimerni materiali na splošno	Plastics in general

SIST EN ISO 6603-2:2001 en

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 6603-2

October 2000

ICS 83.080.01

Supersedes EN ISO 6603-2:1996

English version

Plastics - Determination of puncture impact behaviour of rigid plastics - Part 2: Instrumented puncture test (ISO 6603-2:2000)

Plastiques - Détermination du comportement des plastiques rigides perforés sous l'effet d'un choc - Partie 2: Essai de choc instrumenté (ISO 6603-2:2000)

Kunststoffe - Bestimmung des Durchstoßverhaltens von festen Kunststoffen - Teil 2: Instrumentierter Schlagversuch (ISO 6603-2:2000)

This European Standard was approved by CEN on 1 October 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.

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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Ref. No. EN ISO 6603-2:2000 E

CORRECTED 2002-02-06

Foreword

This document (ISO 6603-2:2000) has been prepared by Technical Committee ISO/TC 198 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

This document supersedes EN ISO 6603-2:1996.

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 April 2001, and conflicting national standards shall be withdrawn at the latest by April 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 6603-2:2000 has been approved by CEN as a European Standard 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 6603-1	2000	Plastics - Determination of puncture impact behaviour of rigid plastics - Part 1: Non-instrumented impact testing	EN ISO 6603-1	2000

INTERNATIONAL STANDARD

ISO 6603-2

Second edition
2000-10-01

Plastics — Determination of puncture impact behaviour of rigid plastics —

Part 2: Instrumented impact testing

Plastiques — Détermination du comportement des plastiques rigides perforés sous l'effet d'un choc —

Partie 2: Essais de choc instrumentés

Reference number
ISO 6603-2:2000(E)

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Printed in Switzerland

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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 part of ISO 6603 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 6603-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 2, *Mechanical properties*.

This second edition cancels and replaces the first edition (ISO 6603-2:1989), which has been technically revised.

ISO 6603 consists of the following parts, under the general title *Plastics — Determination of puncture impact behaviour of rigid plastics*:

— *Part 1: Non-instrumented impact testing*

— *Part 2: Instrumented impact testing*

Annexes A to E of this part of ISO 6603 are for information only.

Plastics — Determination of puncture impact behaviour of rigid plastics —

Part 2: Instrumented impact testing

1 Scope

This part of ISO 6603 specifies a test method for the determination of puncture impact properties of rigid plastics, in the form of flat specimens, using instruments for measuring force and deflection. It is applicable if a force-deflection or force-time diagram, recorded at nominally constant striker velocity, is necessary for detailed characterization of the impact behaviour.

ISO 6603-1 can be used if it is sufficient to characterize the impact behaviour of plastics by a threshold value of impact-failure energy based on many test specimens.

It is not the purpose of this part of ISO 6603 to give an interpretation of the mechanism occurring on every particular point of the force-deflection diagram. These interpretations are a task for scientific research.

NOTE See also clause 1 of ISO 6603-1:2000.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 6603. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 6603 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 2602:1980, *Statistical interpretation of test results — Estimation of the mean — Confidence interval.*

ISO 6603-1:2000, *Plastics — Determination of puncture impact behaviour of rigid plastics — Part 1: Non-instrumented impact testing*.

3 Terms and definitions

For the purposes of this part of ISO 6603, the following terms and definitions apply.

3.1
impact velocity
v_0
velocity of the striker relative to the support at the moment of impact

NOTE Impact velocity is expressed in metres per second (m/s).

3.2
force
F
force exerted by the striker on the test specimen in the direction of impact

NOTE Force is expressed in newtons (N).

3.3
deflection
l
relative displacement between the striker and the specimen support, starting from the first contact between the striker and the test specimen

NOTE Deflection is expressed in millimetres (mm).

3.4
energy
E
energy expended in deforming and penetrating the test specimen up to a deflection l

NOTE 1 Energy is expressed in joules (J).

NOTE 2 Energy is measured as the integral of the force-deflection curve starting from the point of impact up to a deflection l.

3.5
maximum force
F_M
maximum force occurring during the test

See Figures 1 to 4.

NOTE Maximum force is expressed in newtons (N).

3.6
deflection at maximum force
l_M
deflection that occurs at maximum force F_M

See Figures 1 to 4.

NOTE Deflection at maximum force is expressed in millimetres (mm).

3.7
energy to maximum force
E_M
energy expended up to the deflection l_M at maximum force

See Figures 1 to 4.

NOTE Energy to maximum force is expressed in joules (J).

3.8
puncture deflection
l_P
deflection at which the force has dropped to half the maximum force F_M

See Figures 1 to 4 and note to 3.9.

NOTE Puncture deflection is expressed in millimetres (mm).