SLOVENSKI STANDARD
SIST EN ISO 12017:1999

01-maj-1999

Polimerni materiali – Dvo- in triplastne plošče iz polimetilmetakrilata – Preskusne metode (ISO 12017:1995)

Plastics - Poly(methyl methacrylate) double- and triple-skin sheets - Test methods (ISO 12017:1995)

Kunststofffe - Poly(methyl methacrylat) Stegdoppel- und Stegdreifachplatten - Prüfverfahren (ISO 12017:1995)

Plastiques - Plaques de poly(méthacrylate de méthyle) à double et triple paroi - Méthodes d'essai (ISO 12017:1995)

Ta slovenski standard je istoveten z: **EN ISO 12017:1996**

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English version

Plastics - Poly(methyl methacrylate) double- and triple-skin sheets - Test methods (ISO 12017:1995)

Plastiques - Plaques de poly(méthacrylate de méthyle) à double et triple paroi - Méthodes d'essai (ISO 12017:1995)

Kunststoffe - Poly(methyl methacrylat) Stegdoppel- und Stegdreifachplatten - Prüfverfahren (ISO 12017:1995)

This European Standard was approved by CEN on 1996-07-12. 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.

The European Standards exist 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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

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of an identical text or by endorsement, at the latest by January 1997, and conflicting national standards shall be withdrawn at the latest by January 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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 12017:1995 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
ISO 140-2	1991	Acoustics - Measurement of sound insulation in buildings and building elements - Part 2: Determination, verification and application of precision data	EN 20140-2	1993
ISO 140-3	1995	Acoustics - Measurement of sound insulation in buildings and building elements - Part 3: Laboratory measurements of airbone sound insulation of building elements	EN ISO 140-3	1995

INTERNATIONAL STANDARD

ISO 12017

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1995-02-15

Plastics — Poly(methyl methacrylate) double- and triple-skin sheets — Test methods

Plastiques — Plaques de poly(méthacrylate de méthyle) à double et triple paroi — Méthodes d'essai

Reference number
ISO 12017:1995(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.

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 12017 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

Annexes A and B form an integral part of this International Standard.

International Organization for Standardization
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Plastics — Poly(methyl methacrylate) double- and triple-skin sheets — Test methods

1 Scope

This International Standard specifies the test methods for quality control of poly(methyl methacrylate) (PMMA) extruded double- and triple-skin flat sheets, obtained from colourless and coloured transparent, translucent and opaque grades of materials as defined in clause 4.

The minimum sheet width is 600 mm.

The main applications of these sheets are in building and agriculture (greenhouses).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 140-1:1990, *Acoustics — Measurement of sound insulation in buildings and of building elements — Part 1: Requirements for laboratories.*

ISO 140-2:1991, *Acoustics — Measurement of sound insulation in buildings and of building elements — Part 2: Determination, verification and application of precision data.*

ISO 140-3:1978, *Acoustics — Measurement of sound insulation in buildings and of building elements — Part 3: Laboratory measurements of airborne sound insulation of building elements.*

ISO 291:1977, *Plastics — Standard atmospheres for conditioning and testing.*

ISO 2818:1994, *Plastics — Preparation of test specimens by machining.*

ISO 2859-0:—[1], *Sampling procedures for inspection by attributes — Part 0: Introduction to the ISO 2859 attribute sampling system.*

ISO 2859-1:1989, *Sampling procedures for inspection by attributes — Part 1: Sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection.*

ISO 4892-2:1994, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc sources.*

ISO 7823-2:1989, *Plastics — Poly(methyl methacrylate) sheets — Types, dimensions and characteristics — Part 2: Melt-calendered extruded sheets.*

ISO 8302:1991, *Thermal insulation — Determination of steady-state thermal resistance and related properties — Guarded hot plate apparatus.*

ISO/CIE 10526:1991, *CIE standard colorimetric illuminants.*

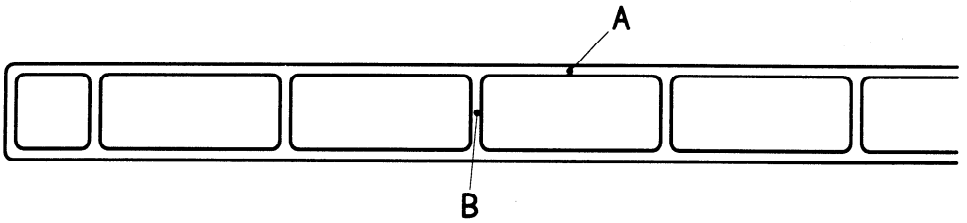
1) To be published.

3 Definitions and abbreviations

For the purposes of this International Standard, the following definitions and abbreviations apply.

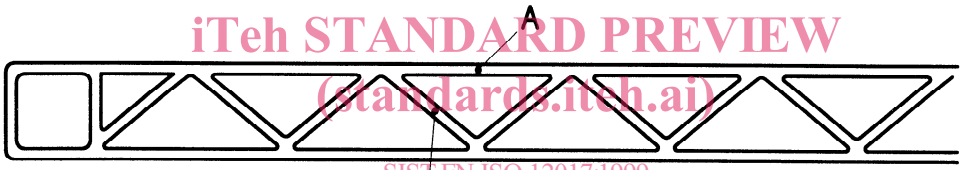
3.1 double-skin sheet (DSS): A sheet having two parallel external skins, differently spaced and jointed by ribs of different shapes (see examples in figures 1 and 2).

3.2 triple-skin sheet (TSS): A sheet having two external and an internal skin which is parallel and properly spaced by ribs from the external one (see an example in figure 3).



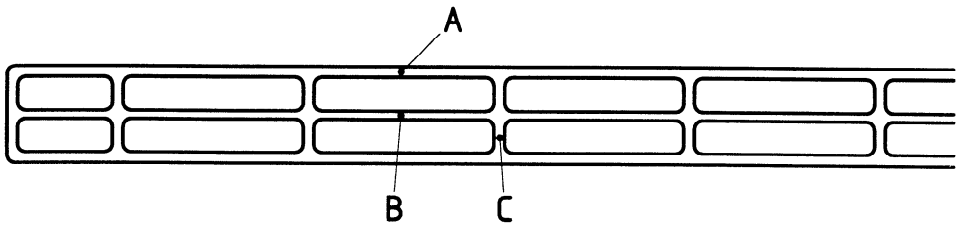
A skin
B rib

Figure 1 — Example of a double-skin sheet



A skin
B rib

Figure 2 — Example of a double-skin sheet



A skin
B internal skin
C rib

Figure 3 — Example of a triple-skin sheet

4 Composition of materials

This International Standard applies to PMMA homopolymers and to copolymers of methyl methacrylate containing at least 80 % (*m/m*) of MMA and not more than 20 % (*m/m*) of acrylic ester or other suitable monomers.

Such materials may be unmodified or may contain lubricants, processing aids, UV absorbers, pigments and colorants.

5 Characteristics

5.1 Main characteristics of DSS and TSS

5.1.1 Total thickness

5.1.2 Total width

5.1.3 Skin thickness

5.1.4 Mass per unit area

5.1.5 Rib thickness

5.1.6 Rib geometry (spacing, angle)

5.2 Profile

The profile of a sheet is defined collectively by the characteristics specified in 5.1 and examples are shown in figures 4 and 5.

5.3 Other characteristics of DSS and TSS

5.3.1 Curvature

5.3.2 Curvature of edge in extrusion direction

5.3.3 Optical properties

5.3.4 Thermal resistance

5.3.5 Bending properties

5.3.6 Sound insulation

5.3.7 Fire resistance

5.3.8 Weatherability

5.3.9 Chemical resistance to gaskets and sealants

5.3.10 Internal stress

5.3.11 Condensate formation

6 Test methods

6.1 General

6.1.1 Test conditions

Make all measurements under the standard conditions of 23 °C ± 2 °C and (50 ± 5) % relative humidity (refer to ISO 291). For measurements made under local ambient conditions, due allowance shall be made for dimensional changes due to the differences in temperature and relative humidity.

6.1.2 Sampling

The sampling procedure shall be agreed upon between the interested parties. The procedures described in ISO 2859-0 and ISO 2859-1 are widely accepted and frequently used. Hence these are recommended for sampling.

The test report shall include the following information:

a) a reference to this International Standard;

b) all details necessary to identify the sample used for the tests.