



SLOVENSKI STANDARD
SIST EN ISO 11833-2:2006
01-julij-2006

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Plastics - Unplasticized poly(vinyl chloride) sheets - Types, dimensions and characteristics - Part 2: Sheets of thickness less than 1 mm (ISO 11833-2:1998)

Kunststoffe - Weichmacherfreie Polyvinylchloridtafeln - Typen, Maße und Eigenschaften - Teil 2: Tafeln mit einer geringeren Dicke als 1 mm (ISO 11833-2:1998)

ITeH STANDARD PREVIEW

Plastiques - Feuilles en poly(chlorure de vinyle) non plastifié - Types, dimensions et caractéristiques - Partie 2: Feuilles et films d'épaisseur inférieure a 1 mm (ISO 11833-2:1998)

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Ta slovenski standard je istoveten z: EN ISO 11833-2:2006

ICS:

83.140.10

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en

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ICS 83.140.10

English Version

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geringeren Dicke als 1 mm (ISO 11833-2:1998)

This European Standard was approved by CEN on 16 March 2006.

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, 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.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of ISO 11833-2:1998 has been prepared by Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 11833-2:2006 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 October 2006, and conflicting national standards shall be withdrawn at the latest by October 2006.

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

Endorsement notice
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The text of ISO 11833-2:1998 has been approved by CEN as EN ISO 11833-2:2006 without any modifications.

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Plastics — Unplasticized poly(vinyl chloride) sheets — Types, dimensions and characteristics —

Part 2:

Sheets of thickness less than 1 mm

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Plastiques — Feuilles en poly(chlorure de vinyle) non plastifié — Types, dimensions et caractéristiques

Partie 2: Feuilles et films d'épaisseur inférieure à 1 mm

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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.

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 11833-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

ISO 11833 consists of the following parts under the general title *Unplasticized poly(vinyl chloride) sheets — Types, dimensions and characteristics*:

- Part 1: *Sheets of thickness not less than 1 mm*
- Part 2: *Sheets of thickness less than 1 mm*

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Plastics — Unplasticized poly(vinyl chloride) sheets — Types, dimensions and characteristics —

Part 2:

Sheets of thickness less than 1 mm

1 Scope

1.1 This part of ISO 11833 specifies requirements for sheets and films of unplasticized poly(vinyl chloride) (PVC-U) and the test methods to be used to measure the required values.

1.2 It applies only to sheets of thickness less than 1,0 mm.

1.3 It does not cover thermoshrinkable or biaxially stretched PVC-U sheets and films.

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2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 11833. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 11833 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 75-2:1993, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite.*

ISO 291:1997, *Plastics — Standard atmospheres for conditioning and testing.*

ISO 306:1994, *Plastics — Thermoplastic materials — Determination of Vicat softening temperature (VST).*

ISO 527-3:1995, *Plastics — Determination of tensile properties — Part 3: Test conditions for films and sheets.*

ISO 1163-1:1995, *Plastics — Unplasticized poly(vinyl chloride) (PVC-U) moulding and extrusion materials — Part 1: Designation system and basis for specifications.*

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

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

ISO 8256:1990, *Plastics — Determination of tensile-impact strength.*

ISO 11501:1995, *Plastics — Film and sheeting — Determination of dimensional change on heating.*

1) To be published. (Revision of ISO 2859-1:1989)

3 Material

Sheets shall be fabricated from unplasticized PVC compounds as defined in ISO 1163-1:1995, subclause 1.3. Compounds may contain additives such as stabilizers, lubricants, processing aids, impact modifiers, flame retardants and colourants. Compounds and additives of unknown identity and composition shall not be used for the processing of sheets.

NOTE — Legal considerations may cause a specific choice of compound.

4 Classification

Sheets are classified into four groups (three of which are subdivided into two classes) by the numerical values of the two most important properties, i.e. the tensile impact strength and the Vicat softening temperature (see table 3).

5 Requirements

5.1 Appearance

The surface shall be free of noticeable flaws, cracks, mottling, voids, bubbles, impurities and other defects which are not acceptable for the application envisaged. The sheet shall have a smooth surface, except for embossed sheets which shall have a uniform pattern. Any further requirements concerning appearance shall be agreed between the interested parties.

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5.2 Colour

Colourants shall be distributed uniformly throughout the material. Admissible differences in colour within a sheet and amongst sheets shall be agreed between the interested parties as required.

5.3 Dimensions

5.3.1 Length, width and rectangularity

The length and width of sheets shall be agreed between the interested parties. The tolerances on the dimensions and the rectangularity shall be as specified in table 1.

Table 1 — Tolerances on length, width and rectangularity

Dimensions in millimetres

Dimension/rectangularity		Tolerance
Length	Flat sheet	+ 20 0
	Rolled sheet	Minus not accepted
Width		+ 5 0
Rectangularity	Flat sheet	$\Delta l \leq 4$ mm per 1 000 mm of side

5.3.2 Thickness

The tolerance on the thickness shall be as specified in table 2.

Table 2 — Tolerances on thickness

Nominal thickness, d mm	Tolerance %
$d \leq 0,03$	± 40
$0,03 < d \leq 0,05$	± 30
$0,05 < d \leq 0,1$	± 20
$0,1 < d \leq 0,3$	± 15
$0,3 < d \leq 0,5$	± 13
$0,5 < d < 1,0$	± 10

5.4 Properties

The properties of sheets of each group and class shall be as specified in table 3.

Table 3 — Properties of sheets

Property	Test method	Unit	Requirements								See subclause
			Group 1		Group 2		Group 3		Group 4		
			Class 1	Class 2	Class 1	Class 2	Class 1	Class 2			
Tensile stress at yield	ISO 527-3 Type 1B 50 mm/min	MPa	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	6.4.1	
Nominal strain at break	ISO 527-3 Type 1B 50 mm/min	%	≥ 20	≥ 20	≥ 20	≥ 20	≥ 20	≥ 20	≥ 20	6.4.1	
Tensile impact strength	ISO 8256 Method A Type 3	kJ/m ²	—	—	≥ 300	≥ 300	≥ 400	≥ 400	—	6.4.2	
Vicat softening temperature	ISO 306 Method B	°C	≥ 60	≥ 70	≥ 60	≥ 70	≥ 60	≥ 70	≥ 90	6.5	

The requirements for the optional properties given in table 4 shall be agreed between the interested parties as required.

Table 4 — Optional properties

Property	Test method	Unit
Temperature of deflection under load	ISO 75-2 Method A	°C
Dimensional change on heating	ISO 11501	%