



SLOVENSKI STANDARD
SIST EN ISO 1133:2000
01-maj-2000

Določa način določanja toplotne masne tokovne hitrosti (MFR) in toplotne volumne tokovne hitrosti (MVR) termoplastov (ISO 1133:1997).

Plastics - Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics (ISO 1133:1997)

Kunststoffe - Bestimmung der Schmelze-Masseflussrate (MFR) und der Schmelze-Volumenflussrate (MVR) von Thermoplasten (ISO 1133:1997)

Plastiques - Détermination de l'indice de fluidité à chaud des thermoplastiques, en masse (MFR) et en volume (MVR) (ISO 1133:1997)

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Ta slovenski standard je istoveten z: **EN ISO 1133:1999**

ICS:

83.080.20 Plastomeri Thermoplastic materials

SIST EN ISO 1133:2000 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 1133

May 1999

ICS 83.080.20

English version

Plastics - Determination of the melt mass-flow rate (MFR) and
the melt volume-flow rate (MVR) of thermoplastics (ISO
1133:1997)

Plastiques - Détermination de l'indice de fluidité à chaud
des thermoplastiques, en masse (MFR) et en volume
(MVR) (ISO 1133:1997)

Kunststoffe - Bestimmung der Schmelze-Massefließrate
(MFR) und der Schmelze-Volumenfließrate (MVR) von
Thermoplasten (ISO 1133:1997)

This European Standard was approved by CEN on 16 April 1999.

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, 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

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

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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 November 1999, and conflicting national standards shall be withdrawn at the latest by November 1999.

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.

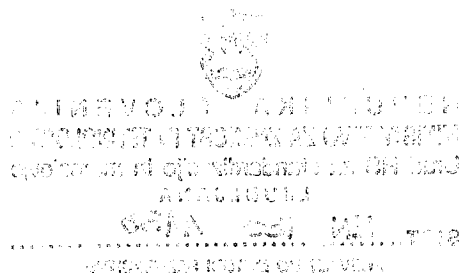
Endorsement notice

The text of the International Standard ISO 1133:1997 has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 1873-1	1995	Plastics - Polypropylene (PP) moulding and extrusion materials - Part 1: Designation system and basis for specifications	EN ISO 1873-1	1995
ISO 1622-1	1994	Plastics - Polystyrene (PS) moulding and extrusion materials - Part 1: Designation system and basis for specifications	EN ISO 1622-1	1999
ISO 2580-1	1997	Plastics - Acrylonitrile/butadiene/styrene (ABS) moulding and extrusion materials - Part 1: Designation system and basis for specifications	EN ISO 2580-1	1999
ISO 2897-1	1997	Plastics - Impact-resistant polystyrene (PS-I) moulding and extrusion materials - Part 1: Designation system and basis for specifications	EN ISO 2897-1	1999
ISO 4613-1	1993	Plastics - Ethylene/vinyl acetate (E/VAC) moulding and extrusion materials - Part 1: Designation and specification	EN ISO 4613-1	1999
ISO 4894-1	1997	Plastics - Styrene/acrylonitrile (SAN) moulding and extrusion materials - Part 1: Designation system and basis for specifications	EN ISO 4894-1	1999
ISO 6402-1	1997	Plastics - Impact-resistant acrylonitrile/styrene (ASA, AES, ACS) moulding and extrusion materials, excluding butadiene-modified materials - Part 1: Designation system and basis for specifications	EN ISO 6402-1	1999
ISO 6507-1	1997	Metallic materials - Vickers hardness test - Part 1: Test method	EN ISO 6507-1	1997
ISO 8986-1	1993	Plastics - Polybutene (PB) moulding and extrusion materials - Part 1: Designation system and basis for specifications	EN ISO 8986-1	1999
ISO 10366-1	1993	Plastics - Methyl methacrylate/acrylonitrile/butadiene/styrene (MABS) moulding and extrusion materials - Part 1: Designation system and basis for specifications	EN ISO 10366-1	1999

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INTERNATIONAL
STANDARD

ISO
1133

Third edition
1997-01-15

**Plastics — Determination of the melt
mass-flow rate (MFR) and the melt
volume-flow rate (MVR) of thermoplastics**
iTeh STANDARD PREVIEW

(standards.iteh.ai)

*Plastiques — Détermination de l'indice de fluidité à chaud
des thermoplastiques, en masse (MFR) et en volume (MVR)*

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Reference number
ISO 1133:1997(E)

ISO 1133:1997(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 1133 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties*.

This third edition cancels and replaces the second edition (ISO 1133:1991), which has been technically revised to include the flow rate ratio (FRR). In addition the text has been revised to improve clarity.

Annex A forms an integral part of this International Standard. Annex B is for information only.

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International Organization for Standardization
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Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics

1 Scope

1.1 This International Standard specifies a method for the determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastic materials under specified conditions of temperature and load. Normally, the test conditions for measurement of melt flow rate are specified in the material standard with a reference to this International Standard. The test conditions normally used for thermoplastics are listed in annexes A and B. The melt volume-flow rate will normally be found useful when comparing filled and unfilled thermoplastics. The melt flow rate can now be determined by automatic measurement provided the melt density at the test temperature is known.

This method is not applicable to thermoplastics for which the rheological behaviour is affected by phenomena such as hydrolysis, condensation or crosslinking.

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1.2 The melt mass-flow rate and melt volume-flow rate of thermoplastics are dependent on the rate of shear. The rates of shear in this test are much smaller than those used under normal conditions of fabrication, and therefore data obtained by this method for various thermoplastics may not always correlate with their behaviour in actual use. Both methods are useful in quality control.

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 468:1982, *Surface roughness — Parameters, their values and general rules for specifying requirement.*

ISO 1622-1:1994, *Plastics — Polystyrene (PS) moulding and extrusion materials — Part 1: Designation system and basis for specifications.*

ISO 1872-1:1993, *Plastics — Polyethylene (PE) moulding and extrusion materials — Part 1: Designation system and basis for specifications.*

ISO 1873-1:1995, *Plastics — Polypropylene (PP) moulding and extrusion materials — Part 1: Designation system and basis for specifications.*

ISO 2580-1:1990, *Plastics — Acrylonitrile/butadiene/styrene (ABS) moulding and extrusion materials — Part 1: Designation.*