Plastics - Polyoxymethylene (POM) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 29988-1:2019)



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 29988-1:2019 sisaldab Euroopa standardi EN ISO 29988-1:2019 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 29988-1:2019 consists of the English text of the European standard EN ISO 29988-1:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.12.2019.	Date of Availability of the European standard is 18.12.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile <u>standardiosakond@evs.ee</u>.

ICS 83.080.20

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega: Koduleht <u>www.evs.ee</u>; telefon 605 5050; e-post <u>info@evs.ee</u>

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 29988-1

December 2019

ICS 83.080.20

Supersedes EN ISO 29988-1:2018

English Version

Plastics - Polyoxymethylene (POM) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 29988-1:2019)

Plastiques - Matériaux à base de polyoxyméthylène (POM) pour moulage et extrusion - Partie 1: Système de désignation et base de spécification (ISO 29988-1:2019)

Kunststoffe - Polyoxymethylen (POM)-Werkstoffe - Teil 1: Bezeichnungssystem und Basis für Spezifikationen (ISO 29988-1:2019)

This European Standard was approved by CEN on 11 November 2019.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 29988-1:2019) 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 NBN.

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 2020, and conflicting national standards shall be withdrawn at the latest by June 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 29988-1:2018.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 29988-1:2019 has been approved by CEN as EN ISO 29988-1:2019 without any modification.

Co	ntents	Page
For	eword	iv
1	Scope	
2	Normative references	1
3	Terms and definitions	1
4	Designation and specification system	2
	4.1 General	2
	4.2 Data block 1	
	4.4 Data block 3	3
	4.5 Data block 4	
	4.5.1 delieral	
	4.5.3 Tensile modulus	
_	4.6 Data block 5	
5	Examples of designations 5.1 Designation only 5.1	
	5.2 Designation transformed into a specification	6
	5.3 Designation transformed into a specification for polymer mixture case	
Bib	liography	8
	Tion of the second seco	
@ IC/	0.2010 All vights reserved	;;;

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

This second edition cancels and replaces the first edition (ISO 29988-1:2018), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

- 4.5.2 and 5.3 have been revised.

A list of all parts in the ISO 29988 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Plastics — Polyoxymethylene (POM) moulding and extrusion materials —

Part 1:

Designation system and basis for specifications

1 Scope

This document establishes a system of designation for polyoxymethylene (POM) thermoplastic material, which can be used as the basis for specifications.

NOTE Polyoxymethylene materials are thermoplastic materials composed principally of long-chain synthetic homopolymers and copolymers of formaldehyde. The repeating unit in the molecular chain is – $\mathrm{CH}_2\mathrm{O}$ – as an integral part of the main polymer chain resulting from polymerization of formaldehyde.

The types of polyoxymethylene plastic are differentiated from each other by a classification system based on appropriate levels of the following designatory properties:

- a) melt mass-flow rate or melt volume-flow rate;
- b) tensile modulus, and on information about basic polymer parameters, intended application, method of processing, important properties, additives, colorants, fillers and reinforcing materials.

This document is applicable to all polyoxymethylene homopolymers and to copolymers of polyoxymethylene and blends of polymers containing polyoxymethylene. It applies to materials ready for normal use in the form of powder, granules or pellets and to materials unmodified and modified by colorants, additives, fillers, etc. It is not intended to imply that materials having the same designation necessarily give the same performance.

This document does not provide engineering data, performance data or data on processing conditions which can be required to specify materials for particular end-use applications. If such additional properties are required, they are to be determined in accordance with the test methods specified by the relevant International Standard.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1043-1, Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics

ISO 1133-1, Plastics — Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics — Part 1: Standard method

ISO 29988-2, Plastics — Polyoxymethylene (POM) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties

3 Terms and definitions

No terms and definitions are listed in this document.