Plastics - Polystyrene (PS) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 24022-1:2020)



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 24022-1:2020 sisaldab Euroopa standardi EN ISO 24022-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 24022-1:2020 consists of the English text of the European standard EN ISO 24022-1:2020.		
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 16.09.2020.	Date of Availability of the European standard is 16.09.2020.		
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 www.evs.ee; telefon 605 5050; e-post info@evs.ee

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

September 2020

EN ISO 24022-1

ICS 83.080.20

Supersedes EN ISO 1622-1:2012

English Version

Plastics - Polystyrene (PS) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 24022-1:2020)

Plastiques - Matériaux à base de polystyrène (PS) pour moulage et extrusion - Partie 1: Système de désignation et base de spécifications (ISO 24022-1:2020) Kunststoffe - Polystyrol(PS)-Werkstoffe - Teil 1: Bezeichnungssystem und Basis für Spezifikationen (ISO 24022-1:2020)

This European Standard was approved by CEN on 22 August 2020.

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 24022-1:2020) 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 March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

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 1622-1:2012.

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 24022-1:2020 has been approved by CEN as EN ISO 24022-1:2020 without any modification.

CO	ntents	Page
Fore	eword	iv
1	Scope	
2	Normative references	1
3	Terms and definitions	2
4	Designation system	2
	4.1 General 4.2 Data block 1 4.3 Data block 2 4.4 Data block 3 4.5 Data block 4 4.5.1 General 4.5.2 Vicat softening temperature 4.5.3 Melt mass-flow rate	2 2 3 4 4 4 4
_	4.6 Data block 5 Examples of designations	
5	5.1 Example 1 5.2 Example 2	5
@ ISC	0 2020 – All rights reserved	iii

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*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition of ISO 24022-1 cancels and replaces ISO 1622-1:2012, which has been technically revised to introduce a new designation system.

The main changes compared to the previous edition are as follows:

- in <u>Clause 2</u>, reference to ISO 1622-2 has been replaced by ISO 24022-2;
- Clause 3 has been added and subsequent clauses have been renumbered.

A list of all parts in the ISO 24022 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 — Polystyrene (PS) moulding and extrusion materials —

Part 1:

Designation system and basis for specifications

1 Scope

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

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

- a) Vicat softening temperature, and
- b) melt mass-flow rate.

and on information about the intended application and/or method of processing, important properties, additives and colorants, fillers and reinforcing materials.

This document is applicable to all amorphous polystyrene homopolymers. It applies to materials ready for normal use, unmodified or modified by colorants, additives, fillers, etc.

This document does not apply to expanded polystyrene, styrene copolymers, homopolymers of substituted styrene or those modified with other polymers such as elastomers.

It is not intended to imply that materials having the same designation give necessarily the same performance. This document does not provide engineering data, performance data or data on processing conditions which might be required to specify a material for a particular application and/or method of processing.

If such additional properties are required, they are determined in accordance with the test methods specified in ISO 24022-2, if suitable.

In order to specify a thermoplastic material for a particular application or to ensure reproducible processing, additional requirements can be given in data block 5 (see 4.6).

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 1043-2, Plastics — Symbols and abbreviated terms — Part 2: Fillers and reinforcing materials

ISO 24022-2, Plastics — Polystyrene (PS) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties