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**Plastics — Polystyrene (PS) moulding  
and extrusion materials —**

**Part 1:  
Designation system and basis for  
specifications**

*Plastiques — Matériaux à base de polystyrène (PS) pour moulage et  
extrusion —*

*Partie 1: Système de désignation et base de spécifications*



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# Contents

Page

<b>Foreword</b>	<b>iv</b>
<b>1 Scope</b>	<b>1</b>
<b>2 Normative references</b>	<b>1</b>
<b>3 Terms and definitions</b>	<b>2</b>
<b>4 Designation system</b>	<b>2</b>
4.1 General	2
4.2 Data block 1	2
4.3 Data block 2	2
4.4 Data block 3	3
4.5 Data block 4	4
4.5.1 General	4
4.5.2 Vicat softening temperature	4
4.5.3 Melt mass-flow rate	4
4.6 Data block 5	5
<b>5 Examples of designations</b>	<b>5</b>
5.1 Example 1	5
5.2 Example 2	6

## 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](http://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](http://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](http://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 [Clause 2](#), 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](http://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*