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**Plastics — Poly(phenylene ether)  
(PPE) moulding and extrusion  
materials —**

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

*Plastiques — Matériaux à base de poly(phénylène éther) (PPE) pour  
moulage et extrusion —*

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



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ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

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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.

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 on 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 the following URL: [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*.

This first edition of ISO 20557-1 cancels and replaces ISO 28941-1:2008, which has been technically revised to introduce a new designation system.

The revised designation system is published under a new ISO number, as many existing documents refer to ISO 28941-1. If the existing ISO 28941-1 would be replaced by the new designation system, these documents would refer to the incorrect designation system.

The new designation system according to ISO 20557-1 is intended to replace gradually any designation system according to ISO 28941-1.

A list of all parts in the ISO 20557 series can be found on the ISO website.

# Plastics — Poly(phenylene ether) (PPE) moulding and extrusion materials —

## Part 1: Designation system and basis for specifications

### 1 Scope

This document establishes a system of designation for poly(phenylene ether) (PPE) thermoplastic materials, which can be used as the basis for specifications.

The types of poly(phenylene ether) (PPE) materials are differentiated from each other by a classification system based on appropriate levels of the designatory properties:

- a) temperature of deflection under load;
- b) melt volume-flow rate;
- c) Charpy notched impact strength;
- d) flammability;

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

This document is applicable to all PPE materials, including those modified with polystyrene or polyamide or other materials.

It applies to materials ready for normal use in the form of powder, granules or pellets and to materials unmodified or modified by colorants, additives, fillers, etc.

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 can be required to specify a material for a particular application and/or method of processing. If such additional properties are required, they are intended to be determined in accordance with the test methods specified in ISO 20557-2, if suitable.

In order to specify a thermoplastic material for a particular application or to ensure reproducible processing, the requirements are given in data block 5 (see [4.1](#)).

### 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 20557-2, *Plastics — Poly(phenylene ether) (PPE) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties*