
**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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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 15103 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15103-1 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

ISO 15103 consists of the following parts, under the general title *Plastics — Poly(phenylene ether) (PPE) moulding and extrusion materials*:

- Part 1: Designation system and basis for specifications
- Part 2: Preparation of test specimens and determination of properties

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

Part 1:

Designation system and basis for specifications

1 Scope

1.1 This part of ISO 15103 establishes a system of designation for PPE thermoplastic materials, which may be used as the basis for specifications.

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

- a) temperature of deflection under load
- b) Charpy notched impact strength
- c) flammability

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

1.3 This part of ISO 15103 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.

1.4 It is not intended to imply that materials having the same designation give necessarily the same performance. This part of ISO 15103 does not provide engineering data, performance data or data on processing conditions which may be required to specify a material for a particular application and/or method of processing.

If such additional properties are required, they shall be determined in accordance with the test methods specified in part 2 of this International Standard, if suitable.

1.5 In order to specify a thermoplastic material for a particular application or to ensure reproducible processing, additional requirements may be given in data block 5 (see 3.1).

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 15103. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 15103 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 1043-1:1997, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*.

ISO 1043-2:—¹⁾, *Plastics — Symbols and abbreviated terms — Part 2: Fillers and reinforcing materials*.

ISO 15103-2:2000, *Plastics — Poly(phenylene ether) (PPE) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties*.

3 Designation system

3.1 General

The designation system for thermoplastics is based on the following standardized pattern:

Designation						
Description block (optional)	Identity block					
	International Standard number block	Individual-item block				
		Data block 1	Data block 2	Data block 3	Data block 4	Data block 5

The designation consists of an optional description block, reading “Thermoplastics”, and an identity block comprising the International Standard number and an individual-item block. For unambiguous coding, the individual-item block is subdivided into 5 data blocks comprising the following information:

- Data block 1: Identification of the plastic by its symbol PPE in accordance with ISO 1043-1 and information about the composition of the polymer (see 3.2).
- Data block 2: Position 1: intended application or method of processing (see 3.3).
Positions 2 to 8: important properties, additives and supplementary information (see 3.3).
- Data block 3: Designatory properties (see 3.4).
- Data block 4: Fillers or reinforcing materials and their nominal content (see 3.5).
- Data block 5: For the purposes of specifications, a fifth data block may be added containing additional information.

The first character of the individual-item block shall be a hyphen. The data blocks shall be separated from each other by commas.

If a data block is not used, this shall be indicated by doubling the separation sign, i.e. by two commas (,,).

3.2 Data block 1

In this data block, after the hyphen, poly(phenylene ether) materials are identified by the symbol PPE, in accordance with ISO 1043-1, followed by a hyphen and a code-number giving additional information on the polymer, as specified in Table 1.

¹⁾ To be published. (Revision of ISO 1043-2:1988)