

# Symbols for plastics and rubber materials —

## Part 1: Schedule for symbols for plastics

# Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Plastics and Rubber Standards Policy Committee (PRM/-) to Technical Committee PRM/10, upon which the following bodies were represented:

- British Plastics Federation
- Chief and Assistant Chief Fire Officers' Association
- Department of the Environment (Building Research Establishment)
- Department of Trade and Industry (Laboratory of the Government Chemist)
- Malaysian Rubber Producers' Research Association
- Ministry of Defence
- Plastics and Rubber Institute

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## National foreword

This Part of BS 3502 has been prepared under the direction of the Plastics and Rubber Standards Policy Committee and is identical with ISO 1043-1:1987 “*Plastics — Symbols — Part 1: Basic polymers and their special characteristics*”, published by the International Organization for Standardization (ISO). It supersedes BS 3502-1:1978, which is withdrawn.

The other two Parts of BS 3502 will be as follows:

- *Part 2: “Schedule for symbols for rubbers”, superseding BS 3502-3:1978, and related to ISO 1629:1987 “Rubber and latices — Nomenclature”;*
- *Part 3: “Schedule for compounding ingredients”, superseding BS 4589:1970, and related to ISO 1043 “Plastics — Symbols” Part 2:1988 “Fillers and reinforcing materials”, Part 3:1988 “Plasticizers”, and a new edition of ISO 6472 “Rubber compounding ingredients — Abbreviations”, to be published shortly.*

### Cross-references

Since publication of ISO 1043-1, the Parts 2 and 3 referred to as being at the stage of draft have been published, both in 1988. They will both be incorporated in a new edition of BS 3502-3.

BS 3502-2:1991 is related to ISO 1629:1987.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

**Compliance with a British Standard does not of itself confer immunity from legal obligations.**

### Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

## 1 Scope and field of application

This part of ISO 1043 provides uniform symbols for terms relating to plastics. It includes only those symbols that have come into established use, and its aim is both to prevent the occurrence of more than one symbol for a given plastics term, and to prevent the interpretation of more than one meaning for a given symbol.

NOTE For symbols for fillers and reinforcing materials, see ISO 1043-2, and for symbols for plasticizers, see ISO 1043-3. Symbols for rubber and latices are given in ISO 1629.

## 2 References

ISO 1043, *Plastics — Symbols — Part 2: Fillers and reinforcing materials*<sup>1)</sup> — *Part 3: Plasticizers*.<sup>1)</sup>

ISO 1629, *Rubbers and latices — Nomenclature*.

## 3 Use of the symbols

**3.1** Symbols for homopolymeric and natural polymeric materials are given in clause 4, those for copolymeric materials in clause 5, and symbols for special characteristics in clause 6. Examples of the use of symbols are given in clause 7, and guidance for the preparation of new symbols in Annex A. Reference lists of the symbols used are given in Annex B.

**3.2** To distinguish the essential molecular characteristics within a given generic type of plastics material, additional symbols, with rules for their use, are provided. The use of symbols for describing properties that can only be ascertained subjectively should be avoided since this can lead to confusion.

**3.3** The symbols are primarily intended to be a convenient shorthand for chemical names in publications and other written matter, and are not intended for the selection of materials. They should also be used for indicating simply the type of basic polymer in materials and products, e.g. ABS moulding material, PA film, PE sheeting, PVC pipe.

**3.4** Only capital letters shall be used.

**3.5** The first appearance of the symbols in texts shall be enclosed in parentheses and shall be preceded by the term written in full.

**3.6** The rules of the International Union of Pure and Applied Chemistry (IUPAC) for source-based names of polymers specify that, when “poly” is followed by more than one word, enclosing marks are used. This practice is followed in this part of ISO 1043, but in common usage the enclosing marks are often omitted.

**3.7** No attempt is made formally to systematize a shorthand terminology of polymers. Terminology and formulae designations for scientific literature in the field of natural and synthetic polymers are elaborated by the Macromolecular Nomenclature Commission of IUPAC. The symbols published by this Commission are the same as in this part of ISO 1043, as far as frequently used polymers are concerned.

## 4 Symbols for homopolymeric and natural polymeric materials

| Symbol | Material                     |
|--------|------------------------------|
| CA     | Cellulose acetate            |
| CAB    | Cellulose acetate butyrate   |
| CAP    | Cellulose acetate propionate |
| CF     | Cresol-formaldehyde          |
| CMC    | Carboxymethyl cellulose      |
| CN     | Cellulose nitrate            |
| CP     | Cellulose propionate         |
| CTA    | Cellulose triacetate         |
| EC     | Ethyl cellulose              |
| EP     | Epoxide; Epoxy               |
| FF     | Furane-formaldehyde          |
| MC     | Methyl cellulose             |

<sup>1)</sup> At present at the stage of draft.