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Plast – Symboler och förkortningar –
Del 1: Grundpolymerer och deras speciella egenskaper
(ISO 1043-1:2001)

Plastics – Symbols and abbreviated terms –
Part 1: Basic polymers and their special characteristics
(ISO 1043-1:2001)

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English version

Plastics - Symbols and abbreviated terms - Part 1: Basic polymers and their special characteristics (ISO 1043-1:2001)

Plastiques - Symboles et termes abrégés - Partie 1: Polymères de base et leurs caractéristiques spéciales (ISO 1043-1:2001)

Kunststoffe - Kennbuchstaben und Kurzbezeichnungen - Teil 1: Basis-Polymere und ihre besonderen Eigenschaften (ISO 1043-1:2001)

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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 Management Centre has the same status as the official versions.

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Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (ISO 1043-1:2001) 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 IBN.

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of an identical text or by endorsement, at the latest by June 2002, and conflicting national standards shall be withdrawn at the latest by June 2002.

This document supersedes EN ISO 1043-1:1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 1043-1:2001 has been approved by CEN as a European Standard without any modifications.

NOTE Normative references to International Standards are listed in annex ZA (normative).

Plastics — Symbols and abbreviated terms —

Part 1:
Basic polymers and their special characteristics

1 Scope

This part of ISO 1043 provides abbreviated terms for the basic polymers used in plastics, symbols for components of these terms, and symbols for special characteristics of plastics. It includes only those abbreviated terms that have come into established use and its aim is both to prevent the occurrence of more than one abbreviated term for a given plastic and to prevent a given abbreviated term being interpreted in more than one way.

NOTE 1 For symbols for fillers and reinforcing materials, see ISO 1043-2, for plasticizers see ISO 1043-3, and for flame retardants see ISO 1043-4. Nomenclature for rubbers and latices is given in ISO 1629, *Rubber and latices — Nomenclature.* Nomenclature for thermoplastic elastomers is given in ISO 18064, *Thermoplastic elastomers — Abbreviated terms and nomenclature* (to be published).

NOTE 2 Guidance for the preparation of new abbreviated terms is given in informative annex A, and reference lists of symbols for the components of plastics terms used to form the abbreviated terms for plastics are given in informative annex B.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this part of ISO 1043. 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 1043 are encouraged to investigate the possibility of applying the most recent edition of the normative document 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 472, *Plastics — Vocabulary*

3 Terms and definitions

For the purposes of this part of ISO 1043, the terms and definitions given in ISO 472 and the following term and definition apply.

3.1
abbreviated term
term resulting from the omission of any part of a term while designating the same concept

4 Use of symbols and abbreviated terms

4.1 Abbreviated terms for homopolymeric, copolymeric and natural polymeric materials are given in clause 5, and symbols for special characteristics are given in clause 6. Examples of the use of abbreviated terms are given in clause 7.

4.2 To distinguish the essential molecular characteristics within a given generic type of plastics material, additional symbols, with guidance 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.

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

4.4 Only capital letters shall be used for symbols and abbreviated terms.

4.5 The first appearance of an abbreviated term in a text shall be enclosed in parentheses and shall be preceded by the term written in full.

4.6 The rules of the International Union of Pure and Applied Chemistry (IUPAC) for source-based names of polymers recommend to use brackets when “poly” is followed by more than one word, in order to avoid ambiguity. This practice is followed in this part of ISO 1043, but in common usage the enclosing marks are often omitted.

4.7 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 have been elaborated by the Commission on Macromolecular Nomenclature of IUPAC. Any abbreviated terms published by this Commission are, in general, the same as in this part of ISO 1043.

5 Abbreviated terms for homopolymeric, copolymeric and natural polymeric materials

For some plastics materials additional abbreviated terms that are often being used are included in this table. In each case the abbreviated terms given in the left column are the preferred abbreviated terms. Other abbreviated terms in use should be transformed to the preferred abbreviated terms in the foreseeable future.

Abbreviated term	Term for material
AB	acrylonitrile-butadiene plastic
ABAK	acrylonitrile-butadiene-acrylate plastic; preferred term for **ABA**
ABS	acrylonitrile-butadiene-styrene plastic
ACS	acrylonitrile-chlorinated polyethylene-styrene; preferred term for **ACPES**
AEPDS	acrylonitrile-(ethylene-propylene-diene)-styrene plastic; preferred term for **AEPDMS**
AMMA	acrylonitrile-methyl methacrylate plastic
ASA	acrylonitrile-styrene-acrylate plastic
CA	cellulose acetate
CAB	cellulose acetate butyrate
CAP	cellulose acetate propionate
CEF	cellulose formaldehyde
CF	cresol-formaldehyde resin
CMC	carboxymethyl cellulose
CN	cellulose nitrate
COC	cycloolefin copolymer
CP	cellulose propionate
CTA	cellulose triacetate
EAA	ethylene-acrylic acid plastic
EBAK	ethylene-butyl acrylate plastic; preferred term for **EBA**
EC	ethyl cellulose
EEAK	ethylene-ethyl acrylate plastic; preferred term for **EEA**
EMA	ethylene-methacrylic acid plastic
EP	epoxide; epoxy resin or plastic
E/P	ethylene-propylene plastic; preferred term for **EPM**
ETFE	ethylene-tetrafluoroethylene plastic
EVAC	ethylene-vinyl acetate plastic; preferred term for **EVA**

EVOH	ethylene-vinyl alcohol plastic
FEP	perfluoro(ethylene-propylene) plastic; preferred term for **PFEP**
FF	furan-formaldehyde resin
LCP	liquid-crystal polymer
MABS	methyl methacrylate-acrylonitrile-butadiene-styrene plastic
MBS	methyl methacrylate-butadiene-styrene plastic
MC	methyl cellulose
MF	melamine-formaldehyde resin
MP	melamine-phenol resin
MSAN	α-methylstyrene-acrylonitrile plastic
PA	polyamide
PAA	poly(acrylic acid)
PAEK	polyaryletherketone
PAI	polyamidimide
PAK	polyacrylate
PAN	polyacrylonitrile
PAR	polyarylate
PARA	poly(aryl amide)
PB	polybutene
PBAK	poly(butyl acrylate)
PBD	1,2-polybutadiene
PBN	poly(butylene naphthalate)
PBT	poly(butylene terephthalate)
PC	polycarbonate
PCCE	poly(cyclohexylene dimethylene cyclohexanedicarboxylate)
PCL	polycaprolactone
PCT	poly(cyclohexylene dimethylene terephthalate)
PCTFE	polychlorotrifluoroethylene
PDAP	poly(diallyl phthalate)
PDCPD	polydicyclopentadiene
PE	polyethylene
PE-C	polyethylene, chlorinated; preferred term for **CPE**
PE-HD	polyethylene, high density; preferred term for **HDPE**
PE-LD	polyethylene, low density; preferred term for **LDPE**
PE-LLD	polyethylene, linear low density; preferred term for **LLDPE**
PE-MD	polyethylene, medium density; preferred term for **MDPE**
PE-UHMW	polyethylene, ultra high molecular weight; preferred term for **UHMWPE**
PE-VLD	polyethylene, very low density; preferred term for **VLDPE**
PEC	polyestercarbonate
PEEK	polyetheretherketone
PEEST	polyetherester
PEI	polyetherimide
PEK	polyetherketone
PEN	poly(ethylene naphthalate)
PEOX	poly(ethylene oxide)
PESTUR	polyesterurethane
PESU	polyethersulfone
PET	poly(ethylene terephthalate)
PEUR	polyetherurethane
PF	phenol-formaldehyde resin
PFA	perfluoro alkoxyl alkane resin
PI	polyimide
PIB	polyisobutylene
PIR	polyisocyanurate
PK	polyketone
PMI	polymethacrylimide
PMMA	poly(methyl methacrylate)