



Plastics Topics – Polymer names

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Plastics Topics – Polymer names

1. Introduction

The naming of polymers has changed as chemists seek to put the most common materials into databases. The old names tended to be confusing as the base polymer was often at the end of the abbreviation, for instance Polyethylene (PE) was available in several varieties such as High Density PE (HDPE), Low Density PE (LDPE) and Linear Low Density PE (LLDPE). If these were in alphabetical order, they would not be near one another in a database and it would be hard to see the relationship between the materials. The new naming convention is that the base polymer is first with any modifiers to the polymer after a hyphen. For instance, the three examples given above are now:

- Polyethylene - High Density (PE-HD)
- Polyethylene - Low Density (PE-LD)
- Polyethylene - Linear Low Density (PE-LLD)

This makes the polymers easy to find and categorise.

A selection of abbreviations for plastics materials and plasticisers as recommended by the International Standards Organisations in "Plastics symbols: ISO 1043 - 21978(E)". The more common British descriptions and abbreviations are also included.

2. Using brackets

If the monomer has only one word in the name, e.g., ethylene, then it is convention to write the polymer name with no brackets, e.g., polyethylene.

If the monomer has more than one word in the name, e.g., methyl methacrylate, then it is possible to write the polymer with brackets, e.g., poly(methyl methacrylate), or without, e.g., polymethyl methacrylate. Using brackets makes the identity of the monomer clearer but most people know what the monomer is and we have chosen not to use brackets in this document.

The favourite polymer of most people is PPTKO - also known as "Poly(put the kettle on)".

3. The polymers

Name	Official Abbreviation	Old Abbreviation	Common Name
Acrylonitrile-butadiene-acrylate	ABA		
Acrylonitrile-butadiene-styrene	ABS	-	-
Cellulose acetate	CA	-	-
Cellulose acetate butyrate	CAB	-	-
Cellulose acetate propionate	CAP	-	-
Cellulose nitrate	CN	-	-
Cellulose propanoate	CP	-	-
Casein	CS	-	-
Ethylene-vinyl-acetate	EVA	-	-
Epoxide, epoxy	EP	-	-
Ethylene-vinyl acetate	EVA	-	-

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Name	Official Abbreviation	Old Abbreviation	Common Name
Melamine formaldehyde	MF	-	-
Phenol formaldehyde	PF	-	Phenolic-
Polyacetal - see Polyoxymethylene			
Polyamide	PA	-	Nylon
Polyaryletherketone	PEEK	-	-
Polybutylene	PB	-	-
Polybutylene naphthalate	PBN	-	-
Polybutylene terephthalate	PBTP	PBT	-
Polycarbonate	PC	-	-
Polychlorotrifluorethylene	PCTFE	-	-
Polydiallyl phthalate	PDAP	DAP	-
Polyethylene	PE	-	-
Polyethylene, high density	PE-HD	HDPE	-
Polyethylene, low density	PE-LD	LDPE	-
Polyethylene, linear low density	PE-LLD	LLDPE	-
Polyethylene, high molecular weight	PE-HMW	HMWPE	-
Polyethylene naphthalate	PEN	-	-
Polyetherimide	PEI	-	-
Polyethersulphone	PES	-	-
Polyethylene terephthalate	PETP	-	PET
Polyimide	PI	-	-
Polymethyl methacrylate	PMMA	-	Acrylic, Perspex
Poly-4-methylpentene-1	PMP	-	-
Polyoxymethylene	POM	-	Acetal
Polypropylene	PP	-	-
Polyphenylene oxide	PPOX	PPO	-
Polyphenylene sulphide		PPS	

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Name	Official Abbreviation	Old Abbreviation	Common Name
Polystyrene	PS	-	-
Polystyrene, high impact	PS-HI	HIPS	-
Polytetrafluoroethylene	PTFE	-	-
Polytrimethylene terephthalate	PTTP	-	PTT
Polyurethane	PUR	PU	-
Polyvinyl acetate	PVAC	-	-
Polyvinyl alcohol	PVAL	-	PVA
Polyvinyl chloride	PVC	-	-
Polyvinyl chloride, chlorinated	PVC-C	-	-
Polyvinyl chloride, plasticized	PVC-P	-	-
Polyvinyl chloride, unplasticized	PVC-U	-	u-PVC
Polyvinylidene chloride	PVDC	-	-
Polyvinyl fluoride	PVF	-	-
Styrene-acrylonitrile	SAN	-	-
Silicone	SI	-	-
Urea formaldehyde	UF	-	-
Unsaturated polyester	UP	-	-