INTERNATIONAL STANDARD

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Textiles — Man-made fibres — Generic names

Textiles — Fibres chimiques — Noms génériques

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Foreword

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The main task of technical committees is to prepare International Standards. 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.

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ISO 2076 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 23, *Fibres and yarns*.

This fifth edition cancels and replaces the fourth edition (ISO 2076:1999), which has been technically revised.

Introduction

A compilation of the generic names of man-made fibres is important for the global distribution of textile products due to national regulations for the declaration of fibre content and care labelling. There is a universal need for the standardization of generic names that would foster easy movement of textiles across borders to facilitate trade. Attempts to coordinate the EU, US Federal Trade Commission, and other countries' lists of generic names is an ongoing effort, as new man-made fibres are the result of innovations and business activities covering research and development in fibre-producing companies, and in the case where companies may have plants in multiple countries. It is recognized that new fibre brand names in textiles sold in markets occur before governmental regulations and standards can consider them for approval. Efforts to have only one name recognized for each generic fibre is the ideal approach but, as has been the case, two names for the same generic fibre are already in use for textiles being made and sold. Therefore, keeping a compilation of generic names will probably fall behind the actual incorporation of new fibres.

Textiles — Man-made fibres — Generic names

1 Scope

This International Standard lists the generic names used to designate the different categories of man-made fibres currently manufactured on an industrial scale for textile and other purposes, together with the distinguishing attributes that characterize them. The term “man-made fibres”, sometimes also called manufactured fibres, has been adopted for those fibres obtained by a manufacturing process, as distinct from materials which occur naturally in fibrous form.

2 General

2.1 Introduction

The entries in Table 1 are organized into four principal elements: generic name, code designation, distinguishing attributes and chemical formulae.

2.2 **Generic name** (e.g. acetate)

This is the name to be used for the fibre whose attributes are described under the heading **Distinguishing attribute** in Table 1. The use of this name shall be limited to those fibres that contain not more than 15 % by mass of fibre-forming additives (no limit is placed upon the proportion of additives that are not fibre-forming). In both the English and French languages, the generic name shall be written without capital letters. The generic name may also be used to describe textile products (yarns, fabrics, etc.) made from man-made fibres, in which case it is accepted that the manufacturing process may have modified the distinguishing attribute.

2.3 **Code** (e.g. CA)

This is a two- to four-letter designation used to facilitate the naming of man-made fibres, e.g. in sales and technical literature. In some cases, the coding system given to textile fibres is different from the one used for plastics.

2.4 Distinguishing attributes

These are attributes that differentiate one fibre from all the others. Chemical difference, which often results in distinctive property differences, is the main basis for classification in this International Standard; other attributes are used, where necessary, to differentiate between otherwise similar man-made fibres. The distinguishing attributes are not necessarily those by which the fibres might be identified or the same as those used for naming chemical molecules, nor are they necessarily suitable for the analysis of fibre mixtures.

NOTE In these descriptions, the concepts “group”, “linkage” and “unit” have been used in the following manner:

— “group” is used to denote a functional chemical unit, e.g. hydroxyl groups on acetate;

— “linkage” is used to denote a chemical bond;

— “unit” is used to denote a repeating element.

2.5 Chemical formulae

These are an indication of the chemical structure of the fibre. The examples do not comprise mandatory elements of this International Standard given that, in some cases, the same chemical formula may be shared by more than one fibre category; e.g. cellulose II is shared by cupro, lyocell, modal and viscose.

3 Generic names

Table 1 — Generic names

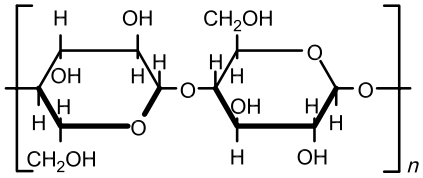
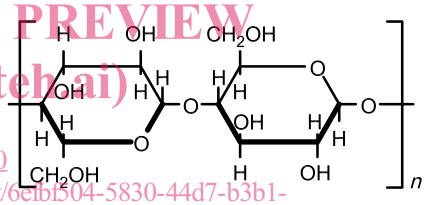
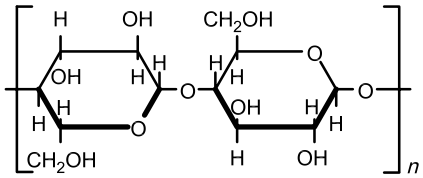
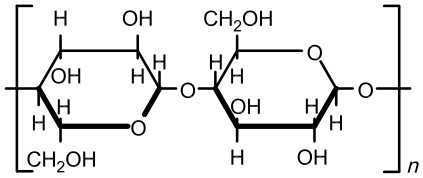
	Generic name	Code	Distinguishing attribute	Examples of chemical formulae
3.1	**cupro**	CUP	Cellulose fibre obtained by the cuprammonium process.	Cellulose II: 
3.2	**lyocell**	CLY	Cellulose fibre obtained by an organic solvent spinning process. It is understood that: 1) an "organic solvent" means essentially a mixture of organic chemicals and water; 2) "solvent spinning" means dissolving and spinning without the formation of a derivative.	Cellulose II: 
3.3	**modal**	CMD	Cellulose fibre having a high breaking strength and a high wet modulus. The breaking strength B_c in the conditioned state and the force B_w required to produce an elongation of 5 % in its wet state are $B_c \geqslant 1{,}3\sqrt{\rho_l} + \rho_l$ $B_w \geqslant 0{,}5\sqrt{\rho_l}$ where ρ_l is the mean linear density (mass per unit length), in decitex. B_c and B_w are expressed in centinewtons.	Cellulose II: 
3.4	**viscose** or **rayon**	CV	Cellulose fibre obtained by the viscose process.	Cellulose II: 

Table 1 (*continued*)

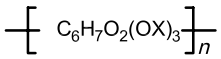
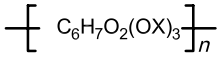
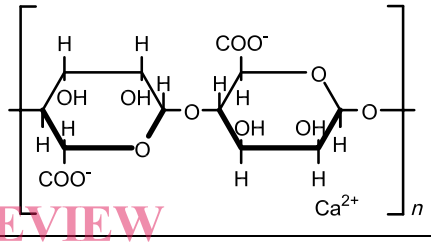
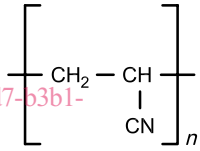
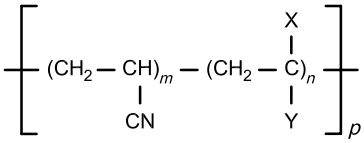
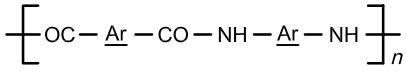
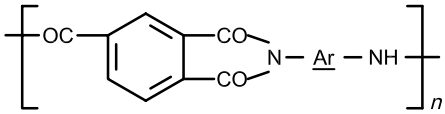
	Generic name	Code	Distinguishing attribute	Examples of chemical formulae
3.5	**acetate**	CA	Cellulose acetate fibre in which less than 92 %, but at least 74 %, of the hydroxyl groups are acetylated.	Secondary cellulose acetate:  where X = H or CH_3CO and the degree of esterification is at least 2,22 but less than 2,76.
3.6	**triacetate**	CTA	Cellulose acetate fibre in which at least 92 % of the hydroxyl groups are acetylated.	Cellulose triacetate:  where X = H or CH_3CO and the degree of esterification is between 2,76 and 3.
3.7	**alginate**	ALG	Fibre obtained from the metal salts of alginic acid.	Calcium alginate: 
3.8	**acrylic**	PAN	Fibre composed of linear macromolecules having, in the chain, at least 85 % by mass of acrylonitrile repeating units.	Polyacrylonitrile:  and acrylic copolymers: 
3.9	**aramid**	AR	Fibre composed of linear macromolecules made up of aromatic groups joined by amide or imide linkages, at least 85 % of the amide or imide linkages being joined directly to two aromatic rings and the number of imide linkages, if the latter are present, not exceeding the number of amide linkages.	EXAMPLE 1:  EXAMPLE 2:  NOTE In Example 1, the aromatic groups can be the same or different.

Table 1 (*continued*)

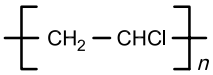
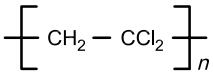
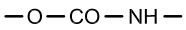
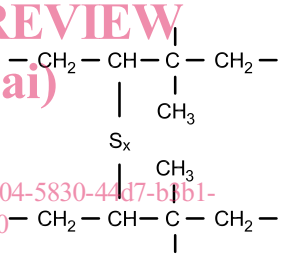
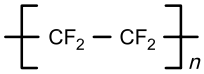
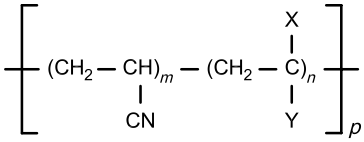
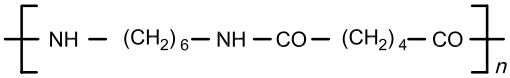
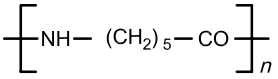
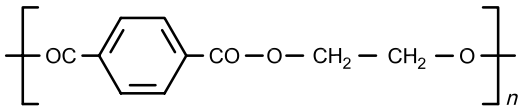
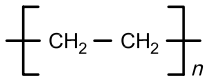
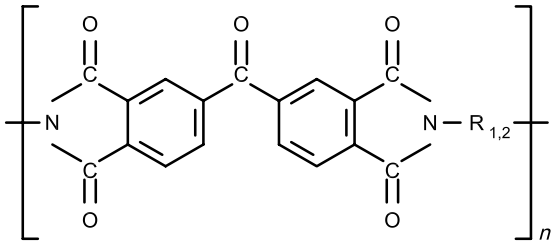
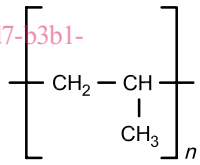
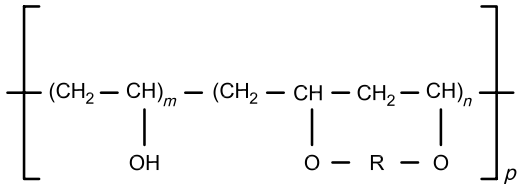
	Generic name	Code	Distinguishing attribute	Examples of chemical formulae
3.10	**chlorofibre**	CLF	Fibre composed of linear macromolecules having, in the chain, more than 50 % by mass of vinyl chloride or vinylidene chloride units (more than 65 % in the case in which the rest of the chain is made up of acrylonitrile, the modacrylic fibres being thus excluded).	Poly(vinyl chloride):  and poly(vinylidene chloride): 
3.11	**elastane** or **spandex**	EL	Fibre composed of at least 85 % by mass of a segmented polyurethane and which, if stretched to three times its unstretched length, rapidly reverts substantially to the unstretched length when the tension is removed.	Macromolecules having alternate elastic and rigid segments with repetition of the group 
3.12	**elastodiene**[a]	ED	Fibre composed of natural or synthetic polyisoprene, or of one or more dienes polymerized with or without one or more vinyl monomers, and which, if stretched to three times its unstretched length, rapidly reverts substantially to the unstretched length when the tension is removed.	Natural polyisoprene extracted from the latex of *Hevea brasiliensis*, vulcanized: 
3.13	**fluorofibre**	PTFE	Fibre composed of linear macromolecules made from aliphatic fluorocarbon monomers.	Polytetrafluoroethylene: 
3.14	**modacrylic**	MAC	Fibre composed of linear macromolecules having, in the chain, at least 50 % and less than 85 % by mass of acrylonitrile.	Acrylic copolymers:  If X = H and Y = Cl: polyacrylonitrile or poly(vinyl chloride) If X = Y = Cl: polyacrylonitrile or poly(vinylidene chloride)
3.15	**polyamide** or **nylon**	PA	Fibre composed of linear macromolecules having, in the chain, recurring amide linkages, at least 85 % of which are joined to aliphatic or cycloaliphatic units.	Polyhexamethylene adipamide (polyamide 6-6):  Polycaproamide (polyamide 6): 

Table 1 (*continued*)

	Generic name	Code	Distinguishing attribute	Examples of chemical formulae
3.16	**polyester**	PES	Fibre composed of linear macromolecules having, in the chain, at least 85 % by mass of an ester of a diol and terephthalic acid.	Poly(ethylene terephthalate): 
3.17	**polyethylene**[b]	PE	Fibre composed of linear macromolecules of unsubstituted saturated aliphatic hydrocarbons.	Polyethylene: 
3.18	**polyimide**	PI	Fibre composed of synthetic linear macromolecules having, in the chain, recurring imide units.	Polyimide:  R_1 = aryl R_2 = alkyl
3.19	**polypropylene**[b]	PP	Fibre composed of linear macromolecules made up of saturated aliphatic hydrocarbon units in which one carbon atom in two carries a methyl side group, generally in an isotactic configuration and without further substitution.	Polypropylene: 
3.20	**glass**	GF	Fibre in textile form, obtained by drawing molten glass.	
3.21	**vinylal**	PVAL	Fibre composed of linear macromolecules of poly(vinyl alcohol) with different levels of acetalization.	Acetalized poly(vinyl alcohol):  where $n > 0$
3.22	**carbon**	CF	Fibre containing at least 90 % by mass of carbon obtained by thermal carbonization of organic precursors.	
3.23	**metal**[c]	MTF	Fibre obtained from metal.	