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 committee responsible for this document is ISO/TC 38, *Textiles.*

This sixth edition cancels and replaces the fifth edition (ISO 2076:2010), which has been technically revised.

Introduction

The objective of this International Standard is to propose a generic name of fibre (a generic name is unique by nature) within the framework of the ISO standardization for the textile products. It has been elaborated in order to present a compilation of generic names and the rules to create a new generic name for new fibres.

It is intended to be the reference for the ISO 1833 series[2] and the Technical Report ISO/TR 11827[3].

It could be a reference within the framework of the globalization as 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. It could be an answer to a universal need for the standardization of generic names that would foster easy movement of textiles across borders to facilitate trade, for example, for companies which might have plants in multiple countries and have innovations and business activities covering research and development in fibre-producing.

Nonetheless, it is not intended to supersede any national or regional regulations, but could be helpful for the coordination of national or regional Authorities (e.g. FTC in USA, European Commission in European Union, etc.) within the framework of regulations. The informative Annex F links the generic names to the specific requirements regarding some national or regional regulations.

For example, products destined for the European market should be labelled in accordance with the regulation identified as Regulation (EU) No. 1007/2011 of the European Parliament and of the Council of 27 September 2011 on textile fibre names and related labelling and marking of the fibre composition of textile products. Regulation 1007/2011 repeals Council Directive 73/44/EEC and Directives 96/73/EC and 2008/121/EC of the European Parliament and of the Council and includes some different and/or additional fibre denominations other than the present generic names (see F.3 and Table F.2). The European Regulation takes precedence over this International Standard.

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, based on a main polymer, 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.

This International Standard presents recommendations of rules for the creation of the generic name (Annex A).

NOTE These rules have been introduced in this sixth edition of ISO 2076, and thus, they could not be applied to the existing generic names of the previous editions.

Annexes include the description of the fibre structures in case of fibre made of several components (Annex B) and the description of modified fibres (Annex C).

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
man-made fibre
fibre obtained by a manufacturing process

Note 1 to entry: The term "man-made" fibre can be named "manufactured" fibre or "chemical" fibre.

3 General

3.1 Introduction

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

3.2 **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 property-enhancing additives prior to spinning (no limit is placed upon the proportion of additives that are not property enhanced). In both the English and French languages, the generic name shall be written without capital letters.

The generic name may also apply to a man-made fibre which results from a manufacturing process that can confer a distinguishing attribute.

3.3 Other denominations

When relevant, this is the denomination used for the fibre name in the regulation of some countries, which differs from the generic name.

The given denominations are relative to the following countries: China (identified as CN), countries of the European Union (EU), Japan (JP) and the USA (US). For further information on the regulation related to these countries, see Annex F.

NOTE The country list can be extended in relation to the contribution of the concerned countries.

3.4 **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.

NOTE The coding system for plastics is given in ISO 1043-1 [1].

3.5 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.

3.6 Chemical formulae

These are indications 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.

4 Generic names

See Table 1.

Table 1 — Generic names

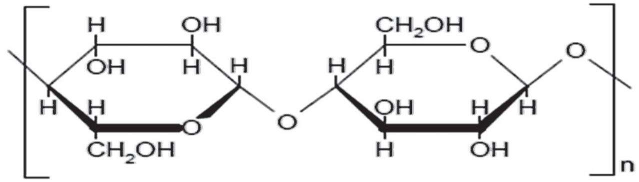
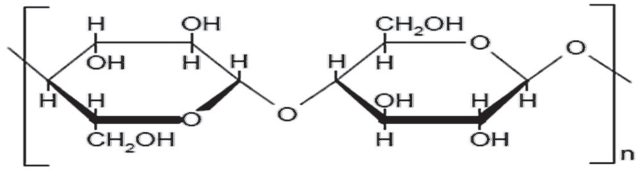
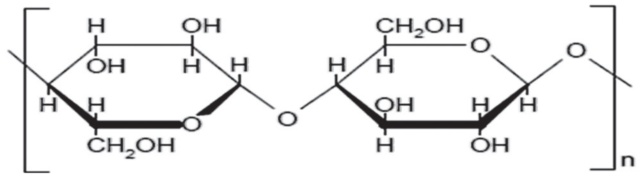
No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.1	cupro		CUP	Cellulose fibre obtained by the cuprammonium process.	Cellulose II: 
4.2	lyocell	rayon (US)	CLY	Cellulose fibre obtained by an organic solvent spinning process. It is understood that: 1) an “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: 
4.3	modal	rayon (US)	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 $B_c \geq 1{,}3\sqrt{\rho_1} + 2\rho_2$ $B_W \geq 0{,}5\sqrt{\rho_1}$ 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: 

Table 1 *(continued)*

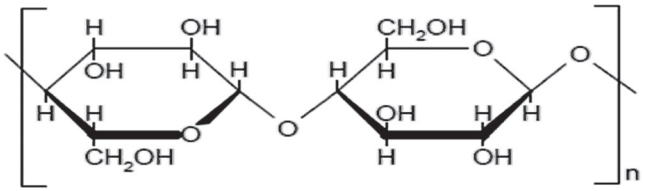
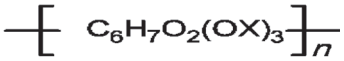
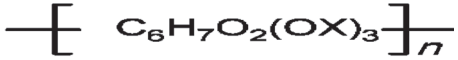
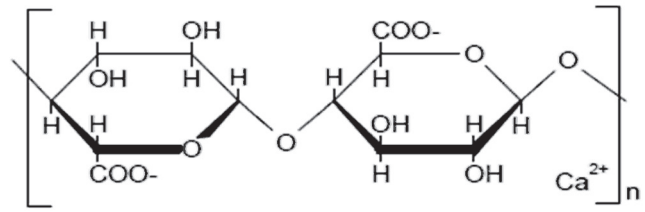
No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.4	viscose	rayon (JP, US) viscose or rayon (CN)	CV	Cellulose fibre obtained by the viscose process.	Cellulose II: 
4.5	acetate		CA	Cellulose acetate fibre in which less than 92 %, but at least 74 %, of the 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.
4.6	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.
4.7	alginate		ALG	Fibre obtained from the metal salts of alginic acid.	Calcium alginate: 

Table 1 *(continued)*

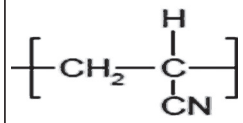
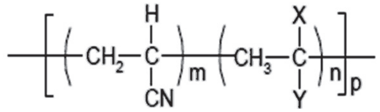
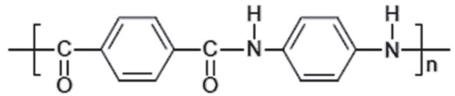
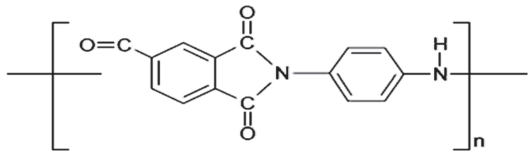
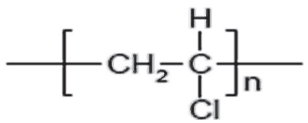
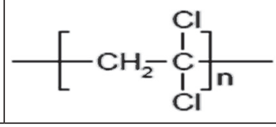
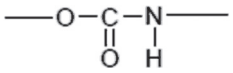
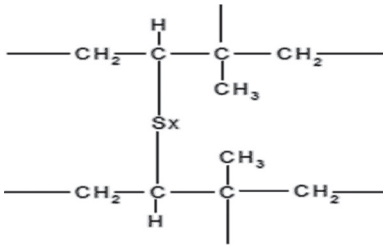
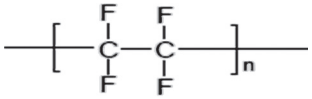
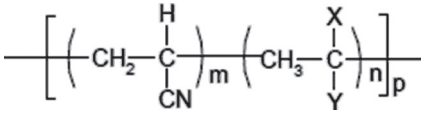
No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.8	acrylic		PAN	Fibre composed of linear macromolecules having, in the chain, at least 85 % by mass of acrylonitrile repeating units.	Acrylonitrile:  and acrylic copolymers: 
4.9	aramid[a]		AR	Fibre composed 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: para-aramid  EXAMPLE 2: polybenzimidazole  NOTE In Example 1, the aromatic groups can be the same or different.
4.10	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): 

Table 1 *(continued)*

No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.11	elastane	polyurethane (JP) spandex (US) elastane or spandex (CN)	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 
4.12	elastodiene[b]		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: 
4.13	fluorofibre		PTFE	Fibre composed of linear macromolecules made from aliphatic fluorocarbon monomers.	Polytetrafluoroethylene: 
4.14	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 = CI: acrylonitrile (vinyl chloride) copolymer If X = Y = CI: acrylonitrile (vinylidene chloride) copolymer