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Textiles — Man-made fibres — Generic names

Textiles — Fibres chimiques — Noms génériques

[Revision of fourth edition (ISO 2076:1999)]

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Foreword

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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.

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Introduction

A compilation of the generic names of man-made fibres is important to the global distribution of textile products due to national regulations for the declaration of fiber content and care labelling. There is a universal need for the standardization fibre names to foster easy movement of textiles across borders to facilitate trade. Attempts to coordinate the EU, U.S. Federal Trade Commission, and other countries' lists of generic names is an on-going effort, as new man-made fibres are the result of innovations and research developments within individual fibre-producing companies. It is recognized that new fibres come into the market before regulations and standards can reflect market introductions. Efforts to have only one name recognized for each generic fibre is the optimum approach but may not occur due new fibre introductions into different regions.

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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

The entries in Table 1 are organized into the four following principal elements.

2.1 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. Use of this name shall be limited to those fibres that contain not more than 15 % (*m/m*) of fibre-forming additives (no limit is placed upon the proportion of additives that are not fibre-forming). In both the English and the 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.

2.2 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.

2.3 Distinguishing attributes

These are attributes that differentiate one fibre from all 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:

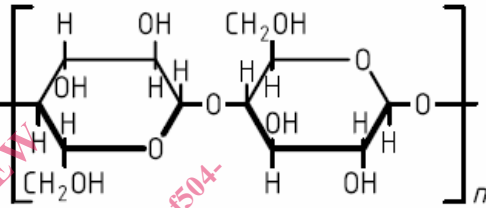
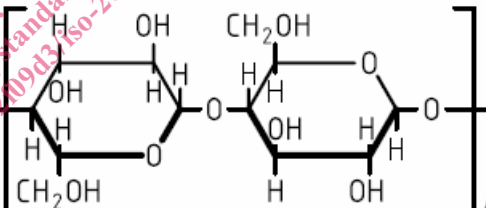
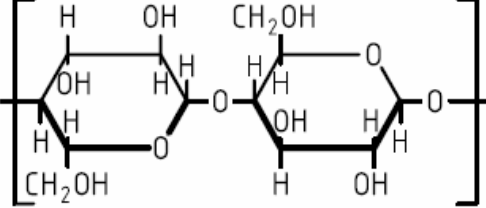
- “group” is used to denote a functional chemical unit, eg., hydroxyl groups on acetate;
- “linkage” is used to denote a chemical bond;
- “unit” is used to denote a repeating element.

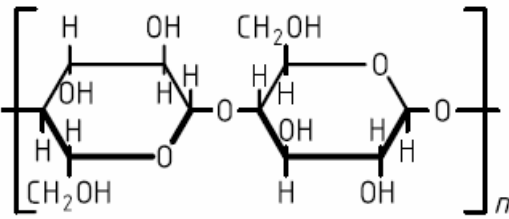
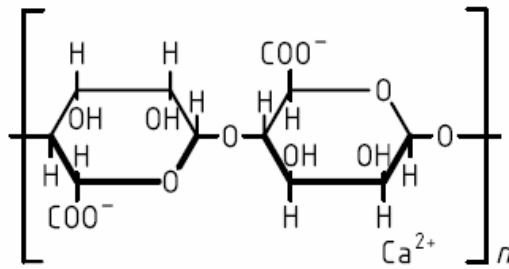
2.4 Examples of chemical formulae

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 names	Code	Distinguishing attribute	Examples of chemical formulae
3.1	cupro	CUP	Cellulose fibre obtained by the cuprammonium process.	Cellulose II: 
3.2	lyocell	CLY	A 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 and 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 $B_c \geq 1,3\sqrt{LD} + 2 LD$ $B_w \geq 0,5\sqrt{LD}$ where LD is the mean linear density (mass per unit length) in decitex. B_c and B_w are expressed in centinewtons.	Cellulose II: 

	Generic names	Code	Distinguishing attribute	Examples of chemical formulae
3.4	viscose or rayon	CV	Cellulose fibre obtained by the viscose process.	Cellulose II: 
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: $\left[C_6H_7O_2(OX)_3 \right]_n$ where X = H or CH ₃ CO 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: $\left[C_6H_7O_2(OX)_3 \right]_n$ where X = H or CH ₃ CO 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: $\left[CH_2 - \underset{\substack{ \\ CN}}{CH} \right]_n$ and acrylic copolymers: $\left[(CH_2 - \underset{\substack{ \\ CN}}{CH})_m - (CH_2 - \underset{\substack{ \\ Y}}{\overset{\substack{ \\ X}}{C}})_n \right]_p$