

BS EN ISO 2076:2013



BSI Standards Publication

Textiles — Man-made fibres — Generic names (ISO 2076:2013)

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National foreword

This British Standard is the UK implementation of EN ISO 2076:2013. It supersedes BS ISO 2076:2010 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee TCI/80, Chemical testing of textiles.

A list of organizations represented on this committee can be obtained on request to its secretary.

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2076:2013)Textilien - Chemiefasern - Gattungsnamen und Kurzzeichen
(ISO 2076:2013)

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

Foreword

This document (EN ISO 2076:2013) has been prepared by Technical Committee ISO/TC 38 "Textiles" in collaboration with Technical Committee CEN/TC 248 "Textiles and textile products" the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by May 2014, and conflicting national standards shall be withdrawn at the latest by May 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 2076:2013 has been approved by CEN as EN ISO 2076:2013 without any modification.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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

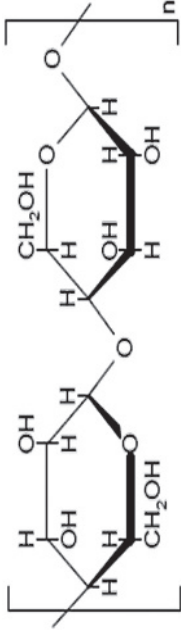
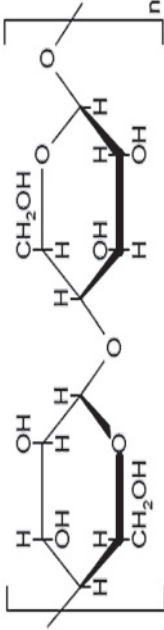
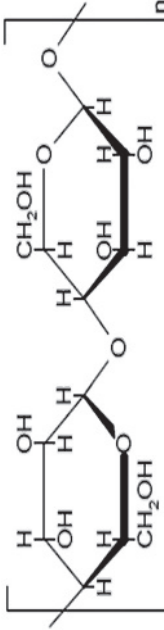
No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.1	cupro		CUP	Cellulose fibre obtained by the cuprammonium process.	<p>Cellulose II:</p>  <p>The diagram shows a repeating unit of Cellulose II, represented by a bracketed structure with a subscript 'n'. It consists of two glucose rings linked by an oxygen atom at the C4 position of the left ring and the C1 position of the right ring. Each glucose ring has a hydroxyl group (-OH) at the C2 position and a hydroxymethyl group (-CH₂OH) at the C6 position. The left ring also has a hydroxyl group at the C3 position. The right ring has a hydroxyl group at the C5 position. The oxygen atom in the glycosidic bond is part of the repeating unit.</p>
4.2	lyocell	rayon (US)	CLY	<p>Cellulose fibre obtained by an organic solvent spinning process. It is understood that:</p> <ol style="list-style-type: none"> 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. 	<p>Cellulose II:</p>  <p>The diagram shows a repeating unit of Cellulose II, represented by a bracketed structure with a subscript 'n'. It consists of two glucose rings linked by an oxygen atom at the C4 position of the left ring and the C1 position of the right ring. Each glucose ring has a hydroxyl group (-OH) at the C2 position and a hydroxymethyl group (-CH₂OH) at the C6 position. The left ring also has a hydroxyl group at the C3 position. The right ring has a hydroxyl group at the C5 position. The oxygen atom in the glycosidic bond is part of the repeating unit.</p>
4.3	modal	rayon (US)	CMD	<p>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</p> $B_c \geq 1,3\sqrt{\rho_1} + 2\rho_2$ $B_w \geq 0,5\sqrt{\rho_1}$ <p>where ρ_1 is the mean linear density (mass per unit length), in decitex. B_c and B_w are expressed in centinewtons.</p>	<p>Cellulose II:</p>  <p>The diagram shows a repeating unit of Cellulose II, represented by a bracketed structure with a subscript 'n'. It consists of two glucose rings linked by an oxygen atom at the C4 position of the left ring and the C1 position of the right ring. Each glucose ring has a hydroxyl group (-OH) at the C2 position and a hydroxymethyl group (-CH₂OH) at the C6 position. The left ring also has a hydroxyl group at the C3 position. The right ring has a hydroxyl group at the C5 position. The oxygen atom in the glycosidic bond is part of the repeating unit.</p>

Table 1 (continued)

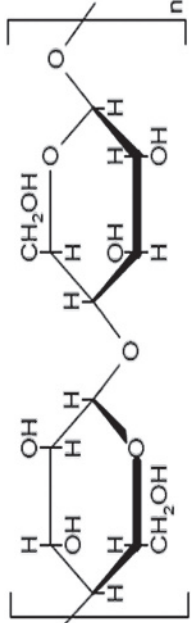
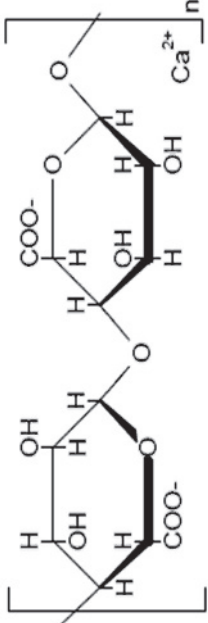
No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.4	viscose	rayon (JP, US) viscose or rayon (CN)	CV	Cellulose fibre obtained by the viscose process.	Cellulose II: 
4.5	acetate		CA	Cellulose acetate fibre in which less than 92 %, but at least 74 %, of the hydroxyl groups are acetylated.	Secondary cellulose acetate: $\left[\text{C}_6\text{H}_7\text{O}_2(\text{OX})_3 \right]_n$ where X = H or CH ₃ CO and the degree of esterification is at least 2,22 but less than 2,76.
4.6	triacetate		CTA	Cellulose acetate fibre in which at least 92 % of the hydroxyl groups are acetylated.	Cellulose triacetate: $\left[\text{C}_6\text{H}_7\text{O}_2(\text{OX})_3 \right]_n$ where X = H or CH ₃ CO 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)

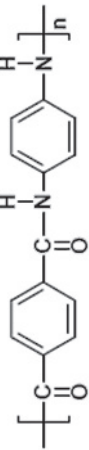
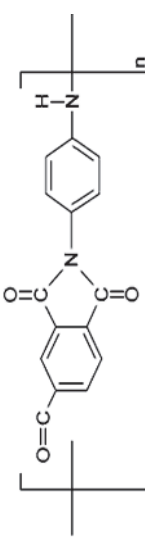
No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.8	acrylic		PAN	Fibre composed of linear macromolecules having, in the chain, at least 85 % by mass of acrylonitrile repeating units.	<p>Acrylonitrile:</p> $\left[\text{CH}_2 - \underset{\text{CN}}{\overset{\text{H}}{\text{C}}} \right]$ <p>and acrylic copolymers:</p> $\left[\text{CH}_2 - \underset{\text{CN}}{\overset{\text{H}}{\text{C}}} \right]_m \left[\text{CH}_2 - \underset{\text{Y}}{\overset{\text{X}}{\text{C}}} \right]_p$
4.9	aramida		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.	<p>EXAMPLE 1: para-aramid</p>  $\left[\text{C}_6\text{H}_4 - \text{C}(=\text{O}) - \text{NH} - \text{C}_6\text{H}_4 \right]_n$ <p>EXAMPLE 2: polybenzimidazole</p>  $\left[\text{C}_6\text{H}_3\text{N}_2 \right]_n$ <p>NOTE In Example 1, the aromatic groups can be the same or different.</p>
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).	<p>Poly(vinyl chloride):</p> $\left[\text{CH}_2 - \underset{\text{Cl}}{\overset{\text{H}}{\text{C}}} \right]_n$ <p>And</p> <p>poly(vinylidene chloride):</p> $\left[\text{CH}_2 - \underset{\text{Cl}}{\overset{\text{Cl}}{\text{C}}} \right]_n$

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 —O—C—N— O
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 <i>Hevea brasiliensis</i> , vulcanized: $\begin{array}{c} \text{H} \\ \\ \text{—CH}_2\text{—C—CH}_2\text{—} \\ \\ \text{CH}_3 \end{array}$ —Sx— $\begin{array}{c} \text{CH}_3 \\ \\ \text{—CH}_2\text{—C—CH}_2\text{—} \\ \\ \text{H} \end{array}$
4.13	fluorofibre		PTFE	Fibre composed of linear macromolecules made from aliphatic fluorocarbon monomers.	Polytetrafluoroethylene: $\left[\begin{array}{c} \text{F} \\ \\ \text{—C—C—} \\ \\ \text{F} \end{array} \right]_n$
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: $\left[\begin{array}{c} \text{H} \\ \\ \text{—CH}_2\text{—C—} \\ \\ \text{CN} \end{array} \right]_m \left(\begin{array}{c} \text{CH}_3 \\ \\ \text{—C—} \\ \\ \text{Y} \end{array} \right)_n \left[\begin{array}{c} \text{X} \\ \\ \text{—C—} \\ \\ \text{Y} \end{array} \right]_p$ <p>If X = H and Y = Cl: acrylonitrile (vinyl chloride) copolymer If X = Y = Cl: acrylonitrile (vinylidene chloride) copolymer</p>

Table 1 (continued)

No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.15	polyamide ^c	polyamide or nylon (EU) NOTE. The use of "nylon" denomination is restricted to polyamide 6.6 in some EU countries. polyamide or nylon (CN) nylon (JP, US)	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.	<p>Polyhexamethylene adipamide (polyamide 6-6):</p> $\left[\text{N} \left(\text{CH}_2 \right)_6 \text{N} \text{C} \left(\text{CH}_2 \right)_4 \text{C} \right]_n$ <p>Polycaproamide (polyamide 6):</p> $\left[\text{N} \left(\text{CH}_2 \right)_5 \text{C} \right]_n$
4.16	polyester	triexta (US, only for polytrimethylene terephthalate)	PES	Fibre composed of linear macromolecules having, in the chain, at least 85 % by mass of an ester of a diol and terephthalic acid.	<p>Poly(ethylene terephthalate) – (PET):</p> $\left[\text{C} \left(\text{O} \right) \text{C}_6\text{H}_4 \text{C} \left(\text{O} \right) \text{CH}_2 \text{CH}_2 \text{O} \right]_n$ <p>Poly(butylene terephthalate) – (PBT):</p> $\left[\text{C} \left(\text{O} \right) \text{C}_6\text{H}_4 \text{C} \left(\text{O} \right) \text{C}_4\text{H}_8 \text{O} \right]_n$ <p>Poly (trimethylene terephthalate) - (PTT)</p> $\left[\text{C} \left(\text{O} \right) \text{C}_6\text{H}_4 \text{C} \left(\text{O} \right) \text{C}_3\text{H}_6 \text{O} \right]_n$
4.17	polyethylened	olefin (US)	PE	Fibre composed of linear macromolecules of unsubstituted saturated aliphatic hydrocarbons.	<p>Polyethylene:</p> $\left[\text{CH}_2 - \text{CH}_2 \right]_n$

Table 1 (continued)

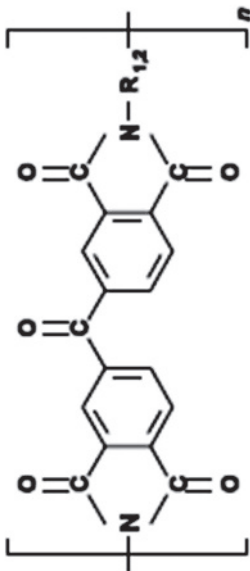
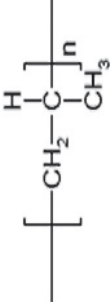
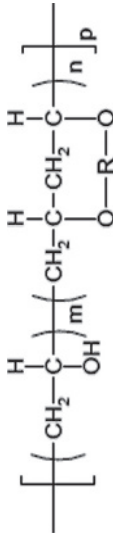
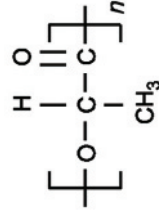
No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.18	polyimide		PI	Fibre composed of synthetic linear macromolecules having, in the chain, recurring imide units.	<p>Polyimide:</p>  <p>where R₁ = aryl and R₂ = alkyl</p> <p>Polypropylene:</p>  <p>Acetalized poly(vinyl alcohol):</p>  <p>where n > 0 and R is: CH₂</p>
4.19	polypropylene ^d	olefin (US)	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.	
4.20	glass		GF	Fibre obtained by drawing molten glass.	
4.21	vinylal		PVAL	Fibre composed of linear macromolecules of poly(vinyl alcohol) with different levels of acetalization.	
4.22	carbon	carbon fibre (CN)	CF	Fibre containing at least 90 % by mass of carbon obtained by thermal carbonization of organic precursors.	
4.23	metale	metallic fibre (EU, US) metal fibre (CN)	MTF	Fibre obtained from metal.	
4.24	polylactide ^f	polylactide (EU, JP) ^g , PLA (US) ^g	PLA	Fibre formed of linear macromolecules having in chain at least 85 % by mass of lactic acid ester units.	

Table 1 (continued)

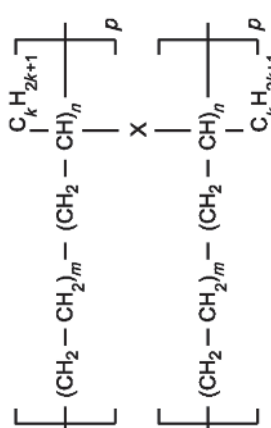
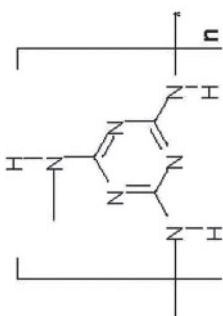

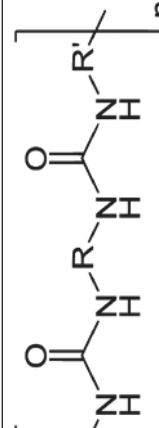
No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.25	elastolefin	lastol (US) elastolefin or lastol (CN)	EOL	Fibre composed of at least 95 % by mass of partially cross-linked macromolecules, made up from ethylene and at least one other olefin, which, when stretched to one and a half times its original length and released, reverts rapidly and substantially to its initial length.	$\left[\text{---} \left(\text{CH}_2 - \text{CH}_2 \right)_m - \left(\text{CH}_2 - \text{CH} \right)_n \right]_p$ $\left[\text{---} \left(\text{CH}_2 - \text{CH}_2 \right)_m - \left(\text{CH}_2 - \text{CH} \right)_n \right]_p$ 
4.26	melamine		MEL	Fibre formed of at least 85 % by mass of cross-linked macromolecules made up of melamine derivatives	
4.27	polyphenylene sulphide		PPS	Fibre composed of linear macromolecules having in the main chain p-phenylthio group	
4.28	protein	azlon (US)	None	fibre obtained from natural protein substances regenerated and stabilized through the action of chemical agents	
4.29	polycarbamide		None	fibre formed of linear macromolecules having in the chain the recurring ureylene (NH-CO-NH) functional group	
4.30	triviny		None	fibre formed of acrylonitrile terpolymer, a chlorinated vinyl monomer and a third vinyl monomer, none of which represents as much as 50 % of the total mass	

Table 1 (continued)

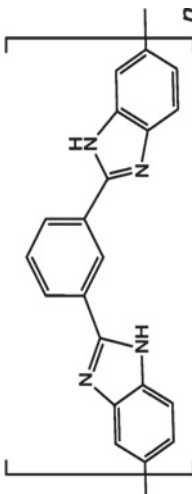
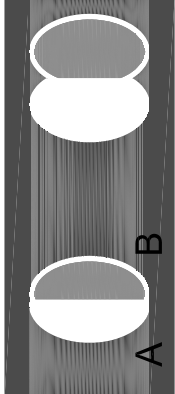
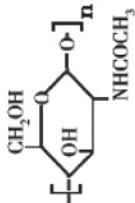
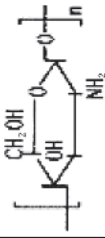
No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.31	polybenzimidazol		PBI	fibre formed of a long chain aromatic polymer having reoccurring imidazole groups as an integral part of the polymer chain	
4.32	elastomulti-ester ^{rh}	elastereII-p (US)	ELE	fibre formed by the interaction of two or more chemically distinct linear macromolecules in two or more phases (of which none exceeds 85 % by mass), which contains ester groups (at least 85 %) as the dominant function and suitable treatment, and which, when stretched by 50 %, and released, durably and rapidly reverts substantially to its unstretched length	<p>At least two ester macromolecules in each filament form an elastomer, e.g.:</p> $\left[\text{O} \parallel \text{C} - \text{O} - \text{CH}_2 - \text{CH}_2 - \text{O} \right]_n$ <p>2GT plus</p> $\left[\text{O} \parallel \text{C} - \text{O} - \text{CH}_2 - \text{CH}_2 - \text{O} \right]_n$ <p>3GT</p> <p>Example of physical arrangement:</p>  <p>Parts A and B consist of different macromolecules with ester groups. GT = Glycol Terephthalate</p>
4.33	polypropylene/polyamide bicomponent		None	a bicomponent fibre composed of between 10 % and 25 % by mass of polyamide fibrils embedded in polypropylene matrix	
4.34	ceramic	ceramic fibre (CN)	CEF	a fibre composed of at least 40 % by mass of alumina (Al ₂ O ₃)	

Table 1 (continued)

No.	Generic name	Other denominations	Code	Distinguishing attribute	Examples of chemical formulae
4.35	chitin		CHT	a fibre made from chitin and its derivatives	<p>Chitin:</p>  <p>Chitosan:</p> 
					<p>a The prefixes “para-” and “meta-” refer to the chemical vocabulary related to the positions of the linkages on the aromatic ring.</p> <p>b The term “rubber” is used in some cases.</p> <p>c The unique number following the name refers to the number of carbon in the monomer (e.g. polyamide 6: 6 carbon in the monomer). The numbers following the name refer to the numbers of carbon in the monomers (e.g. polyamide 6.10 with 6 carbons in one monomer and 10 in the other monomer).</p> <p>d Forms part of the polyolefin class.</p> <p>e Fibres can also be coated with metals, in which case they are described as “metallized fibres” and not “metal fibres”.</p> <p>f The prefix “levo-” (or “L-”) refers to the important proportion of levorotary lactic acid occurring during the enzymatic process when produced from natural sugars (in this case, the melting point is at least 135 °C). In opposite, the prefix “dextro/levo-” (or “D/L-”) refers to the presence of both dextrorotary and levorotary lactic acid when produced from other diesel sources.</p> <p>g The given definition in Table 1 slightly differs from the definition in EU, Japan and the USA. Refer to F.3, F.4 and F.5, respectively, in Annex F for further information.</p> <p>h Polyester/polyester bicomponent (cf. Table 2, 5.1).</p>

5 Designation of the bicomponent fibres

[Table 2](#) lists only some bicomponent fibres currently in use and is not exhaustive as all possible combinations (in relation to polymer couples and their structures – cf. [B.2](#)) are not developed.

Table 2 — Bicomponent fibre designation

No.	Designations	Polymer couples (generic name of polymers: cf. Table 1)	Structure (cf. B.2)	Observations
5.1	polyester/polyester bicomponent	polyester (4.16), and polyester (4.16)	[S/S type]	elastomultiester (Table 1 , 4.32)
5.2	polyester/polyester bicomponent	polyester (4.16), and polyester (4.16)	[Sh/C type]	
5.3	polypropylene/polyamide bicomponent	polypropylene (4.19), and polyamide (4.15)	[M/F type]	polypropylene/polyamide bicomponent (Table 1 , 4.33)

Annex A (informative)

Rules related to the creation of a generic name

A.1 Unique generic name

The generic name shall be a unique term for a man-made fibre.

A.2 Use of the existing generic names

The list of the generic names of textile fibres is considered sufficient currently. This list being mainly based on the chemical nature of polymers, only the new character of the chemical nature of a new fibre can justify the creation of a new generic name.

The choice of the generic name of a fibre must be led by comparing it to the list of the existing generic names.

A.3 Generic name based on chemical nature

As indicated in [A.1](#), only the new character of the chemical nature of a fibre can justify the creation of a new generic name.

In this case, the denomination of new fibre must recall the chemical nature of major polymer.

The choice of the denomination of a fibre shall be led by the chemical nature of the major polymer.

A.4 Exclusion of functionalities or properties

The significant development of properties or functionalities given to fibres can involve the increase in qualifying terms of the fibres and, consequently, can lead to confusion or incomprehension.

NOTE Possible properties or functionalities concerned: fireproofing, protection against UV (Ultraviolet), the activity of microorganisms (effect bacteriostatic, fungicidal, etc.), hydration, thermoregulation, etc.

In order to be back to the original principle of this International Standard, the generic name of fibres shall not take into account the properties or the functionalities of fibres, except for the elastic behaviour (as explained in [A.5](#)).

The generic name of a fibre shall mention neither property nor functionality, except possibly for the elastic behaviour defined in the requirement [A.5](#).

A.5 Reference to the elastic behaviour

The elastic behaviour of fibres is the only property implied in the text of this International Standard, where the prefix "elast-" is used several times.

The elastic behaviour of fibres is related to a fibre which, lengthened under a force of traction, reverts quickly and substantially to this length as soon as the force of traction ceases being applied.

The elastic behaviour of a fibre can be obtained in two ways:

- either the fibre is intrinsically elastic, by nature – e.g. elastodiene, elastane, elastolefin;
- or the conformation of fibre (by texturation, etc. thus developing a crimped fibre) confers a “mechanical” elasticity – e.g. elastomultiester.

When the elastic behaviour is retained and proved, the generic name of fibre can use the prefix “elast-”.

A.6 Manufacture on an industrial scale

The generic name of a man-made fibre has to be based on fibres manufactured on an industrial scale for textile and other purposes in order to be listed in [Table 1](#).

The generic name of a man-made fibre shall be validated for fibre manufactured on an industrial scale.

Annex B (informative)

Fibres made of several components

B.1 General

Some man-made fibres are manufactured based on generally two (or more) strongly bonded polymers of different chemical and/or physical construction.

When two components are used, the fibre is qualified as a bicomponent fibre.

B.2 Types of bicomponent fibre structure

The bicomponent fibre is classified in one type of the three following structures.

B.2.1 S/S structure

S/S type is used as the structure “Side by Side” of the components of the fibre. The structure of the component polymers is bilateral (see illustrations in [Table B.1](#)).

B.2.2 Sh/C structure

Sh/C type is used as the structure “Sheath and Cover” of the components of the fibre. The structure of the component polymers is one external polymer, the “sheath”, covering one internal polymer, the “core” (see illustrations in [Table B.1](#)).

B.2.3 M/F structure

M/F type is used as the structure of “Fibrils in Matrix” of the components of the fibre. The structure of the component polymers is the fibrils of one polymer span inside the other polymer, the matrix (see illustrations in [Table B.1](#)).

B.2.4 Name of a bicomponent fibre

The name of the bicomponent fibre shall be based on the generic name of both components, followed, if required, by the structure type.

The symbol / shall be used to represent the bond between the polymers.

EXAMPLE A bicomponent fibre made of two types of polyester bonded along the fibre shall be named as polyester / polyester [S/S type].

Table B.1 — Structures of bicomponent fibre (examples)

Structures	Bicomponent fibres
[S/S type]	
[Sh/C type]	
[M/F type]	

Annex C (informative)

Modified fibres

C.1 General

Man-made fibre can be modified by addition of ingredient(s), which can alter some initial properties of the fibre.

NOTE The nature of the ingredients may be particles, molecules, etc., added in the spinnable material, and which differs from the polymer components as described in [Annex B](#).

Such an ingredient is said to be “embedded” in the major polymer.

C.2 Name of a modified fibre

The name of a modified fibre shall be composed of the generic name of the fibre (as a matrix), following by the term “with embedded xx”, where xx represents the term related to the ingredient.

NOTE The concept of the denomination is based on the application of the Chinese standard FZ/T 01053^[4].

C.3 Examples

C.3.1 Modified Vinylal

Soy proteins (molecules) have been used to be embedded in the acetalized polyvinyl alcohol polymer. Then the name of this modified fibre shall be “vinylal with embedded soy proteins”.

C.3.2 Modified Acrylic

Milk protein (molecule) has been used to be embedded in the acrylic polymer. Then the name of this modified fibre shall be “acrylic with embedded milk protein”.

C.3.3 Modified Viscose

Pearl powder (particles from crushed or milled pearls) has been used to be embedded in the viscose polymer. Then the name of this modified fibre shall be “viscose with embedded pearl powder”.

Annex D (informative)

Index of generic names in English and in French

See [Table D.1](#).

Table D.1 — Alphabetical index of generic names

English	French	Subclause number	Code
acetate	acétate	4.5	CA
acrylic	acrylique	4.8	PAN
alginate	alginate	4.7	ALG
aramid	aramide	4.9	AR
carbon	carbone	4.22	CF
ceramic	céramique	4.34	CEF
chitin	chitine	4.35	CHT
chlorofibre	chlorofibre	4.10	CLF
cupro	cupro	4.1	CUP
elastane	élasthanne	4.11	EL
elastodiene	élastodiène	4.12	ED
elastolefin	élastoléfine	4.25	EOL
elastomultiester	élastomultiester	4.32	ELE
fluorofibre	fluorofibre	4.13	PTFE
glass	verre	4.20	GF
lyocell	lyocell	4.2	CLY
melamine	mélamine	4.26	MEL
metal	métal	4.23	MTF
modacrylic	modacrylique	4.14	MAC
modal	modal	4.3	CMD
polyamide	polyamide	4.15	PA
polybenzimidazol	polybenzimidazol	4.31	PBI
polycarbamide	polycarbamide	4.29	<i>None</i>
polyester	polyester	4.16	PES
polyethylene	polyéthylène	4.17	PE
polylactide	polylactide	4.24	PLA
polyimide	polyimide	4.18	PI
polyphenylene sulfide	polysulfure de phénylène	4.27	PPS
polypropylene	polypropylène	4.19	PP
polypropylene/polyamide bicomponent	bicomposant polypropylène/ polyamide	4.33	<i>None</i>
protein	protéinique	4.28	<i>None</i>
triacetate	triacétate	4.6	CTA

Table D.1 *(continued)*

English	French	Subclause number	Code
trivinyll	trivinyll	4.30	<i>None</i>
vinylal	vinylal	4.21	PVAL
viscose	viscose	4.4	CV

Annex E (informative)

Index of codes in alphabetical order with English and French equivalents

See [Table E.1](#).

Table E.1 — Alphabetical index of generic name codes

Code	English	French
ALG	alginate	alginate
AR	aramid	aramide
CA	acetate	acétate
CEF	ceramic	céramique
CF	carbon	carbone
CHT	chitin	chitine
CLF	chlorofibre	chlorofibre
CLY	lyocell	lyocell
CMD	modal	modal
CTA	triacetate	triacétate
CUP	cupro	cupro
CV	viscose	viscose
ED	elastodiene	élastodiène
EL	elastane	élasthanne
ELE	elastomultiester	élastomultiester
EOL	elastolefin	élastolefine
GF	glass	verre
MAC	modacrylic	modacrylique
MEL	melamine	mélamine
MTF	metal fibre	fibre de metal
PA	polyamide	polyamide
PAN	acrylic	acrylique
PE	polyethylene	polyéthylène
PES	polyester	polyester
PI	polyimide	polyimide
PLA	polylactide	polylactide
PP	polypropylene	polypropylène
PPS	polyphenylene sulfide	polysulfure de phénylène
PTFE	fluorofibre	fluorofibre
PVAL	vinylal	vinylal

Annex F (informative)

Regional and national requirements related to generic names

F.1 General

In certain countries of the world, there are regulations or specific requirements related to composition labelling. The following is information related to these requirements as examples in China, in the countries of the European Union, in Japan and in the United States. As for other countries, ask and contact their national standard bodies concerned or use their websites to confirm their specific requirements in those countries.

F.2 Requirements in China

The regulation identified as the standard FZ 01053^[4], which includes different and/or additional fibre denominations (see [Table F.1](#) – non-exhaustive list) than the present generic names (cf. [Table 1](#), “Other denominations”).

Table F.1 — Generic names versus Chinese fibre denominations

No.	Generic names	Chinese denominations	Comments
4.4	viscose	viscose or rayon	
4.11	elastane	elastane or spandex	
4.15	polyamide	polyamide or nylon	
4.20	glass	glass fibre	
4.22	carbon	carbon fibre	
4.23	metal	metal fibre	
4.25	elastolefin	elastolefin or lastol	
4.34	ceramic	ceramic fibre	

For further information, see the website www.aqsiq.gov.cn.

F.3 Requirements in the countries of the European Union

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 and repealing Council Directive 73/44/EEC and Directives 96/73/EC and 2008/121/EC of the European Parliament and of the Council, includes the following different and/or additional fibre denominations than the present generic names (see [Table F.2](#) – non-exhaustive list).

Table F.2 — Generic names versus EU fibre denominations

No.	Generic names	EU denominations	Comments
4.15	polyamide	polyamide or nylon	The use of “nylon” denomination is restricted to polyamide 6.6 in some EU countries.
4.20	glass	glass fibre	
4.23	metal	metallic fibre	
4.24	polylactide	polylactide	Fibre formed of linear macromolecules having, in the chain, at least 85 % by mass of lactic acid ester units derived from naturally occurring sugars, and which has a melting temperature of at least 135 °C.

For further information, see the website eur-lex.europa.eu.

F.4 Requirements in Japan

The regulation identified as “Textile Goods Quality Labelling Regulations” includes different and/or additional fibre denominations (see [Table F.3](#) – non-exhaustive list) than the present generic names (cf. [Table 1](#), “Other denominations”).

Table F.3 — Generic names versus Japanese fibre denominations

No.	Generic names	Japanese denominations	Comments
4.4	viscose	rayon	
4.11	elastane	polyurethane	
4.24	polylactide ^a	polylactide	Japanese definition: Fibre formed of linear macromolecules having in chain at least 50 % by mass of lactic acid ester units.

^a IMPORTANT — “Polylactide” products intended to be sold in EU or in the USA have to match the definition given in [Table F.2](#) or [Table F.4](#).

For further information, see the website www.meti.go.jp.

F.5 Requirements in the United States

The regulation identified as “Textile Fiber Products Identification Act” includes the following different and/or additional fibre denominations than the present generic names (see [Table F.4](#) – non-exhaustive list).

Table F.4 — Generic names versus US fibre denominations

No.	Generic names	US fibre denominations	Comments
4.4	viscose	rayon	
4.11	elastane	spandex	
4.15	polyamide	nylon	
4.16	polyester	triexta	“triexta” denomination is used only for poly trimethylene terephthalate.
4.17	polyethylene	olefin	
4.19	polypropylene	olefin	
4.23	metal	metallic fibre	

Table F.4 (continued)

No.	Generic names	US fibre denominations	Comments
4.24	polylactide	PLA	Fibre formed of linear macromolecules having, in the chain, at least 85 % by mass of lactic acid ester units derived from naturally occurring sugars.
4.25	elastolefin	lastol	
4.28	protein	azlon	
4.32	elastomultiester	elasterell-p	

For further information, see the website www.ftc.gov.

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- [1] ISO 1833 (all parts), *Textiles — Quantitative chemical analysis*
- [2] ISO 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*
- [3] ISO/TR 11827, *Textiles — Composition testing — Identification of fibres*
- [4] FZ/T 01053, *Textiles — Identification of fibre content*

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