Designation: D7641 – 10 (Reapproved 2014)ε1

Standard Guide for Textile Fibers[1]

This standard is issued under the fixed designation D7641; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

ε[1] NOTE—Editorial changes were made to Annex A1 in August 2014.

1. Scope

1.1 This guide lists fibers used to manufacture textile products.

1.2 Specific groups of fibers are identified using tables of standard classification.

1.2.1 Animal fibers are identified by commercial name, biological name, end use, and geographic source.

1.2.2 Vegetable fibers are identified by commercial name, botanical name, staple length or description, and geographic source.

1.2.3 Mineral fibers are identified by commercial name, mineralogical name, chemical description, and geographic source.

1.2.4 Manufactured fibers are identified by commercial name, generic name, and major component.

1.3 Major fiber types used for textile purposes are further classified.

1.3.1 Manufactured fibers are identified as having either an organic base or inorganic base.

1.3.2 Natural fibers are identified as having a cellulosic, protein, or mineral base.

1.4 A glossary of generic names and definitions for manufactured fibers is included as additional information.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D123 Terminology Relating to Textiles

2.2 *ISO Standards:*

ISO 2076:1999 (E) Textiles–Man-made Fibers–Generic Names

2.3 *Other Documents:*

Code of Federal Regulations, Title 16, Section 303.7

3. Terminology

3.1 For definitions of textile terms used in the guide see Terminology D123.

4. Significance and Use

4.1 This guide is intended for use as a reference to improve the understanding of the relationship between commercial name, fiber identification and geographical regions of fiber origins that make up the composition of textile products.

4.2 This guide is intended to be used as a source of information only.

4.2.1 Detailed analysis, to verify specific data related to the composition of a particular fiber, may be necessary.

5. Animal (Protein Base) Fibers

5.1 See Table 1.

[1] This guide is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.92 on Terminology.

Current edition approved July 1, 2014. Published August 2015. DOI: 10.1520/D7641-10R14E01.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

TABLE 1 Animal (Protein-Base) Fibers

Commercial and Biological Name[A]		Use	Geographical Regions
ALPACA WOOL	*Llama glama*	textiles	South America, North America
American ring tail	*Bassariscusbacus astutus*	soft brushes	North America
Angora	See Rabbit, Angora, Mohair		
Badger	*Meles meles*	soft brushes	Asia, Europe
	Camelus dromedarius	textiles, soft	Asia
	Camelus bactrianus	textiles, coarse	Asia
CAMEL HAIR			
"Camel hair"	See Squirrel	soft brushes	Asia, North America
CASHMERE HAIR	*Caprahircus sp* (Goat)	textiles	Asia
Cattle hair	*Bos taurus*	upholstery	Asia, Europe
"Civet," "Black Sable"	See Spotted Skunk		
"Fitch"	*Mephitis mephitis et al* (Skunk)	soft brushes	North America
Fox	*Vulpes fulva*	stuffing	North America, Europe

TABLE 1 *Continued*

Commercial and Biological Name[A]		Use	Geographical Regions
Genet	*Genetta*	soft brushes	Africa, Asia, Europe
Goat hair	*Capra sp*	soft brushes	Asia
Hog bristle	*Sus scrofa*	paint brushes	Asia, North America
Horse hair, body	*Equus caballus*	upholstery, felts	Asia, Europe, North America, South America
Horse hair, mane and tail	*Equus caballus*	upholstery	Asia, Europe
Kolinksy	See Sable, red		
LLAMA WOOL	*Llama glama*	textiles	South America
Mink	See Sable, red		
MOHAIR	*Caprahircus* (Angora goat)	textiles	Asia, Africa, North America
Muskrat, Northern	*Ondatra zibethicus*	textiles	North America, Russia
Muskrat, Southern	*Ondatra rivalicia*	textiles	North America
Ox hair, ear	*Bos taurus*	soft brushes	Asia, Europe, North America
Pony	*Equus caballus*	soft brushes, felts	Asia
RABBIT, COMMON	*Oryctolagus cuniculus*	fur felt	Australia, Europe, Asia, North America
RABBIT, ANGORA	*Oryctolagus cuniculus*	textiles	Europe, North America
Sable, red	*Mustela sibirica* (Kolinksy, China Mink, Jap Mink)	soft brushes, stuffing	Asia
SHEEP WOOL	*Ovis aries et al.*	textiles	all continents
Skunk	See "Fitch"		
Skunk, Spotted	*Spilogale sp*	soft brushes	North America
Squirrel	*Sciurus vulgaris et al.*	soft brushes	Asia, North America
SILK	*Bombyx mori*	textiles	Asia, Europe
SILK, TUSSAH	*Antheraea paphia et al.*	textiles	Asia
VICUNA WOOL	*Llama vicugna*	textiles	South America

[A] The most common names are in capital letters; biological names are in italics.

6. Vegetable Fibers

6.1 See Tables 2-4.

TABLE 2 Vegetable Fibers: Seed and Fruit-Hair

NOTE 1—The physical origins and the botanical classifications in Tables 2-4 were reviewed by the U.S. Department of Agriculture.

Commercial and Botanical Name[A]		Staple Length, in.	Geographical Regions
Akund	*Calotropis gigantes*		Asia
	Gossypium, various sp		
COTTON	*Gossypium sp*		
1. American Upland	*Gossypium hirsutum*	¾ to 1 7/16	all continents
2. Asiatic cultivated			
a. Chinese	*Gossypium arboreum*	⅜ to 1	China
b. Indian	*Gossypium arboreum*	⅜ to 1	India
	Gossypium herbaceum		
c. Levantine	*Gossypium herbaceum*	½ to 1	Asia
3. Extra-long staple barbadenses:			
a. Egyptian	*Gossypium barbadense*	1⅛ to 1⅝	Egypt, Sudan, Peru
b. American Egyptian	*Gossypium barbadense*	1⅜ to 1½	United States
c. Sea Island	*Gossypium barbadense*	1½ to 2	West Indies
4. Medium staple, semi-rough barbadenses:			
a. Tanguis	*Gossypium barbadense*	1⅛ to 1¼	Peru
b. Ishan	*Gossypium barbadense*	1⅛ to 1¼	West Africa
c. Ashmouni (uppers)	*Gossypium barbadense*	1 1/16 to 1⅛	Egypt
5. Short staple, rough barbadenses:			
a. Iquitos	*Gossypium barbadense*	1 to 1 1/16	Peru
b. Lengupa	*Gossypium barbadense*	15/16 to 1 1/16	Colombia
6. Perennial tree cottons:			
a. West Indian	*Gossypium hirsutum var Marie-Galante*	1⅛ to 1⅜	West Indies
b. Sertao and Serido	*Gossypium hirsutum var Marie-Galante*	1⅛ to 1⅜	Brazil
KAPOK	*Ceiba pentandra*	¾ to ¼	Tropics
Milkweed Floss	*Asclepias various sp*	¾ to ¼	North America
Ozone fiber	*Asclepias sp incarnata*		United States
Pochote	*Ceiba aesculifolia*		Mexico
Samchu	*Chorisia species*		South America

[A] Preferred or most common names are in capital letters; botanical names are in italics. The abbreviation *sp* is for the word "species," the subdivisions of a genus.

TABLE 3 Vegetable Fibers: Bast and Leaf

Commercial and Botanical Name[A]		Description	Geographical Regions
ABACA	*Musa textilis* Neé	hard leaf fiber	Philippine Islands, Central America, Borneo, Sumatra
Abutilon avcennae Gaertn	See *Abutilon theophrasti* Medic medii		
Abutilon longicuspe	Zada buack	coarse bast fiber	
Abutilon periplocifolium	Maholtine	coarse bast fiber	
Abutilon theophrasti Sweet Medic medii	CHINESE JUTE	coarse bast fiber	China
Aechmae magdalenae André	*Pita floja*	fine leaf fiber	Central and South America
AFRICAN SISAL	*Agave sisalana*, Perrine & Engelm	hard leaf fiber	
Agave cantala Roxb	CANTALA	hard leaf fiber	East Indies, Philippine Islands
Agave cocui Trel	Dispopo	coarse leaf fiber	
Agave hexapetala Jacq	Cocuiza	coarse leaf fiber	
Agave deweyana Trel	Zapupe larga	hard leaf fiber	Mexico
Agave falcata Engelm	Guapilla	hard leaf fiber	Mexico
Agave fourcroydes Lem	HENEQUEN	coarse leaf fiber	Mexico, Cuba, Australia
Agave funkiana Koch & Bouché	JAUMAVE ISTLE	hard leaf fiber	Mexico
Agave lespinassei Trel	Zapupe fuerte	hard leaf fiber	Mexico
Agave letonae F. W. Taylor	SALVADOR SISAL	coarse leaf fiber	El Salvador
Agave lophanta var. *poselgeri* (Salm-Dyck) Berger	TULA ISTLE	hard leaf fiber	Mexico
Agave pesa-mulae Trel	Pata de mula, pie de mula	hard leaf fiber	Mexico
Agave pseudotequilana Trel	Mescal	hard leaf fiber	Mexico
Agave sisalana Perrine& Engelm	SISAL	hard leaf fiber	Mexico, Brazil, Kenya, Tanganyika, Uganda, Angola, Mozambique, Haiti, Java, Sumatra
Agave striata Zucc	Espandinin	hard leaf fiber	Mexico
Agave tequilana Weber	MESCAL	hard leaf fiber	Mexico
Agave zapupe Trel	ZAPUPE	hard leaf fiber	Mexico
Ake-ire	*Urenia lobata* Cav	bast fiber	
Aloes creole			
Aloes fiber			
Aloes malgache	*See Furcraea gigantea* Vent true aloe is not a fiber plant		
Ambari	*Hibiscus cannabrius L*	coarse bast fiber	
Ananas comosus L. (Merr)	PINEAPPLE FIBER	fine leaf fiber	West Indies, Philippine Islands
Apocynum sp	Kendyr	soft bast fiber	Russia
Aramina	*Urena lobata* Cav	bast fiber	
Arghan	*Aechmea magdalenae* André		
Asclepias incurnata L	Swamp milk weed	soft bast fiber	United States
Awasthe hemp	*Hibiscus cannabinus L* (not hemp)	bast fiber	
Bamia	*Urena lobata* Cav		
BANANA	*Musa sapientum L*	leaf fiber	
Banana yucca	*Yucca mohavensis* Sarg		
Ban ochra	*Urena lobata* Cav		
Bariala	*Sida micrantha* Schrank		
Barreta	*Samuela carnerosana* Trel		
BEAR GRASS	*Nolina sp, Yucca sp*		
Benares hemp	*Crotalaria juncea L* (not hemp)		
Benares sunn	*Crotalaria*		
Billbergia infuscata[B]	Infuscata	soft leaf fiber	South America
Bimli jute			
Bimli patam }	*Hibiscus cannabinus L* (not jute)		
Boehmeria nivea (L) Gaud	RAMIE, China grass	soft bast fiber	Japan, China, Brazil, United States
Bolo-bolo	*Urena lobata* Cav		
Bombay aloe	*Furcraea gigantea* Vent (not true aloe)		
Bombay hemp	*Crotalaria jungea L* (not hemp)		
Bowstring hemp	*Sansevieria sp* (not hemp)		
Brazilian jute	*Corchorus sp* (*Hibiscus* and *Urena* are not jute)		
Bromelia magdalenae	See *Aechmea magdalenae* André		
Bromelia karatas L	Gravata	soft leaf fiber	Brazil
Bromelia laciniosa Mart & Schult	Macambira	soft leaf fiber	Brazil
Bromelia longissima	*Aechmea magdalenae* André	soft leaf fiber	Brazil
Bromelia sagenaria	*Pseudaranus sagenarius* (Arruda) Camargo	soft leaf fiber	Brazil
Broom fiber	*Cystisus scoparius* (L) Link, and/or *Spartium junceum* L		
Brown hemp	*Crotalaria juncea L* (not hemp)		
Cabulla	*Furcraea cabuya* Trel		
Cabuya	*Furcraea cabuya* Trel		
Cabuya blanca			
Cabuya blancho			
Cabuya sin espina	*F. cabuya* var. *integra* Trel		
Cadillo			
Caesar weed }	*Urena lobata* Cav		
Calotropis gigantea Dry & Ait	Akund		

TABLE 3 *Continued*

Commercial and Botanical Name[A]		Description	Geographical Regions
Canamo			
Canamo }	Spanish word for hemp		
Candilla			
Candillo }	*Urena lobata* Cav		
Canhamo	*Urena lobata* Cav		
Cannabis sativa L	HEMP	soft bast fiber	all temperate zones
CANTALA	*Agave cantala* Roxb; differs from maguey in retting		
CAROA, *Carua*	*Neoglaziova variegata* Mez		
Carrapicho	*Urena lobata* Cav		
Cebu hemp	*Musa textilis* Née (not hemp)		
CEBU MAGUEY	*Agave cantala* Roxb (retted differently from Cantala)		
Cephalonema sp	Punga	bast fiber	Belgian Congo
Chanvre	French word for hemp		
Chaparral yucca	*Hesperoyucca whipplei* (Torr) Trel		
China grass	*Boehmeria nivea* (*L*) Gaud		
CHINESE JUTE	*Abutilon theophrasti* Medic Medii		
Chingma	*Abutilon theophrasti* Medic		
Chino azul	*Agave tequilana* Weber		
Chino bermejo	*Agave palmaris* Trel		
Chique-chique	*Leopoldinia piassaba* Wallace& Archer		
Chuchao	*Furcraea andine* Trel		
Coconada hemp	*Crotalaria juncea L* (not hemp)		
Cocuiza	*Furcraea humboldtiana* Trel *F hexapetalla*, (Jacq) Urb		
Cocuiza mansa	*Furcraea gigantea* Vent		
CONGO JUTE	*Urena lobata* Cav (not jute)	bast fiber	Belgian Congo, Brazil, Argentina, Venezuela, Cuba
Corchorus capsularis L	JUTE (white jute)	soft bast fiber	Pakistan, India
Corchorus olitorius L	TOSSA, DAISEE (jutes)	soft bast fiber	Pakistan, India
Cousin rouge	*Urena lobata* Cav		
Crotalaria juncea L	SUNN (not hemp)	hard bast fiber	India
Cuban jute	*Urena* sp. *Malva* sp *Sida* sp (not jute)		
Cuban sisal	*Agave fourcroydes* Lem		
Culut culutan	*Urena lobata* Cav		
Cytisus scuparius (L) Link	Broom fiber, Spanish broom	soft bast fiber	Italy, Spain
Da	*Hibiscus cannabinus L*		
DAISEE JUTE	*Corchorus olitorius L*		
Davao hemp	*Musa textiles Nèe* (not hemp)		
Deccan hemp	*Hibiscus cannabinus* (not hemp)		
Dha	*Hibiscus cannabinus L*		
Dispopo	*Agave cocui* Trel		
Ensete edulis (Gmel) Horan	Musa ensete Gmel		
Escobilla	*Sida sp*		
Espadinum	*Agave striata* Zucc		
FIQUE	*Furcraea macrophylla* Baker		
Flax	*Linum usitatissimum L*	soft bast fiber	Argentina, Australia, Belarus, Belgium, Brazil, Bulgaria, Canada, Chile, China, Czech Republic, Egypt, Estonia, France, Germany, Hungary, India, Ireland, Italy, Latvia, Lithuania, Netherlands, New Zealand, Poland, Romania, Russia, Ukraine, United States, Yugoslavia
FORMIO	*Phormium tenax* Forst		
French hemp	*Cannabis sativa L*		
Furcraea andina Trel	Chuchao	hard leaf fiber	Ecuador
Furcraea cabuya Trel	Cabuya	hard leaf fiber	Central America
Furcraea cubensis	Cabulla	hard leaf fiber	Haiti, Cuba, Venezuela, Dominican Republic
Furcraea geminispina Jacobi	Cocuiza	hard leaf fiber	Venezuela
Furcraea gingantea Vent	Piteira, cocuiza mansa	hard leaf fiber	Mauritius, Venezuela, Brazil, Tropics
Furcraea hexapetala (Jacq) Urb	Furcraea cubensis	hard leaf fiber	Haiti, Cuba, Venezuela, Dominican Republic
Furcraea hemboldtiana Trel	Cocuiza	hard leaf fiber	Venezuela
Furcraea macrophylla Baker	FIQUE	hard leaf fiber	Colombia
Galla	Musa ensete-Ensete edulis (Gmel) Horan		
Gambo hemp	*Hibiscus cannabinus L* (not hemp)		
Gombo hemp	*Hibiscus cannabinus L* (not hemp)		
Grand cousin	*Urena lobata* Cav		
Grand mahot cousin	*Urena lobata* Cav		
Gravata	*Bromelia Karatus L*		
Guapilla	*Agave falcata* Engelm		
GUAXIMA	*Urena lobata* Cav		
Guaxima roxa	*Urena lobata* Cav		
Guaxima vermehla	*Urena lobata* Cav		

TABLE 3 *Continued*

Commercial and Botanical Name[A]		Description	Geographical Regions
Guiazo	*Urena lobata* Cav		
HAITIAN SISAL	*Agave sisalana* Perrine & Engelm		
Hanf	German word for hemp		Austria, Bulgaria, Chile, China, Germany, Hungary, Italy, Poland, Romania, Russia, Syria, United States, Yugoslavia
HEMP	*Cannabis sativa L*		
HENEQUEN	*Agave fourcroydes* Lem		
Hennup	Dutch word for hemp		
Hesperaloe funifera (Koch) Trel	ZAMANDOQUE	hard leaf fiber	Mexico
Hesperoyucca whipplei (Torr) Trel	YUCCA	hard leaf fiber	United States
Hibiscus cannabinus L	KENAF, MESHTA, Ambari, Bimlipatam, Awasthe, Deccan, Dha, Gambo	bast fiber	Russia, Persia, India, South America, United States, Cuba
Hibiscus abelmoschus L	Musk hemp	soft bast fiber	India
Hibiscus esculentus L	Ochra	soft bast fiber	United States
Hibiscus ferax Hook	MESHTA	soft bast fiber	India, Brazil
Hibiscus kitaibelifolius St Hil	Juta paulista	soft bast fiber	Brazil
Hibiscus radiatus[C]	Papoula de St Francis	soft bast fiber	Brazil
Hibiscus sabdariffa L	ROSELLA	soft bast fiber	Java, Brazil
Ife hemp			
Ifé	*Sansevieria sp* (not hemp)		
Indian hemp (United States)	*Apocynum cannabinum L* (not hemp)		
Indian hemp (India)	Several unrelated plants (not hemp) *Crotalaria sp* and *Hibiscus sp* (Examples are Ambari, Benares hemp, Itarsi, Sunn)		
Infuscata	*Billbergia infuscata*[B]		
ISTLE	Several *Agave sp* (word is a generic Mexican term)		
IXTLE }			
Istle Jaumave	*Agave funkiana* Koch & Bouché		
Istle, Palma	*Samuela carnerosana* Trel		
Istle Pita	*Yucca treculeana* Carr		
Istle Tula	*Agave lophanta* var *poselgeri* (Salm-Dyck) Berger		
Itarsi hemp	*Crotalaria juncea L* (not hemp)		
Ixtli	*Hesperaloe funifera* (Koch) Trel		
JAUMAVE ISTLE			
Jaumave			
Jaumave lechiguilla	*Agave funkiana* Koch & Bouché		
JAVA CANTALA	*Agave cantala* Roxb different retting from maguey		
Java jute	*Hibiscus sabdariffa L* (not jute)		
JAVA SISAL	*Agave sisalana* Perrine & Engelm		
Jirica	*Nolina sp*		
Jubblepore hemp	*Crotalaria juncea L* (not hemp)		
Juta paulista	*Hibiscus kitaibali folius* St Hil		
JUTE	*Corchorus capsularis L* and *Corchorus olitorius L*		
KENAF	*Hibiscus cannabinus L*		
Kendyr	*Apocynum sp*		
KENTUCKY HEMP	*Cannabis sativa L*		
Lechuguilla (Tula istle)	*Agave lophanta* var *poselgeri* (Salm-Dyck) Berger		
Letona	*Agave letonae* F. W. Taylor		
Linen	See Flax		
Luffa gourd	*Linum usitatissimum L*		
Luffa	*Luffa sp*		
Loofah			
Macambira	*Bromelia laciniosa* Mart & Schultz *L*		
Madagascar bass	*Vonitra sp*		
Madras hemp	*Crotalaria juncea L* (not hemp)		
Maguey	Latin American term applied to many species of *Agave*		
MAGUEY (CEBU)	*Agave cantala Roxb*		
Maguey (Peru)	*Furcraea macrophylla* Baker		
Maguey (Cuba)	*Furcraea hexapetalla* (Jacq) Urb		
Maholtine	*Abutilon periplocifolium* Sweet		
Malva	Latin American term applied to several *Malvaceae*		
MALVA	*Sida micrantha* Schrank		
Malva blanca	*Urena lobata* Cav		
Malva listro			
Malva risco }	*Sida micrantha* Schrank		

TABLE 3 *Continued*

Commercial and Botanical Name[A]		Description	Geographical Regions
Malva roxa	*Urena lobata* Cav		
Malva velluda	*Malache malacophylla* (Néc & Mart) Stand		
Malvas	*Urena lobata* Cav		
Manila	*Musa textilis* Née (not hemp)		
Manila hemp	*Musa textilis* Née (not hemp)		
Manila maguey	*Agave cantala* Roxb		
Mano largo	*Agave palmaris* Trel		
Mauritius hemp	*Furcraea gigantea* Weber (not hemp)		
Mazatlan hemp	*Agave tequilana* Weber (not hemp)		
MESCAL	Fibre mixture, *Agave sp*		
Mescal maguey	*Agave tequilana* Weber		
MESHTA	*Hibiscus cananbinus* L H *ferax* Hook	soft bast fiber	India
Mexican sisal	*Agar fourcroydes* Lem		
Milkweed fiber	*Ascelpias sp* (bast)	bast fiber, also (see Sec. I) seed hair	
Moorva	*Sansevieria sp*		
Musk hemp	*Hibiscus abelmoschus L* (not hemp)		
Musa ensete Gmel	Ensete edulis (Gmel) Horan	coarse leaf fiber	Ethiopia
Musa sapientum L	Banana fiber	coarse leaf fiber	Tropics
Musa textilis Née	ABACA, manila	coarse leaf fiber	Philippine Islands, Borneo, Sumatra
Nanas sabrong	*Agave cantala*, Roxb		
Natal hemp	*Furcraea gigantea* Vent (not hemp)		
Neoglaziovia variegata Mez	CAROA caraua	hard leaf fiber	Brazil
New Zealand flax	*Phormium tenax* Forst phormium or formio (not flax or hemp)		
New Zealand hemp }			
Nolina sp	BEAR GRASS	hard leaf fiber	Southwest United States, Mexico
Ochra	*Hibiscus esculentus L*		
Olona	*Touchar dia latifolia* Gaud		
Ototo grande	*Urena lobata* Cav		
Paka	*Urena lobata* Cav		
Palma	*Samuela carnerosana* Trel		
Palma barreta	*Samuela carnerosana* Trel		
PALMA ISTLE }			
Palmilla	*Yucca elata* Engelm		
Palmyra	*Borassus flabelifer L*		
Panama hat palm	*Carludovica palmata* R & P (not a palm)		
Pangane	*Sansevierid Kirkii* Bak (not hemp)		
Pangane hemp			
Papoula de St Francis	*Hibiscus ferax* Hook		
Pata de mula	*Agave pes-mulae* Trel		
Pavonia malacophylla Wright			
Pavonia schimperiana Hochst & A. Rich			
Pavonia tomentosa Hochst & A. Rich	*Malva relludo* UACIMA	bast fiber	Brazil
Phillibit black hemp	*Crotalaria juncea L* (*C tenuifolia* Roxb) (not hemp)		
Philippine maguey	*Agave cantala* Roxb		
PHORMIUM	*Phormium tenax* Forst		
Phormium tenax Forst	PHORMIUM	hard leaf fiber	Argentina, Chile, New Zealand, St. Helena
Pie de mula	*Agave pes-mulae* Trel		
Pineapple fibre (pina)	*Ananas comosus (L)* Merr		
Pineapple (wild)	*Aechmea magdalenae* André		
Pita	Latin-American name for many different hard fibers		
Pita floya (floia)	*Aechmea magdalenae* André		
PITA ISTLE	*Yucca treculeana* Carr		
Pita palma }			
PITEIRA	*Furcraea gigantea* Vent		
Pitre (peetray)	*Furcraea hexapetala* (Jacq) Urb		
POEPOES	*Agave cantala* Roxb		
Polompom	*Thespesia lampas* Dalz & Dalz & Gibs		
Pochote	Ceiba aesculifolia (H.B.K.) Britt & F. G. Bak		
Pseudananas sagenarius (Arruda) Camargo	*Bromelia sagenaria*	soft leaf fiber	Brazil
Punga	*Cephalonema sp*	bast fiber	Belgian Congo
Queensland hemp	*Sida rhombifolia L* (not hemp)		
RAMIE	*Boehmeria nivea L* Gaud		
RATTAN	*Calamus sp*		
Rhea	*Boehmeria nivea L* Gaud		
ROSELLE, rosella	*Hibiscus sabdariffa L*		
Samandoca	*Hesperaloe funifera* (Koch) Trel		
Samuela carnerosana Trel	PALMA ISTLE	leaf fiber	Mexico
Salvador henequen	*Agave letonae* F. W. Taylor		
SAN SALVADOR SISAL }			

TABLE 3 *Continued*

Commercial and Botanical Name[A]		Description	Geographical Regions
Sansevieria cylindrica Boj	Ifé	hard leaf fiber	Africa
Sansevieria Kirkii Bak	Pangane	hard leaf fiber	South Africa
Sansevieria sp	Bowstring hemp (not hemp)	hard leaf fiber	Florida
SANSEVIERIA	*Sansevieria sp*	hard leaf fiber	Cuba
Sansevieria trifasciata Prain		hard leaf fiber	Cuba
Scaahuista	*Nolina sp*		
Scioa	*Ensete edulis* (Gmel) Horan		
Seonie hemp	*Crotalaria juncea L* (not hemp)		
Sida micrantha Schrank	Escobilla	soft bast fiber	India, Australia, Brazil
Sidamo	*Ensete edulis* (Gmel) Horan		
Sida rhombifolia L	Queensland hemp (not hemp)		Australia
Silk grass	*Aechema magdalena* André		
SISAL	*Agave sisalana* Perrine & Engelm		
Sisal weisz	*Agave fourcroydes* Lem		
Soap weed	*Yucca glauca* Nutt		
Soft leaf fiber	*Pseudananas sagenarius* (Arruda) Camargo		
SOUDAN SISAL	*Agave sisalana* Perriné & Engelm		
Spanish broom	*Cytisus scoparius (L)* Link		
Spartium junceum L	Brom fibre		Southern Europe
Spanish dagger	*Yucca macro carpa* (Torr) Coville		
St Francis poppy	*Hibiscus ferax* Hook		
St Helena hemp	*Phormium tenax* Forst (not hemp)		
SUNN	*Crotalaria juncea L*		
Swamp milkweed	*Asclepias inca nata L*		
TAMPICO	*Agave funkiana* Koch & Bouché, and A. *lophantha* var *poselgeri* (Salm-Dyck) Berger		
TEQUILA	*Agave tequilana* Weber		
Thespesia lampas Dalz & Dalz & Gibs	Polom pom	soft bast fiber	Indochina
Thespesia populnea Sol.& Correa			
Tientsin jute	*Abutilon theophrasti* Medic Medii (not jute)		
Toja	*Urena lobata* Cav		
TOSSA	*Corchorus olitorius L*		
Touchardia latifolia Gaud	Olona	soft bast fiber	Hawaii
TULA ISTLE	*Agave lophantha* var *poselgeri* (Salm-Dyck) Berger		
Uacima	*Urenal lobata* Cav		
Uaixima			
Urena lobata Cav	CONGO JUTE, GUAXIMA		Belgian Congo, Venezuela, Brazil, United States, Cuba, Argentina
Urena sinuata Wedd	Cuban jute, Kunjia		Cuba, Bengal
Urtica nivea L	RAMIE, Boehmeria nivea (L.) Gaud		China
Victoria sisal	*Agave fourcroydes* Lem		
Warangel hemp	*Crotalaria juncea L* (not hemp)		
Yacci	*Agave sisalana* Perrine & Engelm		
Yaxi			
Yucatan sisal	*Agave fourcroydes Lem*		
YUCCA[D]		hard leaf fiber	
Yucca angustifolia[E]	BEAR GRASS, soap weed		
Yucca glauca Nutt	BEAR GRASS, soap weed		
Yucca treculena Carr	PITA ISTLE		
Yucca[D]			
Zada buack	*Abutilon longicuspe* Hochst & A. Rich		
Zamandoque	*Hesperaloe funifera* (Koch) Trel		
ZAPUPE[E]	*Agave zapupe* Trel		

[A] Preferred or most common names are in capital letters; botanical names are in italics. The abbreviation *sp* is for the word "species," the subdivisions of a genus.
[B] Not found in botanical literature.
[C] Authority cannot be determined.
[D] Many Yucca species yield fiber; the principal ones are included in this table.
[E] Many Agave species yield fiber known as zapupe.

TABLE 4 Vegetable Fibers: Palm and Miscellaneous

Commercial and Botanical Name[A]		Description	Geographical Regions
Acrocomia sp	Corojo	palm leaf fiber	South America, West Indies
African fiber	*Chamaerops humilis L*	palm leaf segments	North Africa
Alfa	*Stipa tenacissima L*	grass leaves	Mediterranean
Aren	*Arenga pinnata* (Wurmb) Merr	palm fiber	Java
Arenga pinnata (Wurmb.) Merr	Aren	palm fiber	Java
Astrocaryum tucuma Mart	Tecum, tucum; when mixed with *Bactris setosa* Mart	palm leaf fiber	Brazil
Attalea funifera Mart	Bahia bass	plam leaf-base fiber	Brazil
Bactris sp	Mocoro	palm fiber	South America
Bactris setosa Mart	See Astrocaryum tucuma Mart	palm fiber	Brazil
Bahia bass			
Bahia piassava	*Attalea funifera* Mart	palm leaf-base fiber	Brazil
Bamboo	*Bambus sp*	stem segments	Tropics
Bambusa sp	Bamboo		
Bass	*Attalea funifera* Mart *Leopoldina piassaba* Wallace & Archer *Raphia sp Vonitra sp*	palm fiber	Tropics
Bassine	*Borassus flabellifer L*	palm leaf-stem fiber	India
Borassus flabellifer L	Palmyra bassine	palm leaf-stem fiber	India
Broom corn	*Sorghum bicolar* (*L*) Moench. (*S* technicum Batt & Trab)	flower head	United States
Broom root	*Muhlenbergia macoura* (H.B.K.) Hitchc	roots	Mexico
Buntal	*Corypha utan* Lam	palm fiber	East Indies
Buri	*Corypha utan* Lam	palm fiber	East Indies
Cabo negro	*Arenga pinnata* (Wurmb) Merr	palm fiber	Philippines
Calamas sp	Rattan	stems	Oriental Tropics
Carludovica palmata R & P	Palm hat plant (not a palm)	leaf segments	Ecuador
Caryota urens L	Kittool	palm fiber	Asia, Madagascar
Cattail fiber	*Typha sp*	pappus bristles	United States
Chamaerops humilis L	Crin vegetal	palm leaf segments	North Africa
Chinese fan palm	*Livistona chinensis* R Br	palm leaf segments	East Asia
Chinese mat rush	*Lepironia mucronata* L. C. Rich	stems	East Asia
Coconut fiber	*Cocos nucifera L*	nut husk fiber	Tropics
Cocos nucifera L	Coir	nut husk fiber	Tropics
Coir	*Cocos nucifera L*	nut husk fiber	Tropics
Corojo	*Acrocomia sp*	palm leaf fiber	Cuba
Corypha utan Lam	Buntal	palm leaf segments	Philippines
Crin vegetal	*Chamaerops humilis L*	palm leaf segments	North Africa
Dum	*Hyphaene thebacia* Mart	palm leaf fiber	Arabia
Eel grass	*Zostera marina L*	leaves	Nova Scotia, Newfoundland
Ejoo	*Arenga pinnata* (Wurmb) Merr	palm fiber	Malaysia
Esparto	*Stipa tenacissima L*	leaves	Mediterranean
Gemuti	*Arenga pinnata* (Wurmb) Merr	palm fiber	Malaya
Hyphaene thebaica Mart	Dum	palm fiber	East Africa
Jutilal	*Typha sp*		
Kittool	*Caryota urens L*	palm fiber	Malaya
Leopoldinia piassaba Wallace & Archer	Para piassava	palm leaf-stem fiber	Brazil
Lepironia mucronata Rich	Chinese mat rush	rush stems	China
Livistona chinensis R Br	Chinese fan palm	palm leaf segments	China
Luffa sp	Loofah	net of fruit	Tropics
Mauritia flexusoa L	Moriche palm	palm leaf fiber	Venezuela
Mocoro	*Bactris sp*	palm fiber	South Africa
Monkey bass	*Leopoldinia piassaba* Wallace & Archer	palm leaf-stem fiber	Brazil
Moriche palm	*Mauritia flexuosa L*	palm leaf fiber	Venezuela
Muhlenbergia macoura (H.B.K.) Hitchc	Broom root, rice root	grass root	Mexico
Palmetto	*Sabal sp*	palm fiber	United States
buri	*Corypha utan* Lam	palm fiber	Philippines
Palm fiber Capo negro	*Arenga pinnata* (Wurmb) Merr	palm fiber	Philippines
Nirucge	*Mauritia flexuosa L*	palm leaf fiber	Venezuela
Para piassava	*Leopoldinia piassaba* Wallace & Archer	palm leaf-stem fiber	Brazil
Piassava	*Attalea funifera* Mart, *Leopoldinia piassaba* Wallace & Archer, *Raphia gigantea*, A Chev, *Vonitra sp*	palm fibers	Tropics
Pita de corojo	*Acrocomia sp*	palm leaf fiber	Cuba
Raffia	*Corypha utan*, Lam, *Raphia ruffia* Mart, *Raphia vinifera* P Beauv	palm leaf segments	Madagascar, Philippines
Raphia ruffia Mart	Raffia	palm leaf segments	Madagascar, East Africa
Raphia vinifera P Beauv	West African bass	palm leaf-stem fiber	West Africa
Rice root	*Muhlenbergia macoura* (H.B.K.) Hitchc	roots	Mexico
Rice paper plant	*Tetrapanax papyriferus* (Hook) Koch	pith	China
Sabal sp	Palmetto	palm fiber	Southern United States
Sorghum bicolor (*L*) Moench	Broom corn	flower heads	United States
Southern moss	*Tillandsia usneoides L*	fibrous stem axis	United States
Spanish moss	*Tillandsia usneoides L*	fibrous stem axis	United States
Stipa tenacissima L	Esparto	leaves	Mediterranean
Tillandsia usneoides L	Southern moss	fibrous stem axis	United States

TABLE 4 *Continued*

Commercial and Botanical Name[A]		Description	Geographical Regions
Tree beard	*Tillandsia usneoides L*		
Tecum fiber			
Tecum }	*Astrocaryum tucuma* Mart also *Bactris sp*	palm leaf fiber	Brazil
Tetrapanax papyriferus (Hook) Koch	Rice paper plant	pith	China
Typha sp	Cattail leaf fiber and down	rush leaves and flower bristles	Temperate Zones
Vegetable sponge	*Luffa sp*	net of fruist	Japan, West Indies
Vonitra sp	Madagascar piassava or bass	palm leaf-stem fiber	Madagascar
West African bass	*Raphia vinifera* P Beauv	palm leaf-stem fiber	Africa
Zacaton	Mexican rice root	fibrous roots	Mexico
Zostera marina L	Eel grass	leaves	Newfoundland, Nova Scotia

[A] Preferred or most common names are in capital letters; botanical names are in italics. The abbreviation *sp* is for the word "species," the subdivisions of a genus.

7. Mineral Fibers

7.1 See Table 5.

TABLE 5 Mineral Fibers

Commercial and Mineralogical Name		Chemical Description	Geographical Regions
ASBESTOS	Chrysotile	magnesium silicate	Canada, Russia
	Crocidolite	iron silicate	South Africa, Australia

8. Manufactured Fibers

8.1 See Table 6.

TABLE 6 Manufactured Fibers

Commercial or Generic Name	Major Component
Acetate:[A]	Cellulose Acetate:
Acetate	Secondary Acetate
Triacetate	Primary Acetate
Acrylic[A]	Polyacrylonitrile. See also Polyvinyl
Alginate	Metal salts of alginic acid
Anidel[A]	Copolymer of an acrylic-ester and other monomers
Azlon[A]	Modified naturally occurring proteins (including casein, cottonseed, peanut, and soybean)
Cuprammonium, Cupra	See Rayon[A]
Casein	See Azlon[A]
Cellulose Esters	See Acetate[A]
Elastomers	See Rubber,[A] Spandex[A]
Fluorocarbon	Polytetrafluoroethylene
Glass	Fused inorganic oxides
Metallic	Metal or alloy, some plastic-coated or laminated
Modacrylic[A]	Copolymer of acrylonitrile
Nylon:[A]	Polyamide:
Nylon 6	Poly (epsilon-caproamide)
Nylon 11	Poly (omega-undecanamide)
Nylon 6-6	Poly (hexamethylene adipamide)
Nylon 6-10	Poly (hexamethylene sebacamide)
Olefin[A]	Aliphatic hydrocarbons
Peanut	See Azlon[A]
Polyacrylic	See Acrylic[A]
Polyamide	See Nylon[A]
Polypeptide	See Nylon[A]
Polyester[A]	Condensation polymer of a dihydric alcohol and terephthalic acid
Polyethylene	See Olefin[A]
Polyurethane	See Spandex[A]
Polyvinyl	Copolymer of vinyl chloride and vinyl acetate Copolymer of vinyl chloride and acrylonitrile After-chlorinated polyvinyl chloride Copolymer of vinylidene chloride and other monomers (saran) Also see Acrylic[A]
Protein-Base Fiber	See Azlon[A]
Regenerated Cellulose	See Rayon[A]
Rayon:[A]	Regenerated Cellulose:
Cuprammonium	Cellulose regenerated by Cuprammonium process
Saponified acetate	Saponified cellulose acetate
Viscose	Cellulose regenerated by viscose process including regular and newer types as high-strength, high-wet modulus, cellular, and special cross-section and cross-linked rayons.
Rubber:[A]	Natural or synthetic polymers:
Natural	Polyisoprene

TABLE 6 *Continued*

Commercial or Generic Name	Major Component
Synthetic	Various elastoprenes Also see Elastomer
Saponified Acetate	See Rayon[A]
Saran[A]	Poly (vinylidene chloride) Also see Polyvinyl
Soybean	See Azlon[A]
Spandex[A]	Segmented polyurethane
Vinal[A]	Acetal of poly (vinyl alcohol)
Vinyl Acetate	See Polyvinyl
Vinyl Chloride	See Polyvinyl
Vinylidene Chloride	See Polyvinyl, Saran[A]
Vinyon[A]	Poly(vinyl chloride)
Viscose	See Rayon[A]
Zein	See Azlon[A]

[A] Generic names specified by the Federal Trade Commission: defined fully in Annex A1 of Terminology D123.

9. Major Fiber Types

9.1 See Tables 7 and 8.

TABLE 7 Classification of Major Manufactured[A] Fibers Used for Textile Purposes

	Organic Base[B]	Inorganic Base
Natural Polymer Base	Synthetic Polymer Base	
ALGINATE	Nonvoloid	Ceramic
MODIFIED CELLULOSE	Polyamides	Glass
Esters	Aramid	
Acetate (Secondary Acetate)	Nylon	Metal
Triacetate (Primary Acetate)	Nylon 6 Poly (epsilon-caproamide)	
	Nylon 11 Poly (omega-undecanamide)	Silica
REGENERATED CELLULOSE	Nylon 6-6 Poly (hexamethylene adipamide)	
Rayon[C]	Nylon 6-10 Poly (hexamethylene sebacamide)	
Cupro		
Lyocel	Polybenzimidozole (PBI)	
Modal		
Viscose (Rayon)	Polyester	
	Polyester	
REGENERATED PROTEIN	Elasterell-p	
Azlon		
Casein	Polyoelfins	
Peanut	Olefin (crystalline)	
Soybean	Polyethylene	
Zein	Polypropylene	
	Polystyrene	
PLA	Lastol	
	Spandex	
	Sulfar	
	Acyrlic	
	Anidex	
	Elastoester	
	Flourcarbon	
	Modacryclic	
	Nytril	
	Vinal	
	Vinyon	
Rubber	Synthetic Rubber – poly (isoprene, butadiene, chloroprene)	
	Lastrile	

[A] For more complete information, see Table 6.
[B] Generic terms and limiting percentages are taken from "Generic Names and Definitions of Manufactured Fibers," *Code of Federal Regulations*, Title 16, Section 303.7.
[C] Rayon is made from cellulose that is put through a technical chemical process called "regeneration." There are many sources of cellulose. Common sources are pine, spruce, hemlock, beech, and bamboo. Whatever the source of the cellulose, if it is used to make rayon, then the generic fiber name is "rayon". Some rayon is made by the viscose process.

TABLE 8 Classification of Major Natural Fibers[A] Used for Textile Purposes

Cellulose Base	Protein Base[A,B]	Other
BAST[C]	ANIMAL HAIR	MINERAL[D]
Bamboo	Wool	Asbestos

TABLE 8 *Continued*

Cellulose Base	Protein Base[A,B]	Other
Flax		
Hemp	Specialty	NATURAL RUBBER
Jute	Alpaca	
Kenaf	Camel	
Ramie	Cashmere	
	Llama	
	Mohair	
	Rabbit	
NUT HUSK[E]	Vicuna	
Coir		
LEAF[C]	ANIMAL SECRETION	
Abaca	Silk	
Agave	Cultivated	
New Zealand Flax	Dupioni	
Palm Istle	Tussah	
Yucca		
	Spider Silk	
SEED[E]		
Cotton		
Kapok		

[A] Generic terms and limiting percentages are taken from "Generic Names and Definitions of Manufactured Fibers," *Code of Federal Regulations*, Title 16, Section 303.7.
[B] For more complete information, see Table 1.
[C] For more complete information, see Table 3.
[D] For more complete information, see Table 5.
[E] For more complete information, see Table 4.

ANNEX

(Mandatory Information)

A1. GLOSSARY

A1.1 *Glossary of Terms*:

(a) ***Acrylic***—A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85 % by weight of acrylonitrile units.

(b) ***Modacrylic***—A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of less than 85 % but at least 35 % by weight of acrylonitrile units, except fibers qualifying under paragraph (j)(2) of this section and fibers qualifying under paragraph (q) of this section. (Sec. 7, 72 Stat. 1717; 15 U.S.C. section 70e).

(c) ***Polyester***—A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85 % by weight of an ester of a substituted aromatic carboxylic acid, including but not restricted to substituted terephthalate units, and para substituted hydroxybenzoate units, where the fiber is formed by the interaction of two or more chemically distinct polymers (of which none exceeds 85 % by weight), and contains ester groups as the dominant functional unit (at least 85 % by weight of the total polymer content of the fiber), and which, if stretched at least 100 %, durably and rapidly reverts substantially to its unstretched length when the tension is removed, the term *elasterell-p* may be used as a generic description of the fiber.

(d) ***Rayon*** —A manufactured fiber composed of regenerated cellulose, as well as manufactured fibers composed of regenerated cellulose in which substituents have replaced not more than 15 % of the hydrogens of the hydroxyl groups. Where the fiber is composed of cellulose precipitated from an organic solution in which no substitution of the hydroxyl groups takes place and no chemical intermediates are formed, the term *lyocell* may be used as a generic description of the fiber.

(e) ***Acetate***—A manufactured fiber in which the fiber-forming substance is cellulose acetate. Where not less than 92 % of the hydroxyl groups are acetylated, the term triacetate may be used as a generic description of the fiber.

(f) ***Saran*** —A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 80 % by weight of vinylidene chloride units.

(g) ***Azlon***—A manufactured fiber in which the fiber-forming substance is composed of any regenerated naturally occurring proteins.

(h) ***Nytril***—A manufactured fiber containing at least 85 % of a long chain polymer of vinylidene dinitrile where the vinylidene dinitrile content is no less than every other unit in the polymer chain.

(i) ***Nylon***—A manufactured fiber in which the fiber-forming substance is a long-chain synthetic polyamide in which less than 85 % of the amide linkages are attached directly to two aromatic rings.

(j) ***Rubber***—A manufactured fiber in which the fiber-forming substance is comprised of natural or synthetic rubber, including the following categories:

(1) A manufactured fiber in which the fiber-forming substance is a hydrocarbon such as natural rubber, polyisoprene, polybutadiene, copolymers of dienes and hydrocarbons, or amorphous (noncrystalline) polyolefins.

(2) A manufactured fiber in which the fiber-forming substance is a copolymer of acrylonitrile and a diene (such as butadiene) composed of not more than 50 % but at least 10 % by weight of acrylonitrile units. The term *lastrile* may be used as a generic description for fibers falling within this category.

(3) A manufactured fiber in which the fiber-forming substance is a polychloroprene or a copolymer of chloroprene in which at least 35 % by weight of the fiber-forming substance is composed of chloroprene units.

(k) ***Spandex***—A manufactured fiber in which the fiber-forming substance is a long chain synthetic polymer comprised of at least 85 % of a segmented polyurethane.

(l) ***Vinal***—A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 50 % by weight of vinyl alcohol units, and in which the total of the vinyl alcohol units and any one or more of the various acetal units is at least 85 % by weight of the fiber.

(m) ***Olefin***—A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85 % by weight of ethylene, propylene, or other olefin units, except amorphous (noncrystalline) polyolefins qualifying under paragraph (j)(1) of this section [Rule 7]. Where the fiber-forming substance is a cross-linked synthetic polymer, with low but significant crystallinity, composed of at least 95 % by weight of ethylene and at least one other olefin unit, and the fiber is substantially elastic and heat resistant, the term *lastol* may be used as a generic description of the fiber.

(n) ***Vinyon***—A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85 % by weight of vinyl chloride units.

(o) ***Metallic***—A manufactured fiber composed of metal, plastic-coated metal, metal-coated plastic, or a core completely covered by metal.

(p) ***Glass***—A manufactured fiber in which the fiber-forming substance is glass.

(q) ***Anidex***—A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 50 % by weight of one or more esters of a monohydric alcohol and acrylic acid.

(r) ***Novoloid***—A manufactured fiber containing at least 85 % by weight of a cross-linked novolac.

(s) ***Aramid***—A manufactured fiber in which the fiber-forming substance is a long-chain synthetic polyamide in which at least 85 % of the amide linkages are attached directly to two aromatic rings.

(t) ***Sulfar***—A manufactured fiber in which the fiber-forming substance is a long chain synthetic polysulfide in which at least 85 % of the sulfide linkages are attached directly to two (2) aromatic rings.

(u) ***PBI***—A manufactured fiber in which the fiber-forming substance is a long chain aromatic polymer having reoccurring imidazole groups as an integral part of the polymer chain.

(v) ***Elastoester***—A manufactured fiber in which the fiber-forming substance is a long-chain synthetic polymer composed of at least 50 % by weight of aliphatic polyether and at least 35 % by weight of polyester, as defined in 16 CFR 303.7(c).

(w) ***Melamine***—A manufactured fiber in which the fiber-forming substance is a synthetic polymer composed of at least 50 % by weight of a cross-linked melamine polymer.

(x) ***Fluoropolymer***—A manufactured fiber containing at least 95 % of a long-chain polymer synthesized from aliphatic fluorocarbon monomers.

(y) ***PLA***—A manufactured fiber in which the fiber-forming substance is composed of at least 85 % by weight of lactic acid ester units derived from naturally occurring sugars.(Sec. 6, 72 Stat. 1717; 15 U.S.C. 70e).

A1.2 This glossary is an alphabetical listing of terms presented as two columns. The column on the left shows the names of textile fibers that appear in the Code of Federal Regulations (CFR) Title 16, Section 303.7. The column on the right shows the ISO equivalent name for the fiber.

A1.2.1 The ISO name equivalent for a textile fiber in the right column will be shown in ***bold*** font with brackets.

A1.2.2 When the textile fiber listed in the CFR and ISO name equivalent are the same, the word [SAME] will be shown in brackets.

FTC (Bold/Italics)	ISO [Bold/Brackets]
Acetate	**[CELLULOSE]**
Acrylic	**[SAME]**
Anidex	**[SAME]**
Aramid	**[SAME]**
Azlon	**[SAME]**
Elastoester	**[ELASTOMULTIESTER]**
Fluoropolymer	**[FLUOROFIBRE]**
Glass	**[VERRE FIBRE]**
Melamine	**[SAME]**
Metallic	**[METAL FIBRE]**
Modacrylic	**[SAME]**
Novoloid	**[SAME]**
Nylon	**[POLYAMIDE]**
Nytril	**[SAME]**
Olefin	**[POLYPROPYLENE]**
PBI	**[SAME]**
Polyactide	**[SAME]**
Polyester	**[SAME]**
Rayon	**[VISCOSE]**
Rubber	**[ELASTODIENE]**
Saran	**[SAME]**
Spandex	**[ELASTANE]**
Sulfar	**[SAME]**
Vinal	**[VINYLAL]**
Vinyon	**[CHLOROFIBRE]**