

Fibre Properties

Polymer family and type	common names and trade names	deniers (gm/9,000 m)	tensile strength (gm/denier)	elongation at break (%)	initial modulus (gm/denier)	apparel and home-furnishing applications	industrial applications
Cellulosics							
Regenerated cellulose	rayon	2-3	2.0-2.1	17-20	--	area rugs, substitute for cotton in clothing	disposable nonwoven fabrics, tire cord, paper
Cellulose triacetate	acetate, Arnel	2-3	1.2-1.4	25-28	35-40	suit coat linings	cigarette filters
Polyamide							
Polycaprolactam (textile fibre)	nylon 6 (textile)	1.5-5	4.5-6.8	23-43	25-35	hosiery, lingerie, sports garments, soft-sided luggage, upholstery	no significant applications
Polyhexamethylene adipamide (textile fibre)	nylon 6,6 (textile)	1.5-5	4.5-6.8	23-43	25-35	hosiery, lingerie, sports garments, soft-sided luggage, upholstery	no significant applications
Polycaprolactam (industrial fibre)	nylon 6 (industrial)	1.5-5	6.5-9.5	12-17	33-46	no significant applications	ties, ropes, seat belts, parachutes, fishing lines and nets, hoses
Polyhexamethylene adipamide (industrial fibre)	nylon 6,6 (industrial)	1.5-5	6.5-9.5	12-17	33-46	no significant applications	ties, ropes, seat belts, parachutes, fishing lines and nets, hoses
Aramid							
Poly- <i>p</i> -phenylene terephthalamide	Kevlar, Twaron, Technora	1.0-1.5	25-30	3-6	500-1,000	no significant applications	radial tire belts, bulletproof vests, reinforcement for boat hulls and aircraft panels
Poly- <i>m</i> -phenylene isophthalamide	Nomex, Conex	2-5	3-6	2-30	130-150	no significant applications	filter bags for hot stack gases, flame-resistant clothing
Polyester							
Polyethylene terephthalate	Dacron, Terylene, Trevira	1.5-5	4.7-6.0	35-50	25-50	permanent-press clothing, firefill insulation, carpets	sewing thread, seat belts, tire yarns, nonwoven fabrics
Polyacrylonitrile							
Acrylic (>85% acrylonitrile)	Acrlan, Creslan, Courtelle	2-8	2.5-4.5	27-48	25-63	substitute for wool— e.g., in sweaters, hosiery, blankets	filters, battery separators, substitute for asbestos in cement
Modacrylic (35-85% acrylonitrile)	Verel, SEF	2-8	2.5-4.5	27-48	22-56	flame-resistant clothing— e.g., artificial fur, children's sleepwear	flame-resistant awnings, tents, boat covers
Polypropylene							
	Herclon, Marvess	2-10	5-9	15-30	29-45	upholstery, carpets, carpet backing	ropes, nets, disposable nonwoven fabrics
Polyethylene							
Regular		2-10	2-4	20-40	--	no significant applications	cordage, webbing
High-modulus	Dyneema, Spectra	--	30-35	2.7-3.5	1,370-2,016	no significant applications	reinforcement for boat hulls, bulletproof vests
Polyurethane							
	spandex, Lycra	2.5-20	0.6-1.5	400-600	--	stretch fabrics— e.g., for sportswear, swimsuits	no significant applications

First published in , and now in its fourth edition, Physical properties of textile fibres has become a classic, providing the standard reference on key aspects. tions, and indicates the properties required of the fibres to make full use of their large surfaces. 2. The Total Surface Area of Fibres. If each fibre is removed from. Fibre properties in the end product Characteristics of the raw material; Fiber fineness Fiber transfer factor; The most important working regions in carding. Summary of most important fibre properties Fiber transfer factor; The most important working regions in carding Behavior of fibers in the drafting zone. FibreMax can produce lightweight precision cables out of almost any fibre material. Each fibre material has its own distinctive properties. The choice for the right. Fiber or fibre is a natural or synthetic substance that is significantly longer than it is wide. Fibers Human-made or chemical fibers are fibers whose chemical composition, structure, and properties are significantly modified during the. Properties of Cotton Fiber Physical Characteristics of Cotton Fibre Chemical Characteristics of Cotton Fiber Cotton Properties. Where Does Cotton Come. Covers the mechanical properties of reinforcing fibres. Man-made fibre, fibre whose chemical composition, structure, and properties are significantly modified during the manufacturing process. Man-made fibres are. Introduction; Some Basic Concepts; Structural Attributes of Fibres; Fibre Characteristics; Dimensional and Related Attributes; Spirality, Crimp and Surface . filament i.e. classification of textile fibres and general properties of textile fibres. Introduction. The word textile is derived from the Latin term texture for. Request PDF on ResearchGate Fibre and sheet properties of Acacia and Eucalyptus Three market hardwood pulps; one acacia of Indonesian origin (Acacia. Properties Of Bamboo Fibre. Dr. Subrata Das. Written by: Dr. Subrata Das. By: Dr. Subrata Das E-mail: drsubratadas@livebreathelovehiphop.com Bamboo fibre is a. Wool's range of desirable properties make it a valuable material for many different purposes, from high-end fashion to fire-resistant products. This chapter contains sections titled: Introduction. Fibre Properties. Characteristic Values and Statistics. Significance of Fibre Testing Methods.

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