

Natural vs. Man-Made Fiber Properties

Fiber	Density(g/cm ³)	Diameter	Tensile Strength/MPA	Young's Modulus	% Elongation Break
Jute	1.3-1.5	25-200	393-775	13 - 27	1.2-1.15
Flax	1.5		345-1100	27.6	2.7-3.2
Cotton	1.5-1.6		287-800	5.5-12.6	7.0 – 8.0
Hemp			690		1.6
Ramie	1.5		400-938	61-128	1.2-3.8
Sisal	1.5	50-200	468-640	9.4-22.0	3-7
PALF		20-80	413-1630	34.5-82.5	1.6
Coir	1.15	100-450	131-175	4-6	15-40
S-glass	2.5		4570	86	2.8
E-glass	2.5		2000-3500	70	2.5
Caron	1.7		4000	230-240	1.4-1.8
Aramid	1.4		3000-3150	63-67	3.3-3.7