

Hexcel® HexTow™ AS4 Carbon Fiber

Category : Carbon , Carbon Fiber

Material Notes:

HexTow™ AS4 carbon fiber is a continuous, high strength, high strain, PAN based fiber available in 3,000 (3K), 6,000 (6K), and 12,000 (12K) filament count tows. The fiber has been surface treated and can be sized to improve its interlaminar shear properties, handling characteristics, and structural properties, and is suggested for use in weaving, prepregging, filament winding, pultrusion, and molding compounds. Sizing compatible with various resin systems are available to improve handling characteristics and structural properties. Information provided by Hexcel

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-HexTow-AS4-Carbon-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.79 g/cc	0.0647 lb/in ³	
Filament Diameter	7.1 µm	7.1 µm	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	2221 MPa	322100 psi	Typical epoxy composite property
	4480 MPa	650000 psi	Typical fiber property
Elongation at Break	1.8 %	1.8 %	Calculated from tow test data
Tensile Modulus	141 GPa	20500 ksi	Typical epoxy composite property
	231 GPa	33500 ksi	Typical fiber property; Chord 6000-1000
Flexural Modulus	128 GPa	18600 ksi	Typical epoxy composite property
Shear Strength	124 MPa	18000 psi	Typical epoxy composite property; short-beam

Component Elements Properties	Metric	English	Comments
Carbon, C	94 %	94 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	0.32 ohm-cm	0.32 ohm-cm	12K
Surface Resistance	0.00153 ohm	0.00153 ohm	12K

Descriptive Properties	Value	Comments
Approximate Yield (m/g)	1.17	12K

Descriptive Properties	Value	Comments
	4.76	3K
Fiber Volume (%)	62	
Filament Shape	Round	
Tow Cross-Sectional Area (mm2)	0.12	3K
	0.24	6K
	0.48	12K
Twist	None	
Weight/Length (g/m)	0.21	3K
	0.427	6K
	0.858	12K

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