

Hexcel® HexTow™ IM6 Carbon Fiber

Category : Carbon , Carbon Fiber

Material Notes:

HexTow™ IM6 carbon fiber is a continuous, high performance, intermediate modulus, PAN based fiber available in 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. HexTow™ IM6 fiber has shear properties equivalent to those of standard AS type fibers. It is suggested for use in prepregging and filament winding. The unique properties of HexTow™ IM6 fiber, such as lower density (5% less than AS type), higher modulus (20% stiffer than AS type fibers), and good shear strength, allow structural designers to achieve both higher safety margins and lower weights for both stiffness and strength critical applications. Information provided by Hexcel

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-HexTow-IM6-Carbon-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.76 g/cc	0.0636 lb/in ³	
Filament Diameter	5.2 μm	5.2 μm	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	2760 MPa	400000 psi	Typical epoxy composite property
	5700 MPa	827000 psi	Typical fiber property
Elongation at Break	1.9 %	1.9 %	Calculated from tow test data
Tensile Modulus	159 GPa	23100 ksi	Typical epoxy composite property
	279 GPa	40500 ksi	Typical fiber property; Chord 6000-1000
Flexural Modulus	145 GPa	21000 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	0.52 ohm-cm	0.52 ohm-cm	12K
Surface Resistance	0.0014 ohm	0.0014 ohm	12K

Descriptive Properties	Value	Comments
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Approximate Yield (m/g) Descriptive Properties	2.24 Value	12K Comments
Fiber Volume (%)	62	
Tow Cross-Sectional Area (mm ²)	0.25	12K
Weight/Length (g/m)	0.446	12K

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