



# HexTow<sup>®</sup> IM6

## Carbon Fiber



### Product Data Sheet

HexTow<sup>®</sup> IM6 carbon fiber is a continuous, high performance, intermediate modulus, PAN based fiber available in 12,000 (12K) filament count tows. This fiber has been surface treated and can be sized to improve its interlaminar shear properties, handling characteristics, and structural properties. It is suggested for use in prepregging, filament winding, braiding, and pultrusion.

The unique properties of HexTow<sup>®</sup> IM6 fiber, such as higher tensile strength and modulus, as well as good shear strength, allow structural designers to achieve both higher safety margins for both stiffness and strength critical applications.

Typical Fiber Properties	U.S. Units	SI Units
Tensile Strength (12K)	850 ksi	5860 MPa
Tensile Modulus (Chord 6000-1000)	40.5 Msi	279 GPa
Ultimate Elongation at Failure (12K)	1.9%	1.9%
Density	0.0636 lb/in <sup>3</sup>	1.76 g/cm <sup>3</sup>
Weight/Length (12K)	25.0 x 10 <sup>-6</sup> lb/in	0.446 g/m
Approximate Yield (12K)	3,337 ft/lb	2.24 m/g
Tow Cross-Sectional Area (12K)	3.93 x 10 <sup>-4</sup> in <sup>2</sup>	0.25 mm <sup>2</sup>
Filament Diameter	0.204 mil	5.2 microns
Carbon Content	95.0%	95.0%
Twist	Never Twisted	Never Twisted

Typical HexPly 8552 Composite Properties (at Room Temperature)	U.S. Units	SI Units	Test Method
0° Tensile Strength	400 ksi	2,758 MPa	ASTM D3039
0° Tensile Modulus	23.0 Msi	159 GPa	
0° Tensile Strain	1.6%	1.6%	
0° Flexural Strength	260 ksi	1,793 MPa	ASTM D790
0° Flexural Modulus	21.5 Msi	148 GPa	
0° Short Beam Shear Strength	18.0 ksi	124 MPa	ASTM D2344
Fiber Volume	60%	60%	

### Carbon Fiber Certification

This carbon fiber is manufactured to Hexcel aerospace grade specification HS-CP-5000. A copy of this specification is available upon request. A Certification of Analysis will be provided with each shipment.

### Available Sizing

Sizing compatible with various resin systems, based on application are available to improve handling characteristics and structural properties. Please see additional information on available sizes on our website or contact our technical team for additional information.

**Sizing**

Size	Compatibility	Recommended Uses
G	Epoxy, Phenolic, Polyurethane	Weaving, Prepreg Tape
Unsize	All Resins	Prepreg Tape

\*Compatibility with these Matrices is considered theoretically compatible. Hexcel cannot guarantee their results.

**Packaging**

Standard packaging of HexTow® IM6 is as follows:

Filament Count	Sizing	Nominal Weight		Nominal Length	
		(lb)	(kg)	(ft)	(m)
12K	G (0.25%)	4.0	1.8	13,330	4,060
	Unsize				

Other package sizes may be available on request. The fiber is wound on a 3-inch ID by 11-inch long cardboard tube and overwrapped with plastic film.

**Safety Information**

Obtain, read, and understand the Material Safety Data Sheet (MSDS) before use of this product.

**For more information**

Hexcel is a leading worldwide supplier of composite materials to aerospace and industrial markets. Our comprehensive range includes:

- HexTow® carbon fibers
- HexForce® reinforcements
- HiMax® multiaxial reinforcements
- HexPly® prepregs
- HexAM® additive manufacturing
- HexMC® molding compounds
- HiFlow® RTM resins
- HexBond® adhesives
- HexTool® tooling materials
- HexWeb® honeycomb
- Acousti-Cap® sound attenuating honeycomb
- Engineered core
- Engineered products
- Polyspeed® laminates & pultruded profiles

For U.S. quotes, orders and product information call toll-free 1-800-688-7734. For other worldwide sales office telephone numbers and a full address list, please go to:

<http://www.hexcel.com/contact>

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