



HexTow[®] IMA

Carbon Fiber



Product Data Sheet

HexTow[®] IMA 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.

The unique properties of HexTow[®] IMA 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)	880 ksi	6,067 MPa
Tensile Modulus (Chord 6000-1000)	43.2 Msi	298 GPa
Ultimate Elongation at Failure (12K)	1.9%	1.9%
Density	0.0648 lb/in ³	1.79 g/cm ³
Weight/Length (12K)	25.0 x 10 ⁻⁶ lb/in	0.446 g/m
Approximate Yield (12K)	3,345 ft/lb	2.25 m/g
Tow Cross-Sectional Area (12K)	3.83 x 10 ⁻⁴ in ²	0.25 mm ²
Filament Diameter	0.202 mil	5.1 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	426 ksi	2935 MPa	ASTM D3039
0° Tensile Modulus	25.5 Msi	176 GPa	
0° Tensile Strain	1.5%	1.5%	
0° Short Beam Shear Strength	17.2 ksi	119 MPa	ASTM D2344
0° Compressive Strength	276 ksi	1903 MPa	ASTM Mod. D695
Open Hole Tensile Strength	69.2 ksi	477 MPa	ASTM D5766
Open Hole Compressive Strength	44.8 ksi	309 MPa	ASTM D6484
Fiber Volume	60%	60%	

**Carbon Fiber Certification**

This carbon fiber is manufactured to Hexcel aerospace specification HS-CP-6000. 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
GS	Epoxy, Vinyl Ester, Polyurethane	Prepreg Tape

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

Packaging

Standard packaging of HexTow® IMA is as follows:

Filament Count	Sizing	Nominal Weight		Nominal Length	
		(lb)	(kg)	(ft)	(m)
12K	GS (0.5%)	8.0	3.6	26,670	8,130

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 Safety Data Sheet (SDS) 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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Title

Subtitle



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