



HexTow® IM5

Carbon Fiber



Product Data Sheet

HexTow® IM5 carbon fiber is a continuous, high strength, high strain, PAN based fiber available in 12,000 (12K) and 24,000 (24K)* filament count tows. This 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 prepegging, filament winding, braiding, pultrusion, and injection/infusion processes including all reinforcements (HiTape®, braids, fabrics, multiaxials etc.).

Typical Fiber Properties		U.S. Units	SI Units
Tensile Strength		797 ksi	5500 MPa
Tensile Modulus (Chord 6000-1000)		40.5 Msi	279 GPa
Ultimate Elongation at Failure		1.7%	1.7%
Density		0.0647 lb/in ³	1.79 g/cm ³
Weight/Length			
12K		41.1 x 10 ⁻⁶ lb/in	0.735 g/m
24K		82.2 x 10 ⁻⁶ lb/in	1.470 g/m
Approximate Yield			
12K		2025 ft/lb	1.36 m/g
24K		1012 ft/lb	0.68 m/g
Tow Cross-Sectional Area			
12K		6.36 x 10 ⁻⁴ in ²	0.41 mm ²
24K		12.70 x 10 ⁻⁴ in ²	0.82 mm ²
Filament Diameter		0.260 mil	6.6 microns
Twist		Never Twisted	Never Twisted

* 24K data is provisional

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
GP	Epoxy, Phenolic, Vinyl Ester, Polyurethane, Cyanate Ester, BMI	Weaving, Filament Winding, Prepreg Tape
GS	Epoxy, Vinyl Ester, Polyurethane	Prepreg Tape
Unsized	All Resins	Prepreg Tape

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



Packaging

Standard packaging of HexTow® IM5 is as follows:

Filament Count	Sizing	Nominal Weight		Nominal Length	
		(lb)	(kg)	(ft)	(m)
12K	Unsized, GP, GS	4.0	1.8	8100	2470
24K*	Unsized, GP, GS	8.0	3.6	8100	2470

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.

* 24K data is provisional

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
- 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:

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

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