



# HexTow® AS4C

## Carbon Fiber (Industrial)



### Product Data Sheet

HexTow® AS4C 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. 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 weaving, prepregging, filament winding, braiding, and pultrusion.

Typical Fiber Properties	U.S. Units	SI Units
Tensile Strength	650 ksi	4,463 MPa
Tensile Modulus (Chord 6000-1000)	33.5 Msi	231 GPa
Ultimate Elongation at Failure	1.8%	1.8%
Density	0.0643 lb/in <sup>3</sup>	1.78 g/cm <sup>3</sup>
Weight/Length		
1K	5.6 x 10 <sup>-6</sup> lb/in	0.067 g/m
3K	11.2 x 10 <sup>-6</sup> lb/in	0.200 g/m
6K	22.4 x 10 <sup>-6</sup> lb/in	0.400 g/m
12K	44.8 x 10 <sup>-6</sup> lb/in	0.800 g/m
Approximate Yield		
1K	22,209 ft/lb	10.00 m/g
3K	7,441 ft/lb	5.00 m/g
6K	3,721 ft/lb	2.50 m/g
12K	1,861 ft/lb	1.25 m/g
Tow Cross-Sectional Area		
1K	0.58 x 10 <sup>-4</sup> in <sup>2</sup>	0.04 mm <sup>2</sup>
3K	1.74 x 10 <sup>-4</sup> in <sup>2</sup>	0.11 mm <sup>2</sup>
6K	3.48 x 10 <sup>-4</sup> in <sup>2</sup>	0.22 mm <sup>2</sup>
12K	6.97 x 10 <sup>-4</sup> in <sup>2</sup>	0.45 mm <sup>2</sup>
Filament Diameter	0.272 mil	6.9 microns
Carbon Content	94.0%	94.0%
Twist	Never Twisted	Never Twisted

### Carbon Fiber Certification

This carbon fiber is manufactured to Hexcel industrial grade specification HS-CP-3000. A copy of this specification is available upon request. A Certification of Conformance will be provided with each shipment of HS-CP-3000 fiber.

### 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
Unsized	All Resins	Prepreg Tape

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



## Packaging

Standard packaging of HexTow® AS4C is as follows:

Filament Count	Size	Nominal Weight		Nominal Length	
		(lb)	(kg)	(ft)	(m)
3K	GP (1%)	4.0	1.8	29,760	9,070
6K	GP (1%)	4.0	1.8	14,880	4,540
12K	GP (0.2%)	8.0	3.6	14,880	4,540
	GP (0.9%)				
	Unsized				

*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® preprints
- 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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