



HexTow[®] AS4D

Carbon Fiber

Product Data

HexTow[®] AS4D carbon fiber is a continuous, high strength, high strain, 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, and is suggested for use in prepregging, filament winding, braiding, and pultrusion.

Typical Fiber Properties	U.S. Units	SI Units
Tensile Strength	689 ksi	4,750 MPa
Tensile Modulus (Chord 6000-1000)	35.5 Msi	245 GPa
Ultimate Elongation at Failure	1.8%	1.8%
Density	0.0647 lb/in ³	1.79 g/cm ³
Weight/Length 12K	42.8 x 10 ⁻⁶ lb/in	0.765 g/m
Approximate Yield 12K	1,945 ft/lb	1.31 m/g
Tow Cross-Sectional Area 12K	6.63 x 10 ⁻⁴ in ²	0.43 mm ²
Filament Diameter	0.265 mil	6.7 microns
Carbon Content	94.0%	94.0%
Twist	Never Twisted	Never Twisted

Typical HexPly 8552 Composite Properties (at Room Temperature)	U.S. Units	SI Units	Test Method
0° Tensile Strength	350 ksi	2,413 MPa	ASTM D3039
0° Tensile Modulus	21.4 ksi	145 GPa	
0° Tensile Strain	1.6%	1.6%	
0° Short Beam Shear Strength	18.5 ksi	128 MPa	ASTM D2344
0° Compressive Strength	260 ksi	1,793 MPa	ASTM Mod. D695
Fiber Volume	60%	60%	

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Carbon Fiber Certification

This carbon fiber is manufactured to Hexcel aerospace specification HS-CP-4000 or Hexcel industrial grade specification HS-CP-3000. Copies of these specifications are available upon request. A Certification of Analysis will be provided with each shipment of HS-CP-4000 fiber. A Certificate 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.

Packaging

Standard packaging of HexTow[®] AS4D is as follows:

Filament Count	Nominal Weight		Nominal Length	
	(lb)	(kg)	(ft)	(m)
12K	8.0	3.6	15,570	4,740

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.

Important

Hexcel Corporation believes, in good faith, that the technical data and other information provided herein is materially accurate as of the date this document is prepared. Hexcel reserves the right to modify such information at any time. The performance values in this data sheet are considered representative but do not and should not constitute specification minima. The only obligations of Hexcel, including warranties, if any, will be set forth in a contract signed by Hexcel or in Hexcel's then current standard Terms and Conditions of Sale as set forth on the back of Hexcel's Order Acknowledgement.

For more information

Hexcel is a leading worldwide supplier of composite materials to aerospace and other demanding industries. Our comprehensive product range includes:

- Carbon Fiber
- RTM Materials
- Honeycomb Cores
- Carbon, Glass, Aramid and Hybrid Prepregs
- Structural Film Adhesives
- Honeycomb Sandwich Panels
- Engineer
- Reinforcement Fabrics

For US quotes, orders and product information call toll-free 1-866-556-2662 and 1-800-987-0658. For other worldwide sales office telephone numbers and a full address list, please click here: <http://www.hexcel.com/contact/salesoffices>