



# HexTow® PV42/850

## Carbon Fiber



### Product Data Sheet

HexTow® PV42/850 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 prepegging, filament winding, braiding, and pultrusion.

The unique properties of HexTow® PV42/850 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	900 ksi	6205 MPa
Tensile Modulus (Chord 6000-1000)	43.2 GPa	298 GPa
Ultimate Elongation at Failure 12K	1.9%	1.9%
Density	0.0647 lb/in <sup>3</sup>	1.79 g/cm <sup>3</sup>
Weight/Length 12K	25.0 × 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	3.86 × 10 <sup>-4</sup> in <sup>2</sup>	0.25 mm <sup>2</sup>
Filament Diameter	0.202 mil	5.1 microns
Carbon Content	95.0%	95.0%
Twist	Never Twisted	Never Twisted

#### Carbon Fiber Certification

This carbon fiber is manufactured to Hexcel aerospace specification HS-CP-4300. 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.



## Packaging

Standard packaging of HexTow® PV42/850 is as follows:

Filament Count	Sizing	Nominal Weight		Nominal Length	
		(lb)	(kg)	(ft)	(m)
12K	GS	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® prepgres
- HexAM® additive manufacturing
- HexMC®-i molding compounds
- HexFlow® RTM resins
- Hexbond™ adhesives
- HexTool® tooling materials
- HexWeb® honeycombs
- Acousti-Cap® sound attenuating honeycomb
- Engineered core
- Engineered products
- Polyspeed™ laminates

For US quotes, orders and product information call toll-free 1-866-556-2662. For other worldwide sales office telephone numbers and a full address list, please go to:

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