

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 prepegging.

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® 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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Title
Subtitle



Product Data Sheet