

Weaving, NCF, Prepregs, Filament Winding, Pultrusion, ...

HiPer-tex™

HiPer-tex™ reinforcement is a non added boron glass which can be classified as high strength R-glass, as defined by the ASTM C-162, DIN 1259 and ISO 2078 standards.

This glass formulation is designed for high modulus, excellent mechanical properties and to offer significantly better thermal and corrosion resistance properties than E-glass.

Main benefits of HiPer-tex™ fibre versus E-glass are:

- up to 30% higher strength
- up to 17% higher modulus
- up to 45% higher strain energy
- up to 10 times improved life time in fatigue.

Product line includes reinforcements developed for end applications such as wind turbine blades, composite ballistic panels, sport goods, as well as high pressure vessels.

Our dedicated Technical and Sales Team is looking forward to working on your applications.

www.3B-fibreglass.com

HiPer-tex™ W 3030 Rovings

High Performance glass Direct Roving for Polyester, Vinylester & Epoxy Resins



Product Description

HiPer-tex™ W 3030 Rovings are specifically designed to provide significantly higher modulus, strength and enhanced fatigue performances versus traditional E-glass for wind turbine blades made out of unsaturated polyester, vinylester or Epoxy resin. HiPer-tex™ W 3030 Rovings are perfectly suited for the production of high modulus Non Crimped Glass Fabrics. The sizing W 3030 is purposely formulated for excellent adhesion with polyester, vinylester and Epoxy resin

systems and leads to superior interfibre and interlaminar shear strengths as well as dynamic performances.

The specific boron free glass formulation provides superior hydrolysis and corrosion resistance.

These properties improvements versus typical E-glass will help blade designers to push further the limits of glass fiber blade designs, especially for the long blades required for the multi MW turbines for on shore and off shore.

| FIBRE PROPERTIES | VALUES |
|------------------------------------|--|
| Tensile strength | 2600 - 2900 MPa (ASTM D2343-09) |
| Tensile modulus | 86 - 89 GPa (ASTM D2343-09) |
| Tensile strain | 3.1 - 3.3 % (ASTM D2343-09) |
| Density (17µm fibre) | 2.58 gr/cm ³ |
| Resin compatibility | Polyester, Vinylester, Epoxy |
| Sizing amount | 0.3 - 0.7 % (depending on tex) |
| Filament diameter - linear density | 17 µm - 1200 tex 17 µm - 2400 tex 24 µm - 4800 tex |

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COMPOSITE CHARACTERISTICS (PLEASE CONTACT US FOR ADDITIONAL INFO ON PROPERTIES)

| Laminates type | Characteristics | Standard | HiPer-tex™ W 3030 UP Resin |
|--|------------------------------|-----------|-------------------------------|
| Uni-directional fabric 17 µm - 2400 tex roving | Tensile strength at Vf=56% | ISO 527-5 | 1220 MPa |
| | Tensile modulus at Vf=56% | ISO 527-5 | 48 GPa |
| | Transverse Tensile Strength | ISO 14125 | 28 MPa |
| | Inter Laminar Shear Strength | ISO 14130 | 50 MPa |

PACKAGING

Bobbins are individually wrapped with stretched plastic film for protection, improved handling and to allow optimum transfer from bobbin to bobbin.

Nominal weight for bobbins is 25 kgs.

Two pallet configurations are available:

- Bulk Pack: standard packaging, consists of individual bobbins.
- Creel Pack: bobbins are connected together for continuous unwinding and no bobbins handling for operators.

For detailed information about bobbins, pallet weight, dimensions and layout please contact us.

STORAGE

Storage in a cool and dry warehouse into the original packaging is formally recommended. More precisely ideal storage conditions are a temperature between 15°C and 35°C and a relative humidity comprised between 35% and 75%.

Two-height stacking is possible under customer's responsibility.

Place HiPer-tex™ W3030 Rovings in the workshop at least 24 hours prior usage.

For an optimal processing we recommend to use the product in ambient conditions (20-23 °C, 60-65% RH).

Binani



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