Binani 3B the fibreglass company

BRAJ BINANI GROUP

HiPer tex highperformancefibre

datasheet

HiPer-tex™ W 2020 Rovings

High Performance glass Direct Roving for Epoxy Resin

Product Description

HiPer-tex™ W 2020 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 epoxy resin. HiPer-tex™ W 2020 Rovings are perfectly suited for the production of high modulus Non Crimped Glass Fabrics and prepregs. The sizing W 2020 is purposely formulated for excellent adhesion with 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 fibre blade designs, especially for the long blades required for the multi MW turbines for on shore and off shore.

The W 2020 roving is approved by Germanischer Lloyd for the use in wind turbine rotor blades.

FIBRE PROPERTIES	VALUES
Tensile strength	2700 - 2900 MPa (ASTM D2343-09)
Tensile modulus	86 - 89 GPa (ASTM D2343-09)
Tensile strain	3.1 - 3.3 % (ASTM D2343-09)
Density	2.58 gr/cm^3
Resin compatibility	Epoxy
Sizing amout	0.4 - 0.6 %
Filament diameter - linear density	17 µm - 600 tex 17 µm - 1200 tex 17 µm - 2400 tex 24 µm - 4800 tex

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 2020 Rovings

High Performance glass Direct Roving for Epoxy Resins

datasheet

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

Laminates type	Characteristics	Standard	HiPer-tex™ W 2020
Uni-directional fabric 17 µm - 2400 tex roving Infused with Epoxy resin	Tensile strength at Vf=56%	ISO 527-5	1280 MPa
	Tensile modulus at Vf=56%	ISO 527-5	48 GPa
	Transverse Tensile Strength	ISO 527-5	57 MPa
	Inter Laminar Shear Strength	ISO 14130	64 MPa
	Compression Strength	ISO 14126	900 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 for tex >600 tex and 21 kgs for 600 tex rovings.

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™ W2020 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 3B the fibreglass company
BRAJ BINANI GROUP

Customer Service India
Survey No 220,Village Colvale
Taluka, Bardez, Goa-403 513, India
P. +91 832-2299 884/886
F. +91 832-2299 887
E. goa@3b-fibreglass.com

Customer Service Europe
Ildefonse Vandammestraat 5-7
B-1560 Hoeilaart, Belgium
P. +32 2 402 2000
F. +32 2 402 2002
E. 3B-thefibreglasscompany@3b-fibreglass.com