



Lloyd's
Register



FDA



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OPERATING 2417

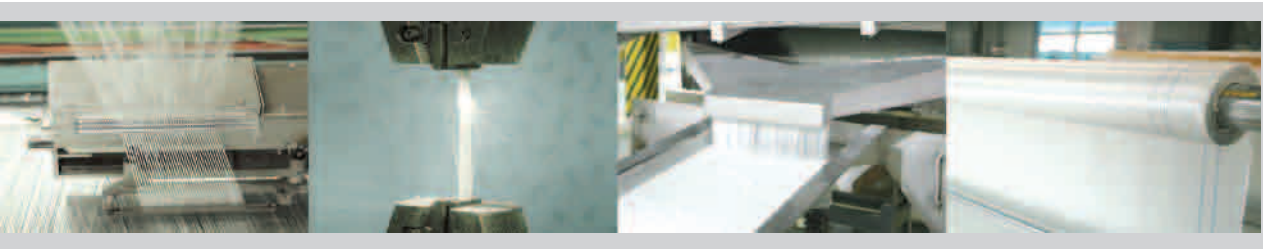
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泰山玻璃纤维
Taishan Fiberglass

Fiberglass Solutions to **WIND ENERGY**

Sinoma 泰山玻璃纤维有限公司
中国中材 Taishan Fiberglass Inc.



Manufacturing Process for Wind Energy

Hand Lay-up

Prepreg (Pre-forming)

Vacuum Infusion (Vacuum Bagging)

Fiberglass Products for Wind Energy

Roving for Wind Energy

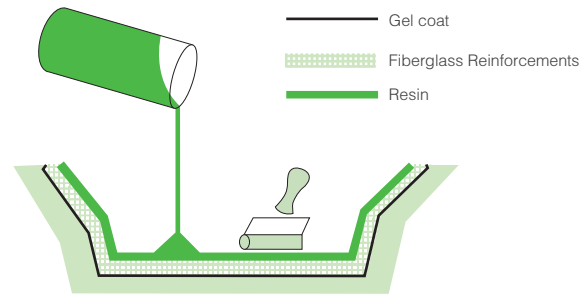
Multi-axial Fabrics for Wind Energy

PP Core Mat

Manufacturing Process for Wind Energy: Hand Lay-up, Prepreg (Pre-forming), Vacuum Infusion (Vacuum Bagging)

Hand Lay-up

Resin mix and fiberglass reinforcements are laid into mold layer by layer, completely impregnated with air bubble removed, laminated to designed thickness and cured.



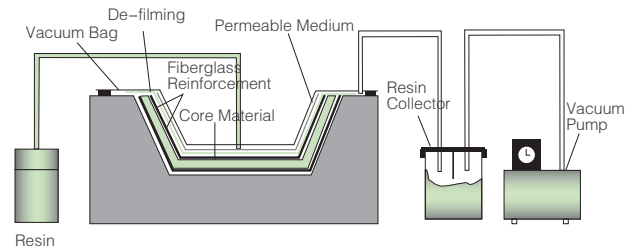
Hand Lay-up

Prepreg (Pre-forming)

An intermediate molding process where fiberglass reinforcements (roving or fabrics) and resin are impregnated evenly and partially cured as pre-formed materials, which can be directly processed for final products without adding more resin.

Vacuum Infusion (Vacuum Bagging)

Air is extracted completely from inside the vacuum bag with fiberglass reinforcements, and resin is forced by pressure into the reinforcements, uniformly impregnated and cured to form the laminates after vacuum bag removal.



Vacuum Infusion

Fiberglass Products for Wind Energy

Roving for Wind Energy



Fiberglass roving for wind energy is compatible with EP, VE and UP resins and used to produce wind fabrics with fast wet-out and high strength & modulus. It is available with E-glass, TCR glass and S-1HM™ glass, a high-performance glass manufactured under AGY technology, to meet the demands of wind market on roving of higher strength & modulus.

【 Products 】

Product Code	Linear Density tex	Linear Density yield	Resin Compatibility	Product Features
920W	300,600,1200,2400	1656,828,414,207	EP	Complete and fast wet out; good process performances, high laminate strength and excellent modulus
912	300,600,1200,2400	1656,828,414,207	VE,UP	Complete and fast wet out, low fuzz, good process performances, high laminate strength and excellent modulus

Multi-axial Fabrics for Wind Energy



【 Description 】

Multi-axial fabrics are non-crimp fiberglass reinforcements made on a warp knitting loom where fiberglass weft and warp are oriented at set angles by one or multiple layers and stitched-bonded. Each multi-axial fabric can be combined with chopped fiber, veil, etc. for enhanced performances.

It is widely used in wind energy to produce moulds, wind blades and nacelle, etc.

【 Properties 】

- Crimp-free construction and higher fabric strength
- Excellent molding property and impregnation
- Enhanced surface aesthetics of finished products and no print-through
- Optimized composites directional fiber content
- Enhanced mechanical properties for lighter laminates

【 Identification of Product Code 】

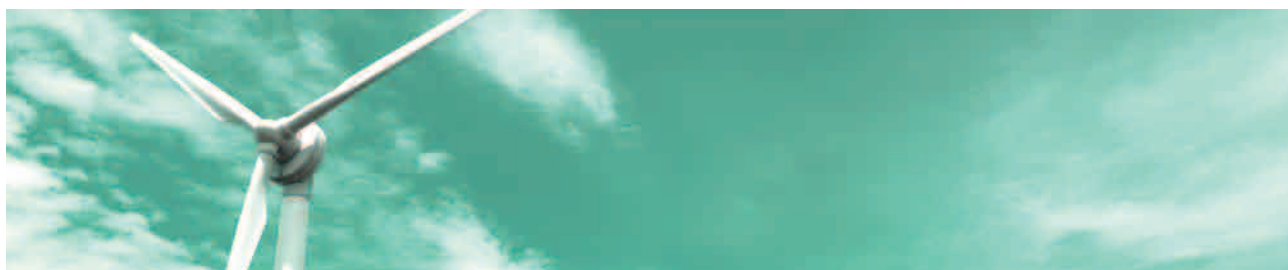
E TL 1215 (0/+45/-45) T30 EP - 1270 E6

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①	Fiberglass Type		E (E-glass) or TCR (TCR glass)
②	Fabrics Type	UD	UL: warp unidirectional fabrics UT: weft unidirectional fabrics
		Biaxial	BX: ($\pm 20^\circ \sim \pm 80^\circ$) Biaxial Fabrics BLT: ($0^\circ / 90^\circ$) Biaxial Fabrics
		Triaxial	TL: 0° with ($\pm 20^\circ \sim \pm 80^\circ$) Triaxial Fabrics TT: 90° with ($\pm 20^\circ \sim \pm 80^\circ$) Triaxial Fabrics
		Quadraxial	QL: 0° single layer quadraxial fabrics QT: 90° single layer quadraxial fabrics
③	Area Weight		400 ~ 2000g/m ²
④	Angle		0° , $+45^\circ$, 90° , -45° etc.
⑤	Type & Area Weight of Additional Inputs		C: Chopped Fiber 50 ~ 600g/m ² T: Surface mat 30 ~ 50g/m ² H: Hot melt yarn
⑥	Resin Compatibility		EP: Epoxy resin UP: Unsaturated Polyester VE: Vinyl Ester
⑦	Width		100 ~ 2540mm
⑧	Density of Stitching Yarn		E: number of stitching yarn in 1 inch

【 Products 】

Type	Specification
UD	EUL1200(0)EP
	EUL1200(0)C50EP
Blaxial	EBX808(+45/-45)EP
	EBX1200(+45/-45)EP
	EBLT600(0/90)C300UP
	EBLT800(0/90)C240UP
Triaxial	ETL973(0/+45/-45)EP
	ETL973(0/+45/-45)T30EP
	ETL1200(0/+45/-45)EP
	ETL1215(0/+45/-45)EP
	ETL1215(0/+45/-45)T30EP
	ETT1215(+45/90/-45)EP
Quadraxial	EQL800(0/+45/90/-45)UP
	EQL2000(0/+45/90/-45)EP
	EQT2000(0/+45/90/-45)EP



PP Core Mat



【 Description 】

PP Core mat is a combination of a non-woven PP (polypropylene) core stitch-bonded between two or three layers of binder-free chopped fiber, bi-axial fabrics or woven roving, compatible with UP & EP resins and typically used to produce nacelle for wind energy.

【 Properties 】

- Special resin conductive layer, high resin flow and fast curing
- Optimum thickness, less reinforcement placement and higher efficiency
- Capable for high part flexibility, multi-thickness and excellent part integrity
- Special fabric construction and high mechanical properties of composites

【 Identification of Product Code 】

Eg.1: E CW 600/180 (PP) / 600 – 1270

E: E-glass
 CW: Multi-axial Fabrics
 600: Area Weight of Base Chopped Fiber (g/m²)
 180(PP): Area Weight of PP Core (g/m²)
 600: Area Weight of Top Chopped Fiber (g/m²)
 1270: Width (mm)

Eg.2: E CW 600/180(PP)/624(0, 90)–1270

E: E-glass
 CW: Multi-axial Fabrics
 600: Area Weight of Chopped Fiber (g/m²)
 180(PP): Area Weight of PP Core (g/m²)
 624(0, 90): Area Weight of Biaxial Fabrics (g/m²)
 1270: Width (mm)

【 Products 】

Specification	Total Weight g/m ²	Chopped Fiber g/m ²	Bi-axial Fabric g/m ²	PP Core g/m ²	Chopped Fiber g/m ²	Num. of Layer
ECW300/180(PP)/300	780	300	--	180	300	3
ECW450/180(PP)/450	1080	450	--	180	450	3
ECW600/180(PP)/600	1380	600	--	180	600	3
ECW300/180(PP)/624(0,90)	1104	--	624	180	300	3
ECW300/180(PP)/770(0,90)	1250	--	770	180	300	3
ECW450/180(PP)/624(0,90)	1254	--	624	180	450	3
ECW600/180(PP)/624(0,90)	1404	--	624	180	600	3



About Us

Taishan Fiberglass Inc., is a wholly owned subsidiary company of China National Materials Co., Ltd., and a National Key High-tech Enterprise.

Its leading products cover several different types and specifications, including E-glass Roving, Chopped Strand Mat, Yarn, Electronic Fiberglass Fabrics, Chopped Strands, Multiaxial Fabrics, Knitted Fabrics, Woven Roving, etc., among which E-glass Roving and Chopped Strand Mat are both certified as "China Top Brand". Its products are exported to over 60 countries and regions, including the US, Europe, ME, etc. and "CTG" has been awarded "China Well-known Trademark".

Taishan Fiberglass Inc., is committed in scientific and standardized management and has acquired certificates of International Quality Management System (ISO9001), Environmental Management System (ISO14001); Occupational Health and Safety Management System (GB/T28001) and products are awarded Det Norske Veritas Type Approval Certificate (DNV), Lloyd's Register of Shipping (LR), Germanischer Lloyd (GL) and China Classification Society (CCS), etc.

Taishan Fiberglass Inc., will adhere to sustainable development and provide customers with superior products and services, to keep contributing to the progresses of China fiberglass industry and in pursuit of becoming a globally prestigious fiberglass manufacturer.



Fiberglass Solutions to Pipes & Tanks	Filament Winding; Centrifugal Casting
	Direct Roving for Filament Winding, Chop Roving, Chopped Strand Mat, Woven Roving, Axial Tape, Knitted Mat, Surface Mat, Hobas Roving
Fiberglass Solutions to Open Molding	Spray-up; Hand Lay-up
	Spray-up Roving, CSM, Woven Roving, Combo Mat, Knitted Mat, Surface Mat
Fiberglass Solutions to Pultrusion	Pultrusion
	Direct Roving for Pultrusion, Knitted Mat, Surface Mat
Fiberglass Solutions to Continuous Panel Molding	Continuous Panel Molding
	Continuous Panel Roving, Chopped Strand Mat
Fiberglass Solutions to Compression Molding	SMC/BMC Compression Molding
	SMC Roving, Chopped Strands for BMC
Fiberglass Roving for Mats & Fabrics	Weaving Mat Production
	Direct Roving for Multi-axial Fabrics, Direct Roving for Geo-grids, Direct Roving for Fabrics, Roving for Mat
Fiberglass Solutions to Thermoplastics	Extrusion & Injection; LFT (Long Fiber Thermoplastic): LFT-G and LFT-D GMT (Glass Mat reinforced Thermoplastics)
	Continuous Roving for Thermoplastics, Chopped Strands LFT Roving, GMT Roving
Fiberglass Solutions to Wind Energy	Prepreg (Pre-forming); Vacuum Infusion (Vacuum Bagging); Hand Lay-up
	Multi-axial Fabrics for Wind Energy, PP Core Mat
Electronic & Industrial Fiberglass Yarns	
Electronic Fiberglass Fabrics	

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