















# Fiberglass Solutions to **PIPES & TANKS**





# **Filament Winding**

Direct Roving for Filament Winding Chop Roving Chopped Strand Mat Woven Roving Axial Tape Knitted Mat Surface Mat

# **Centrifugal Casting**

Hobas Roving

# **Filament Winding**

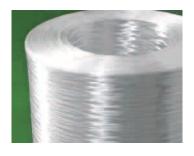
Resin-impregnated continuous strands (woven roving, mat, or impregnated roving) are wound onto a mandrel in specific patterns and then cured to form the finished products, it includes discontinuous filament winding and continuous filament winding.

# **Fiberglass Products for Filament Winding**

# **Direct Roving for Filament Winding**

# [ Description ]

Direct roving for filament winding is applicable for manufacturing GRP/GRE pipes of various diameters & specifications for water transportation & chemical resistance; high-pressure pipes; pressure vessels, storage tanks and insulation products. It is available with E-glass, TCR glass and S-1 HM™glass.



# [ Properties ]

- OSilane-based sizing
- © Even tension and no free loops
- OHigh abrasion resistance and low fuzz
- Consistent linear density and high filament tensile strength
- © Excellent compatibility with resins, rapid wet–out and complete impregnation
- © Providing composites with excellent mechanical strength

# Mandrel Resin Bath Fiberglass Roving

Filament Winding

#### 【Identification of Product Code】

Eg. E DR 240 – T910

E: E-glass
DR: Direct Roving

240: Linear Density 2400texT910: Sizing & Product Code

# [ Products ]

Product Code	Linear Density tex	Linear Density yield	Resin Compatibility	Typical Applications
T910	200,275,300,600, 1200,2400,4800,9600	2484,1807,1650,828, 414,207,104,52	UP & VE	Standard pressure & chemical resistant pipes, storage tanks.etc
T980	600,1200,2400, 4800,9600	825,414,207,104,52	EP	Medium & high pressure pipes, tanks and insulation products
Т940Н	1200,2000,2400	414,248,207	EP	High pressure pipes and tanks
T920H	1200,2000,2400	414,248,207	EP	High pressure pipes and tanks

# **Chop Roving**

# [ Description ]

Chop roving for pipes is coated with silane–based sizing, compatible with UP, VE resins and applicable for producing GRP pipe. It is available with E–glass & TCR glass.



[ Properties ]

© Excellent mechanical properties of pipes

#### [ Identification of Product Code ]

Eg. ERS 240 – T982A

E: E-glass

RS: Assembled/Multi-end Roving

240: Linear Density 2400texT982A: Sizing & Product Code

# [ Products ]

Product Code	Linear Density tex	Linear Density yield	Application Features	Finished Products
T982A	2400	207	Fast wet-out	C.F.W GRP Pipe
Т988	2400	207	Medium wet-out	C.F.W GRP Pipe

# **Chopped Strand Mat**

# [ Description ]

Chopped Strand Mat is made of chopped fiber in specified length, randomly & evenly distributed on conveyor, bonded together by polyester powder binder (or emulsion binder) and cut into certain widths and lengths after heat forming. It is compatible with UP and VE resins.



# [ Properties ]

- © Even area weight
- © Fast wet out and low resin consumption
- Medium rigidity and optimum molding performances

# [ Identification of Product Code ]

Eg. EMC 300 - 1040

E: E-glass

MC: Chopped Strand Mat (Powder Bonded)

300 : Area Weight (g/m²)

1040 : Width (mm)

# [ Products ]

Product Code	Width mm	Area Weight g/m²	Wet Out Speed s	Styrene Solubility s	Moisture Content %	Binder
EMC series	100-3000	100–900	≤100	≤40	≤0.20	Polyester Powder

# **Surface Mat**

# [ Description ]

Surface mat is used in the interior & exterior surface laminates of pipes & tanks, to improve the chemical corrosion resistance, anti–leakage, laminate strength, appearance and extend the service life.



# [ Properties ]

- © Even distribution of fiber
- © Fast wet-out
- © Excellent molding property

# 【Identification of Product Code】

Eg. A E MS - 30 - 1000

A: Taishan
E: E-glass
MS: Surface Mat
30: Area Weight (g/m²)

1000: Width (mm)

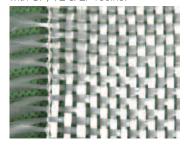
# [ Products ]

Specification	Area Weight g/m²	Width mm	Typical Application
AEMS	25–50	50-2080	Filament Winding

# **Woven Roving**

# [ Description ]

Woven roving is made on looms by weaving direct roving into fabrics, it gives bi-directional (0° /90°) reinforcement and is compatible with UP, VE & EP resins.



# [ Properties ]

- © High mechanical strength of finished products
- © Even area weight
- © Flexible inputs of warp & weft

# [ Identification of Product Code ]

Eg. E WR 580 –160

E: E-glass

WR: Woven Roving

580: Area Weight (g/m²)

160: Width (mm)

# [ Product ]

Product Code	Area Weight g/m²	Width mm	LOI %	Moisture Content %
EWR270	270	160	≤0.80	≤0.20
EWR360	360	160	≤0.80	≤0.20
EWR580	580	160	≤0.80	≤0.20
EWR400	400	1000	≤0.80	≤0.20
EWR600	600	1000	≤0.80	≤0.20
EWR800	800	1000	≤0.80	≤0.20

# **Axial Tape**

# [ Description ]

Axial tape is produced by weaving looms, mainly used to increase axial strength of laminates and compatible with UP & VE resins.



#### [ Properties ]

- O High axial strength
- © Even area weight
- ©Solid fabric construction and easy application

# [ Identification of Product Code ]

Eg. E CW 510 (90) - 200

E: E-glass

CW: Axial Tape

510: Area Weight (g/m²)

(90): Unidirectional Weft (90°)

200: Width (mm)

# [ Products ]

Product Code	Area Weight g/m²	Width mm	Moisture Content %
ECW410(90)	410	200	≤0.20
ECW510(90)	510	200	≤0.20
ECW710(90)	710	200	≤0.20
ECW910(90)	910	200	≤0.20

# **Knitted Mat**

# [ Description ]

Knitted mat is composed of E-glass fiber chopped in specified length, randomly dispersed & stitched together by polyester yarn, and it is compatible with UP & EP resins.



# [ Properties ]

- Free of any binderEven thickness
- ©Fast wet-out
- © Excellent isotropy of properties
- © Good molding property

# [ Identification of Product Code ]

Eg. EMK 450 - 1500

E: E-glass
MK: Knitted Mat

450: Area Weight (g/m²)

1500: Width (mm)

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	<b>Products</b>	
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Product Code	Area Weight g/m²	Width mm	Num. of Layer
EMK300	300	250-1500	1
EMK380	380	250-1500	1
EMK450	450	250-1500	1

# **Centrifugal Casting**

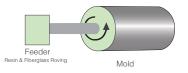
Resin, chopped fiberglass and filler are fed in a specific proportion and method (pre-mixing, resin pump feeding, injection) into a fast rotating mold, compressed with the centrifugal force and then cured to form the finished product.

# **Fiberglass Products for Centrifugal Casting**

# **Hobas Roving**

# [ Description ]

Assembled roving for centrifugal casting is coated with silane-based sizing, compatible with UP & VE resins and is used for producing Hobas pipes.



Centrifugal Casting



Hobas Pipe



# [ Properties ]

- © Excellent chop-ability and dispersion
- © Easy air release
- Good mechanical properties of pipes

# [ Identification of Product Code ]

Eg. ERS 240 - T132HB

E: E-glass

RS: Assembled roving
T132HB: Sizing & Product Code

# [ Products ]

Product Code	Linear Density tex	Linear Density yield	Resin Compatibility	Application
T132HB	2400	207	UP	Hobas Pipe



# **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 (IS014001); 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.



	Filament Winding; Centrifugal Casting
Fiberglass Solutions to Pipes & Tanks	Direct Roving for Filament Winding, Chop Roving, Chopped Strand Mat, Woven Roving, Axial Tape, Knitted Mat, Surface Mat, Hobas Roving
	Spray-up; Hand Lay-up
Fiberglass Solutions to Open Molding	Spray-up Roving, CSM, Woven Roving Combo Mat, Knitted Mat, Surface Mat
Fiberglass Solutions to Pultrusion	Pultrusion
- I Derglass Solutions to Fulliusion	Direct Roving for Pultrusion, Knitted Mat, Surface Mat
Fiberglass Solutions to Continuous	Continuous Panel Molding
Panel Molding	Continuous Panel Roving, Chopped Strand Mat
Fiberglass Solutions to Compression	SMC/BMC Compression Molding
Molding	SMC Roving, Chopped Strands for BMC
Fibergless Devine for Mate 9 February	Weaving Mat Production
Fiberglass Roving for Mats & Fabrics	Direct Roving for Multi-axial Fabrics, Direct Roving for Geo-grids, Direct Roving for Fabrics, Roving for Mat
	Extrusion & Injection; LFT (Long Fiber Thermoplastic): LFT-G and LFT-D GMT (Glass Mat reinforced Thermoplastics)
Fiberglass Solutions to Thermoplastics	Continuous Roving for Thermoplastics, Chopped Strands LFT Roving, GMT Roving
File angles a Calutions to Wind France	Prepreg (Pre-forming); Vacuum Infusion (Vacuum Bagging); Hand Lay-up
Fiberglass Solutions to Wind Energy	Multi-axial Fabrics for Wind Energy, PP Core Mat
Floatrania 9 Industrial Fiberglass Verns	
Electronic & Industrial Fiberglass Yarns	
Electronic Fiberglass Fabrics	
Licentific Libergiass Labrics	



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