



# Fiberglass Solutions to **THERMOPLASTICS**





# **Extrusion & Injection**

Continuous Roving for Thermoplastics Chopped Strands

# LFT (Long Fiber Thermoplastic): LFT-G and LFT-D

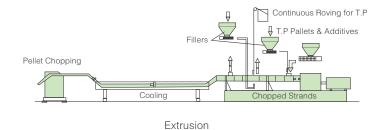
LFT Roving

# **GMT (Glass Mat reinforced Thermoplastics)**

GMT Roving

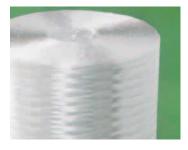
# **Extrusion & Injection**

Thermoplastic resin, additives and fiberglass reinforcements (roving or chopped strands) are mixed, compounded by screws and extruded into pellets, which is further processed to designed parts by injection molding.



# **Fiberglass Products for Extrusion & Injection**

# **Continuous Roving for Thermoplastics**



## 【 Description 】

Continuous roving for thermoplastics includes direct roving or assembled roving, coated with silane-based sizing and used for reinforcements of PA, PP, PBT, PET, ABS, AS with good resin compatibility.

#### 【 Description 】

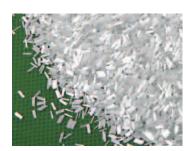
 $\ensuremath{\textcircled{O}}$  High abrasion resistance and low fuzz

- ○Consistent linear density
- $\ensuremath{\mathbb O}$  Good dispersion in resin matrix
- $\ensuremath{\mathbb O}$  Excellent compatibility with resin
- $\ensuremath{\mathbb{O}}$  Superior mechanical properties of composites
- Eg. ERS200-13-T635B
  - E: E-glass

【Identification of Product Code】

- RS: Assembled /Multi-end Roving
- 200: Linear Density 2000tex.
- 13: Filament Diameter 13 µ m
- T635B: Sizing & Product Code

Product Code	Linear Density tex	Linear Density yield	Filament Diameter µm	Resin Compatibility
T635B	1000,2000,2400	497,248,207	13,14,17	General Purpose
T635C	1000,2000,2400	497,248,207	13,14,17	General Purpose
TCR735	2000	248	13	PA
TCR736	2000	248	13	PBT, PET
TCR738	2000	248	13	PP
TCR739	2000	248	13	AS, ABS



# **Chopped Strands**

#### 【 Description 】

Chopped Strands is made by chopping E-glass fiber, coated with special silane-based sizing and used for reinforcements of PA, PP, PBT, PET, ABS, AS, PC, PPO, PPS, POM, LCP with good resin compatibility.

### 【 Properties 】

© Excellent strand integrity, high bulk density and low fuzz

© Superior dry-use flow-ability and easy control of glass loading

 $\ensuremath{\mathbb O}$  Superior wet–use dispersion & flow–ability and easy impregnation with resin matrix

© Excellent mechanical property & surface quality

#### 【Identification of Product Code】

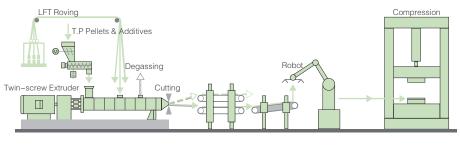
- Eg. ECS10-3.0-T435N
  - E: E-glass
  - CS: Chopped Strands
  - 10: Filament Diameter 10 µ m
  - 3.0: Chopped length 3.0mm
  - T435N: Sizing & Product Code

Resin Matrix	Product Code	Filament Diameter $\mu$ m	Chopped Length mm	Features & Applications
	T435N	10,11,13	3.0,4.5	Standard Product for PA6 & PA66, FDA Approved
PA	T435TM	10,11,13	3.0,4.5	Excellent Hydrolysis, Glycol & High Temperature Resistance, Standard Product for PA6, PA66, PA6T, PA9T, PPA, FDA Approved
T435A		10,11,13	3.0,4.5	Excellent Impact Resistance
	T436H	10,11,13	3.0,4.5	Excellent Mechanical Properties, FDA Approved
PBT/PET/PC	T436W	13	3.0,4.5	White Color Products, FDA Approved
	T536	13	3.0,4.5	Standard Product
	T438	13	3.0,4.5	White Color Products, Excellent Mechanical Properties
PP T438R		13	3.0,4.5	Natural Color Products, Excellent Detergent Resistance
	T538A	13	3.0,4.5	Standard Product
ABS/AS	T439	13	3.0,4.5	Standard Product
PC	T442	13	3.0,4.5	High Mechanical Properties, glass content > 15% by weight
	T442N	13	3.0,4.5	glass content < 15% by weight
	T443	10	3.0	High Mechanical Properties
PPS\LCP	T443R	10	3.0	Excellent Hydrolysis Resistance
LCP	T490	10	3.0	Standard Product
PPO	T551	13	3.0	High Mechanical Properties
FFU	T551R	13	3.0	Excellent Hydrolysis Resistance
POM	T445	10	3.0,4.5	Standard Product

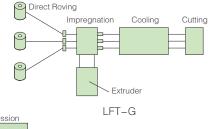
# LFT (Long Fiber Thermoplastic): LFT-G and LFT-D

LFT-G: Molten thermoplastic resin & additives are impregnated with fiberglass roving in a special dispersion die and consolidated into rods, after cooling, rods are chopped into pellets, which can be further processed by injection or compression molding to final products.

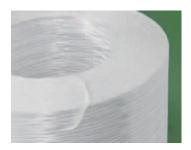
LFT-D: Thermoplastic resin, additives and fiberglass roving are mixed, impregnated in a twin-screw extruder to form the compound, which is directly processed by injection or compression molding to final products.



LFT-D



# **Fiberglass Products for LFT**



# LFT Roving

## 【 Description 】

LFT roving is a direct roving coated with silane–based sizing, applicable for LFT–G & LFT–D processes and used for reinforcements of PA, PP with good resin compatibility.

[Identification of Product Code]

#### 【 Properties 】

©Consistent linear density

OUniform filament tension

- ◎High abrasion resistance and low fuzz
- Good compatibility with resin

© Excellent mechanical properties of composites

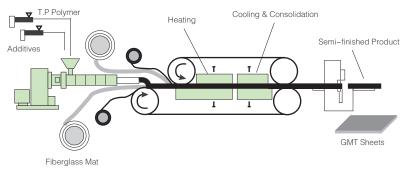
Eg. EDR240–T838 E: E-glass

- DR: Direct Roving
- 240: Linear Density 2400tex
- T838: Sizing & Product Code

Product Code	Linear Density tex	Linear Density yield	Filament Diameter µm	Resin Compatibility	Application Features
T838	2400	207	17	PP	Standard Product, Multi-process Compatible
T838T	2400	207	17	PP	White Colour, Good Dispersion
T835	2400	207	17	PA	Standard Product

# **GMT (Glass Mat reinforced Thermoplastics)**

Fiberglass mat is sandwiched with molten thermoplastic polymers or sheets, and the sandwich is heated, consolidated and cut after cooling into semi–finished GMT sheets, which can be further processed by compression molding to final products.



GMT

# **Fiberglass Products for GMT**



# **GMT Roving**

#### [ Description ]

GMT roving is assembled roving coated with silane-based sizing and used for reinforcements of PP resins.

## [ Properties ]

 $\ensuremath{\mathbb O}$  High abrasion resistance and low fuzz

 $\ensuremath{\mathbb O}\xspace$  Low static and good chop–ability

○Consistent linear density

 $\ensuremath{\mathbb O}$  Good dispersion and stable properties of composites

◎Good compatibility with PP resins

© Excellent mechanical properties of composites

#### 【Identification of Product Code】

- Eg. ERS240-T986K
  - E: E-glass
    - RS: Assembled /Multi-end Roving
    - 240: Linear Density 2400tex
    - T986K: Sizing & Product Code

Product Code	Linear Density tex	Linear Density yield	Filament Diameter µm	Resin Compatibility	Applications
T838G	600	825	14/16	PP	GMT-UD
T986K	2400	207	14	PP	GMT-RD



# 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.



Fiberalase Colutions to Dines & Tarks	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
File angles of October 10 October Malaline	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
	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
	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
	Prepreg (Pre-forming); Vacuum Infusion (Vacuum Bagging); Hand Lay-u
Fiberglass Solutions to Wind Energy	Multi-axial Fabrics for Wind Energy, PP Core Mat
Electronic & Industrial Fiberglass Yarns	
Electronic Fiberglass Fabrics	

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

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