



Compofil™

HIGH PERFORMANCE



Company Profile

Jushi Group Co., Ltd is located in Tongxiang Economic Development Zone in the center of the Yangtze River Delta Economic Zone. The geographical advantages provide the company with opportunities for rapid growth.

Jushi Group specializes in the production of fiberglass. The company has attained the leadership position in the global fiberglass industry in terms of Output, Technology, R&D, Quality and Market share. Jushi Group is a Chinese national, key high technology enterprise, operating a distinguished Post-Doctoral program.

Jushi Group always adheres to its fundamental Management principles:

- "Apply science and technology for development,
- Build the brand name to expand market share,
- Emphasize management to improve efficiency and
- Employ talented people to enable future growth".

The company owns proprietary, world-class core technologies for large E-glass fiber furnaces, C-glass fiber furnaces and waste fiber recycling furnaces. The company has established a global marketing network and achieved certifications to ISO9001, ISO14001, ISO18001, ISO12001 and ISO17025. Its testing center has been certified by both China National Accreditation Board for Laboratories (CNAS) and Germanischer Lloyd (GL). The trademark "JUSHI" has been recognized as "China Famous Trademark". The principal products of Jushi Group have been approved by Lloyd's Register and Germanischer Lloyd (GL), DET NORSKE VERITAS (DNV), China Classification Society (CCS) and FDA.

Jushi Group produces E-glass and C-glass fiberglass products including rovings, chopped strands, chopped strand mats, woven rovings, Compofil™ and electrical yarns and fabrics in over 20 product categories and 500 specifications. The products are sold in all provinces in China and exported to over 70 countries. The key regions include North America, Middle East, Europe, Southeast Asia and Africa with export accounting for 50% of the total sales volume.

Jushi people adhere to our core values of "Behavior, Innovation, Responsibility, Learning, Enthusiasm" to build the company into an international group with leading manufacturing scale, advanced technology, talented team, excellent management, powerful execution, great achievements and fast growth. Jushi Group strives to lead the modernization of China's fiberglass industry and maintain the leadership position in the global fiberglass industry through endless pursuit of innovation and excellence.





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BENEFITS of Compofil™

Compared with traditional roving, Compofil™ offer the following unique benefits

Dry thermoplastic prepreg with excellent self-impregnation

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Good permeation of fiber glass in the thermoplastic resin

Short processing cycle and high productivity

• •

Low production cost, high competitiveness

Excellent mechanical properties

• •

High glass content, specifically important for structural applications

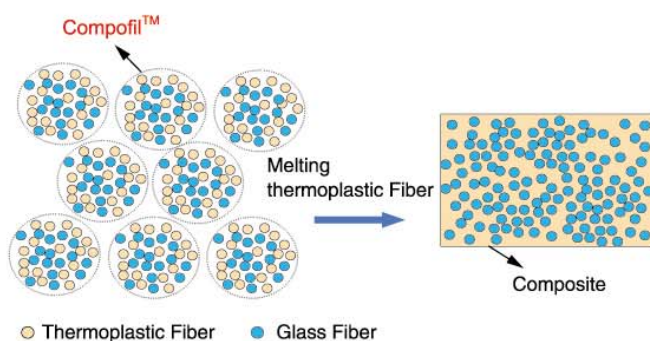
Environment-friendly production process and recyclability

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Thermoplastics is recyclable and environment friendly.

INTRODUCTION of Compofil™

Compofil™ is a high-performance roving made of interwound continuous glass fiber and thermoplastic fiber. It can be used to manufacture thermoplastic composites directly with no need for extra resin. It is suitable for various molding processes including mold pressing, vacuum molding, filament winding and more. The applications of this product include military, automotive, construction, sports and new energy industries.



Building



Sports classes



New energy groups



PRODUCT REFERENCE of Compofil™

DIRECT ROVING

Compofil™-PET-70-DR-700

- PET — Polyethylene terephthalate fiber;
PPS and PP also can be used;
- 70 — Fiberglass content, wt%;
- DR — Direct roving;
- 700 — Linear density, tex.

FABRIC

Compofil™-PET-70-U-400-1000

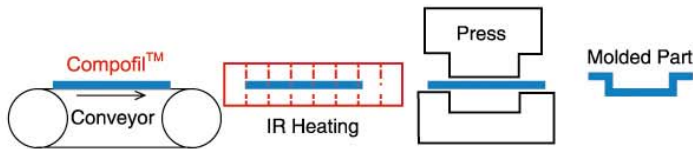
- PET — Polyethylene terephthalate fiber;
- 70 — Fiberglass content, wt%;
- U — Unidirectional fabric;
plain, twill and satin fabrics are also available;
- 400 — Area weight, g/m²;
- 1000 — Width, mm.

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PROCESS of Compofil™

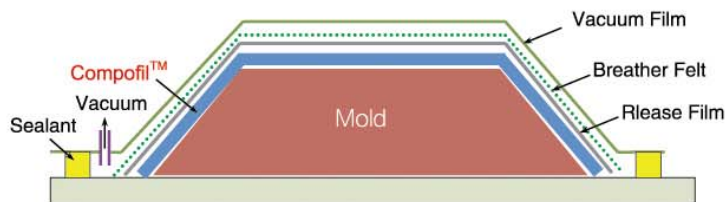
1. Mold Pressing

Sheets of fabric as designed (unidirectional, plain, twill and satin) are placed, then heated to melt the thermoplastic fiber and pressed rapidly in the mold, forming the composite parts.



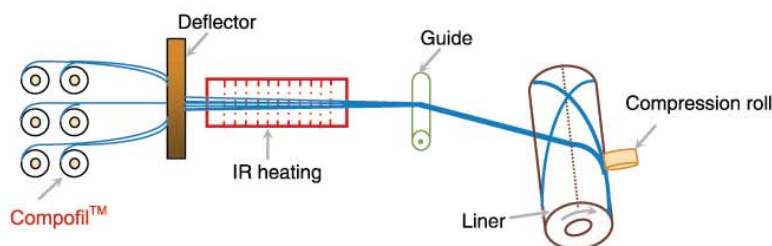
2. Vacuum Molding

Sheets of fabric as designed (unidirectional, plain, twill and satin) are placed on the mold, and then the release film, breather felt and vacuum film are placed over the **Compofil™** fabrics. Seal the material to the mold; Remove the air from the vacuum film, sandwiching the **Compofil™** between the mold and vacuum film. Heat the mold in the oven to melt the thermoplastic fiber, forming the composite parts. Because of lower porosity, the molded parts have excellent mechanical properties, specifically important for wind energy, military and aerospace industries.



3. Filament Winding

Filament winding is an automated open molding process that uses a rotation mandrel and a compression roll as the mold. **Compofil™** roving are drawn through a deflector and pulled by the force of a rotating mandrel. After the thermoplastic fiber is heated to melt, the roving is wound around the mold, forming the composite parts. Filament winding is used to deliver high strength, specifically important for gas tanks and pipes for various applications.



National defense and military



Aerospace



The car class





CUSTOMER AND TECHNICAL SUPPORT ORGANIZATION

Offer Best Technical Support

Jushi Group possesses world class core technologies and advanced testing and analysis capabilities for glass, organic chemistry, fiberglass and composites. We have established a global network of marketing and technical service professionals to help customers solve problems in materials development and process optimization. We collaborate closely with customers to address market challenges and promote the growth of the composites industry.





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Compofil™ -PET

Compofil™ - PET is a high performance roving made of interwound continuous glass fiber and long PET fiber. It can be used to manufacture thermoplastic composites directly with no need for extra resin.

The product is suitable for various molding processes including mold pressing, vacuum molding, filament winding and more. The applications of this product include military, automotive, construction, sports and new energy industries.

Product Features

- Dry thermoplastic prepreg with excellent self-impregnation
- High productivity and short processing cycle
- Environment-friendly production process and recyclability
- Excellent mechanical properties

Product Reference

Compofil™-PET-70-DR-700
 PET: Polyethylene terephthalate fiber
 70: Fiberglass content(wt%)
 DR: Direct roving
 700: Linear density((tex)

Product Availability

- **Compofil™** - PET-70-DR-700
- **Compofil™** - PET-60-DR-810
- Other products available upon request



Mechanical Properties

Environmental Temperature: 23°C, Humidity: 50%,
 Unidirectional laminate by mould pressing

Property	Unit	Standard	
Resin	/	/	PET
Glass content	%	GB/T2577	70
Tensile strength	MPa	ISO527-4	759
Tensile modulus	GPa	ISO527-4	56
Flexural strength	MPa	ISO178	1117
Flexural modulus	GPa	ISO178	52
Notched impact	kJ/m ²	ISO179	390

Packaging

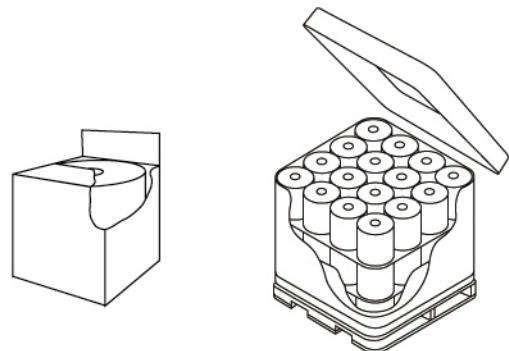
The product can be packed on pallet or in small cardboard boxes.

Package height mm (in)	260 (10)
Package inside diameter mm (in)	160 (6.3)
Package outside diameter mm (in)	275 (10.8)
Package weight kg (lb)	12 (26.5)

Number of layers	3	4
Number of doffs per layer	16	
Number of doffs per pallet	48	64
Net weight per pallet kg (lb)	576 (1268.7)	768 (1691.6)

Storage

Unless otherwise specified, fiberglass products should be stored in a dry, cool and moisture-proof area. The room temperature and humidity should be always maintained at 15°C~35°C and 35% ~ 65%. It is best if the product is used within 12 months after production date. Fiberglass products should remain in their original packaging until just prior to use. To ensure safety and avoid damage to the products, the pallets should not be stacked more than three layers high. When the pallets are stacked in 2 or 3 layers, special care should be taken to correctly and smoothly move the top pallet.



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Compofil™- PPS is a high performance roving made of interwound continuous glass fiber and long PPS fiber. It can be used to manufacture thermoplastic composites directly with no need for extra resin. It is suitable for various molding processes including mold pressing, vacuum molding, filament winding and more. The applications of this product include military, automotive, construction, sports, and new energy industries.

Product Features

- Dry thermoplastic prepreg with excellent self-impregnation
- Environment-friendly production process and recyclability
- Excellent high temperature resistance
- Excellent mechanical properties

Product Reference

Compofil™- PPS-70-DR-700
 PPS: Polyphenylene sulfide fiber
 70: Fiberglass content(wt%)
 DR: Direct roving
 700: Linear density(tex)

Product Availability

- **Compofil™** - PPS-70-DR-700
- **Compofil™** - PPS-60-DR-810
- Other products available upon request



Mechanical Properties

Environmental Temperature: 23°C, Humidity: 50%,
 Unidirectional laminate by mould pressing

Property	Unit	Standard	
Resin	/	/	PPS
Glass content	%	GB/T2577	70
Tensile strength	MPa	ISO527-4	929
Tensile modulus	GPa	ISO527-4	44
Flexural strength	MPa	ISO178	838
Flexural modulus	GPa	ISO178	42
Notched impact	kJ/m ²	ISO179	378

Packaging

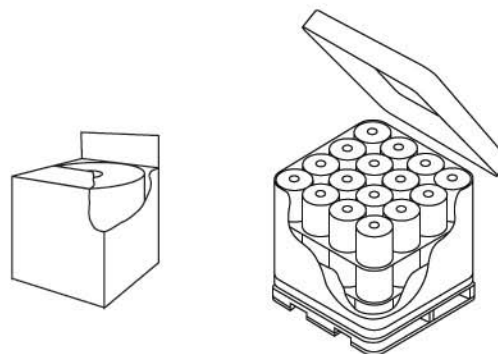
The product can be packed on pallet or in small cardboard boxes.

Package height mm (in)	260 (10)
Package inside diameter mm (in)	160 (6.3)
Package outside diameter mm (in)	275 (10.8)
Package weight kg (lb)	12 (26.5)

Number of layers	3	4
Number of doffs per layer	16	
Number of doffs per pallet	48	64
Net weight per pallet kg (lb)	576 (1268.7)	768 (1691.6)

Storage

Unless otherwise specified, the fiberglass products should be stored in a dry, cool and moisture-proof area. The room temperature and humidity should be always maintained at 15°C ~35°C and 35% ~ 65%. It is best if the product is used within 12 months after production date. The fiberglass products should remain in their original packaging until just prior to user. To ensure safety and avoid damage to the product, the pallets should not be stacked more than three layers high. When the pallets are stacked in 2 or 3 layers, special care should be taken to correctly and smoothly move the top pallet.



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Compofil™-PP is a high performance roving made of interwound continuous glass fiber and long **PP** fiber. It can be used to manufacture thermoplastic composites directly with no need for extra resin. It is suitable for various molding processes including mold pressing, vacuum molding, filament winding and more. The applications of this product include military, automotive, construction, sports and new energy industries.

Product Features

- Dry thermoplastic prepreg with excellent self-impregnation
- High productivity and short processing cycle
- Environment-friendly production process and recyclability
- High performance-cost ratio

Product Reference

Compofil™-PP-60-DR-810
 PP: Polypropylene fiber
 60: Fiberglass content(wt%)
 DR: Direct roving
 810: Linear density(tex)

Product Availability

- **Compofil™** - PP-60-DR-810
- **Compofil™** - PP-80-DR-610
- Other products available upon request



Mechanical Properties

Environmental Temperature: 23°C, Humidity: 50%,
 Unidirectional laminate by mould pressing

Property	Unit	Standard	
Resin	/	/	PP
Glass content	%	GB/T2577	60
Tensile strength	MPa	ISO527-4	660
Tensile modulus	GPa	ISO527-4	47
Flexural strength	MPa	ISO178	640
Flexural modulus	GPa	ISO178	45
Notched impact	kJ/m ²	ISO179	434

Packaging

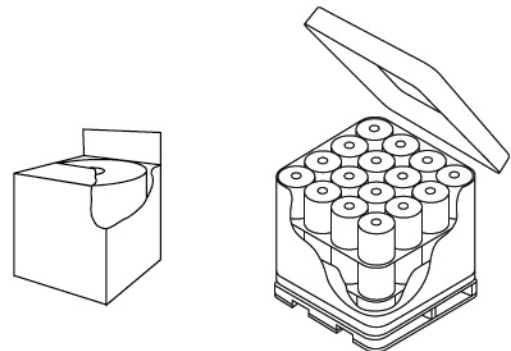
The product can be packed on pallet or in small cardboard boxes.

Package height mm (in)	260 (10)
Package inside diameter mm (in)	160 (6.3)
Package outside diameter mm (in)	275 (10.8)
Package weight kg (lb)	12 (26.5)

Number of layers	3	4
Number of doffs per layer	16	
Number of doffs per pallet	48	64
Net weight per pallet kg (lb)	576 (1268.7)	768 (1691.6)

Storage

Unless otherwise specified, the fiberglass products should be stored in a dry, cool and moisture-proof area. The room temperature and humidity should be always maintained at 15°C ~35°C and 35% ~ 65%. It is best if the product is used within 12 months after production date. The fiberglass products should remain in their original packaging until just prior to user. To ensure safety and avoid damage to the product, the pallets should not be stacked more than three layers high. When the pallets are stacked in 2 or 3 layers, special care should be taken to correctly and smoothly move the top pallet.



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Compofil™ - fabric is a reinforcement woven from **Compofil™** roving. The product is suitable for mold pressing, roller pressing, vacuum molding and more. The applications of this product include military, automotive, construction, sports and new energy industries.

Product Features

- Fibers arrayed symmetrically, resulting in dimensional stability
- Good moldability, fast and complete wet in resin
- Excellent mechanical properties

Product Reference

Compofil™ - PPS-70-U-400-1530

PPS: Polyester fiber

70: Glass content by weight(wt%)

U: Fabric, unidirectional

400: Area weight(g/m²)

1530: Width(mm)



Product Code

Product Availability	Resin	Glass Content(wt%)	Area Weight(g/m ²)	Width(mm)	Fabric
Compofil™-PPS-70-U-400-1530	PPS	70	400	1530	unidirectional
Compofil™ -PET-70-U-400-1530	PET	70	400	1530	unidirectional
Compofil™ -PP-60-U-400-1530	PP	60	400	1530	unidirectional

Packaging

Wound onto a paper tube which has an inside diameter of 89mm, and the roll has a diameter of 260mm. The roll is wrapped up with plastic film, and then packed in a cardboard box or wrapped up with kraft paper. The rolls are to be horizontally placed. For transportation the rolls can be loaded into a container directly or on pallets.

Storage

Unless otherwise specified, products should be stored in a dry, cool and rain-proof area. It is recommended that the room temperature and humidity should be always maintained at 15°C-35°C and 35%-65% respectively.

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