重庆国际复合材料股份有限公司
CHONGQING POLYCOMP INTERNATIONAL CORPORATION

PULTRUSION

FIBERGLASS INTEGRATED SOLUTION

GLASS FIBER SOLUTION EXPERT

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INNOVATIVE COMPOSITE MATERIAL TOWARDS THE GREEN FUTURE

COMPANY PROFILE

Chongqing Polycomp International Corporation (hereinafter referred to as "CPIC" or "the Company"), established in 1991, is an important pillar of Yuntianhua Group Co., Ltd. in the new glass fiber material industry. As a high-tech enterprise with the core business of R&D, production and sales of glass fibers and composite materials, CPIC focuses on new high-performance materials and is committed to developing high-performance products with stable quality and continuous innovation, so as to provide customers with valuable services and application solutions.

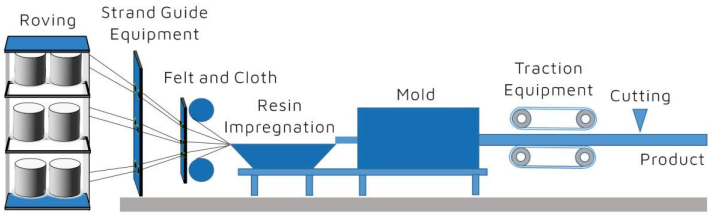
As a reinforcing material for composite materials, glass fiber has the characteristics of lightweight, high strength, durability, and environmental friendliness. It is widely used in wind power blades, photovoltaic bracket frames, automobiles and rail transit, electronic appliances, electrical insulation, building materials, doors and windows, industrial pipes and tanks, aerospace and other important fields. In more than 30 years of continuous development, CPIC now has 12 production bases and 18 glass fiber furnace production lines around the world, with an annual production capacity of more than 1 million tons of glass fiber, ranking third nationally and fourth globally in terms of production capacity. The core business areas such as emission reduction and 5G communication are in a leading position globally. The company's marketing network spreads all over the world, and it has established trading subsidiaries in the United States, the Netherlands and Hong Kong SAR of China. Its products are sold in dozens of countries and regions around the world, and it has established long-term and stable strategic cooperative relations with international well-known enterprises such as General Electric, DuPont, BASF, Siemens Gamesa, Vestas, Huawei, Zhuzhou Times New Material Technology, Sinoma Science & Technology and Kingfa Science & Technology.

Through years of exploration and efforts, CPIC now has a number of inventions and practical patents including ECT, TM, and TM+. The main products have passed Germanischer Lloyd (GL), Lloyd's Register of Shipping (LR), and U.S. Food and Drug Administration (FDA) certification. Since its establishment, CPIC has successively won many honors, such as China Grand Award for Industry, National Intellectual Property Advantage Enterprise, China Patent Excellence Award, China Famous Brand Product, National Key New Product, Chongqing Outstanding Innovative Enterprise, Chongqing Science and Technology Progress First Prize and many other honors.

In the light of the development idea of Yuntianhua Group, which takes "fertilizers and modern agriculture, glass fiber and composite materials, fine chemicals and new materials" as its main business and "building a green industry group with global influence" as its vision, CPIC takes the initiative to adapt to the new normal of economic development, continuously deepens the development strategy of "intensive industrial cultivation, sophisticated manufacturing, market precision, and refined management", optimizes the international production capacity layout and proactively extends the industrial chain, strives to develop new glass fiber products with high technology and environmental friendliness, comprehensively enhances its core competitiveness, and makes continuous efforts toward the goal of becoming the enterprise with the most valuable glass fiber and composite material in the world.

Process

Description



Pultrusion Process: Under the traction of equipment, continuous fibers or fabrics are immersed in resin and then cured by heat or photoinitiation system through the molding die, and the final composite products are cut according to a certain length.

Process Application Fields: Electric power, construction, communication, rail transit, and wind energy

Product

Profile

E-glass Fiber Direct Roving for Pultrusion

Product code

ECT 469PH - 4400

- Glass type
- Sizing Code
- Linear Density Tex

Product Introduction

E-glass fiber direct roving for pultrusion produced by CPIC is a continuous single-strand roving. With special sizing agents and manufacturing processes selected in the production process, the product is suitable for reinforcing unsaturated polyester resin (UP), vinyl resin (VE), epoxy resin (EP), phenolic resin (PF), polyurethane resin (PU), and other resins. The product can be produced from ECT glass, TM+ glass, and TMII glass (with prominent advantages for large FRP products requiring high modulus). The product is widely used in building materials, sports equipment, communications, wind energy, and other fields.

Product Features

Silane coupling agent and proprietary sizing agent; good wear resistance, low fuzz; good wet out, pay out, and tension uniformity.

Product Catalog

Product Code	Common tex	Applicable Resin	Product Characteristics	Typical Applications
469L	100 300 600 1200 2400 4800	Unsaturated Polyester Resin Epoxy resin Vinyl resin Phenolic resin Polyurethane resin	Universal pultrusion yarn with good compatibility with matrix resin and suitable for various resins	Various pultrusion profiles
469P	2400 4400 4800			
469HT	8800 9600		Pultrusion yarn for general purpose, large TEX specification	Wind power wedge strip, the evacuation platform
469PH	2200 2400 4400 9600	Unsaturated Polyester Resin Epoxy resin Vinyl resin	More excellent mechanical properties and boiling resistance, suitable for products with high requirements for mechanical properties	Fishing rod, tent rod, anchor rod
469E	300 600 735 1200 2400	Unsaturated Polyester Resin Vinyl resin	Composite materials have high interface bonding strength, excellent folding resistance, and good chemical corrosion resistance	Optical cable reinforcing core and sucker rod
469LU	300 600 1200	Acrylic acid modified resin	Good compatibility with UV curable resin, fast wet out, suitable for UV high-speed curing pultrusion	Optical cable reinforcing core
468GS	1200 2400	Epoxy resin	Good compatibility with epoxy and high strength	Wind power glass plate
467R	2400 4800 9600	Polyurethane resin	Good resin compatibility, fast wet out, high product strength, suitable for PU resin pultrusion and rapid pultrusion process	Polyurethane doors and windows, photovoltaic frames

E-glass Fiber Assemble Roving for Pultrusion

Product code

ECT 555ML - 9600

- Glass type
- Sizing Code
- Linear Density Tex

Product Introduction

CPIC E-glass assemble roving for pultrusion is made of a multi-end roving by roving winder. With special sizing agents and manufacturing processes selected in the production process, the product is suitable for unsaturated polyester resin (UP), vinyl resin (VE), epoxy resin (EP), phenolic resin (PF), polyurethane resin (PU), and other resins. Such roving can be manufactured from ECT glass, ECR glass (with excellent chemical resistance), TM+ glass (with prominent advantages for large FRP products requiring high modulus).

Product Features

Silane coupling agent and proprietary sizing agent; good wear resistance, low fuzz; uniform tension, good pay out, fast wet through and good compatibility with resin.

Product Catalog

Product Code	Common tex	Applicable Resin	Product Characteristic	Typical Applications
555ML	8800 9600 19200	Epoxy resin	Excellent appearance quality, excellent electrical insulation and quality stability	High-end insulated core rod
560T		Epoxy resin Unsaturated Polyester Resin	Products with few white stripes and transparent appearance	Wind power wedge strip Assemble Roving
561L		Unsaturated Polyester Resin Epoxy resin Vinyl resin Phenolic resin Polyurethane resin	Good resin compatibility and wet out	Middle- and low-end insulated core rod Assemble Roving
101MD	13800 19200	Polyurethane resin	Good resin compatibility, high product interface strength, and good mechanical properties	Polyurethane cross ties

E-glass Fiber Texturized Yarns for Pultrusion

Product code

E T 9 - 550 S / NT

- Glass type
- the abbreviation of texturized yarns
- fiber diameter μm
- linear density tex
- sizing agent type: S represents starchiness, the abbreviation of four-turn
- structure: NT represents the non-twist structure

Product Introduction

CPIC E-glass fiber texturized yarns for pultrusion is a shape change roving formed by expansion, curling, and winding of one or more bundles of continuous spun yarns or rovings after passing through high-pressure airflow. Special sizing agents and manufacturing processes are selected in the production process of the product. The product has the advantages of stable TEX and uniform expansion. It has a fluffier structure and stronger coverage ability. It can replace traditional asbestos products. Products are widely used in woven decorative fabrics, corner filling of pultrusion profiles, and industrial fabrics for special purposes (such as thermal insulation cloth, filter cloth, wear-resistant materials, and filling materials).

Product Features

Silane or starch sizing agent; no convex ring and knotting; good combination effect with treating agent; uniform and stable yarn density; good weaving performance in warp and weft directions.

Product Catalog

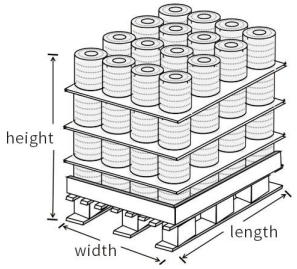
Product code	Fiber Diameter (μm)	Common Tex	Applicable Resin	Product Characteristics	Typical Applications
ET*	5-17	300-10000TEX	Unsaturated Polyester Resin Epoxy resin Phenolic resin Polyurethane resin Vinyl resin	Good resin compatibility, good processability and good product surface quality	Pultrusion profiles

If there are special requirements for sizing agent or bulging degree, please contact the product manager.

Package

Specification

Packaging method of direct roving, assemble roving, and texturized yarns (see Tables I, II, and III for pallet size)



Pallet size (Table I) (Note: The following roll weights are for reference only, and the sales contract shall prevail)

Net weight of each roll (kg)	Nominal size of bobbin (mm)			Rolls/ layer	Layers/ pallet	Rolls/ pallet	Pallet size (mm)	Weight (kg) /pallet
	outer diameter	inner diameter	height					
17-19	280	161	260	16	3	48	1140x1140x940	816-912
				16	4	64	1140x1140x1200	1088-1216
22-24	310	161	260	12	3	36	1260x970x940	792-864
				12	4	48	1260x970x1200	1056-1152

Pallet size (Table II) (Note: The following roll weights are for reference only, and the sales contract shall prevail)

Net weight of each roll (kg)	Nominal size of bobbin (mm)			Rolls/ layer	Layers/ pallet	Rolls/ pallet	Pallet size (mm)	Weight (kg) /pallet
	outer diameter	inner diameter	height					
18-20	280	100	260	16	3	48	1140x1140x940	864-960
				16	4	64	1140x1140x1200	1152-1280
23-25	310	100	260	12	3	36	1260x970x940	828-900
				12	4	48	1260x970x1200	1104-1200

Pallet size (Table III) (Note: The following roll weights are for reference only, and the sales contract shall prevail)

Net weight of each roll (kg)	Nominal size of bobbin (mm)			Rolls/ layer	Layers/ pallet	Rolls/ pallet	Pallet size (mm)	Weight (kg) /pallet
	outer diameter	inner diameter	height					
3-4	185	94	260	36	3	108	1140x1140x900	324-432
				36	4	144	1140x1140x1165	432-576
4.5-6	220	94	260	25	3	75	1140x1140x900	338-450
				25	4	100	1140x1140x1165	450-600
6.5-10	275	94	260	16	3	48	1140x1140x900	312-480
				16	4	64	1140x1140x1165	416-640

Storage: If there is no special requirement, the product shall be stacked in a dry and cool place. If it is not used, please do not unpack the package to avoid moisture.

Application

Area





optical cable reinforcing core, doors and windows, insulating core rods, polyurethane cross ties, and wind power wedge strips

ECT-Glass

Corrosion-resistant glass fiber

ECT glass fiber is a kind of high-performance and multi-compatible E-glass fiber, which has the characteristics of excellent corrosion resistance, good mechanical performance and electrical insulation performance, light color, and high price/performance ratio, and can be widely used in various industrial applications.

Main applications of ECT glass fiber

wind power industry, urban sewage pipeline, CNG cylinder, power insulation industry, sucker rod, seawater treatment equipment, oil pipeline for saline-alkali land, rail transit, high-grade car interior, high-temperature resistant water tank, muffler filler, and other composite materials.

ECT performance parameter table

Performance	Unit	Test Method	E-Glass	ECT-Glass
Density	(g/cm^3)	ASTM D 1505	2.59~2.63	2.58~2.62
Refractive index	(25°C)	ASTM D 1648	1.54	1.565
Softening temperature	(°C)	ASTM D 338	840~850	880~900
Elastic modulus	(Gpa)	ASTM D 2343	78~82	82~86
Tensile strength	(Mpa)	ASTM D 2343	2100~2500	2300~2700
Acid resistance	(%)	Weight Loss in 10% H_2SO_4 24h at 80°C	22.6	1.85

GLOBAL MANUFACTURE BASE AND MARKETING NETWORK

CPIC PROVIDES CLIENTS WITH FAST AND PROFESSIONAL SERVICES AROUND THE WORLD

OPEN MOLDING FIBERGLASS INTEGRATED SOLUTION

CLOSED MOLDING FIBERGLASS INTEGRATED SOLUTION

PULTRUSION FIBERGLASS INTEGRATED SOLUTION

PIPE & TANK FIBERGLASS INTEGRATED SOLUTION

PANEL FIBERGLASS INTEGRATED SOLUTION

MAT & FABRIC FIBERGLASS INTEGRATED SOLUTION

WIND ENERGY PRODUCTS FIBERGLASS INTEGRATED SOLUTION

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