

做客户增值服务中心，创全球一流玻纤供应商！

**WORLD-LEADING FIBERGLASS SUPPLIER
TO BE CUSTOMERS' VALUE-ADDED
SERVICE CENTER**

www.glasstex.cn



SDF

FIBERGLASS ROVING FOR THERMOSETTING RESIN

增强热固性树脂玻璃纤维纱



SDF 山东玻纤集团股份有限公司

地址：中国·山东·沂水工业园 邮编：276400
电话：+86-539-7369687（外贸）/7369671（内贸）
Add: Yishui Industrial Zone, Linyi City, Shandong, China. 276400
Tel: +86-539-7369687 (export) / 7369671 (domestic)
E-mail: tony@glasstex.cn



山东玻纤集团股份有限公司
SHANDONG FIBERGLASS GROUP CORP.



山东玻纤集团股份有限公司位于沂水县经济开发区，是山东能源临沂矿业集团的控股公司。于2013年12月改制为国有控股的股份公司，注册资本40,000万元，是能源集团“十三五”新材料重要产业板块，公司在册员工3000余人，总占地面积80余万平方米，企业总资产40亿元，下设临沂天炬节能材料科技有限公司、沂水热电公司、淄博卓意玻纤材料有限公司，已形成玻璃纤维及制品、贵金属加工、发电供热的产业链经营模式，拥有耐碱纤维、ECR高性能纤维、E-cer@Tex改性纤维、玻璃纤维装饰壁布、单丝涂塑平织窗纱、PCB湿法薄毡、砂轮网布七大类近300多个品种的产品体系，玻璃纤维总产能40万吨，产业规模同行业国内排名第四位；电力产品主要是火力发电和沂水城区供暖，总装机容量12万MW，城区供暖面积300万平米。

公司建立了完善的质量管理体系，通过了ISO9001/ISO18001/ISO14001体系认证，FDA、GL、UL、CQM产品认证等，公司秉承“质量至尚 精益求精”的企业文化，产品质量稳定持续提升。市场遍布全国31个省、市、自治区，并远销欧、美、亚、非等30多个国家，在世界范围内已形成品牌效应。公司先后荣获省级重合同守信用企业、省管企业文明单位、省高新技术企业、省级技术中心等多项荣誉称号。

Shandong Fiberglass Group Corp. located in Yishui industrial area, is a state-owned enterprise group belongs to Linyi Mining Group of Shandong Energy group. After restructured in 2013, our group grow rapidly, now the registered capital is 4,000,000,000RMB with covering 800,000sqm and employees more than 3000 at end of 2018, And the annual capacity for fiberglass grow up to 400,000tons, which ranked China 4th largest Fiberglass producer. Which have 3 subsidiary factories - Linyi Tianju Energy Saving Material Corp, Yishui Thermo Electricity Plant and Glasstex Fiberglass Material Corp. The main industries are fiberglass products manufacture, chemicals, precious metal processing, urban heat & power supply. It is an important industrial sector of the "13th five-year" new material industry of Shandong Energy Group. Currently we can provide 7 categories products with 300 more kind products in ECR fiber, E-cer@Tex Modified Fiber, C-glass fiber, Wallcoveing, Insect Screen, PCB Tissue and Mesh.

We are certified enterprise group with ISO9001, ISO18001, ISO14001, Germanischer Lloyd(GL), UL and CQM certificates. The company adheres the culture of "Reliable product quality, striving for perfection". While the products are popular in over 30 countries and whole China with good reputation. We are awarded many honorary title like "Provincial Contract and Trustworthy Enterprise", "Provincial Management Enterprises", "Provincial High-tech Enterprises" and "Provincial Technology Centers" etc.



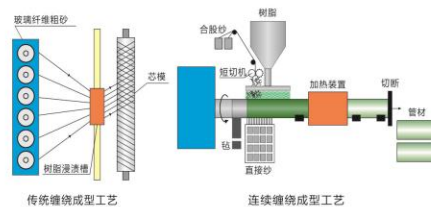
缠绕工艺

将浸渍树脂的玻璃纤维粗纱在一定张力下，按照一定规律缠绕在回转的芯模上，固化获得制品。

分为传统缠绕成型工艺和连续缠绕成型工艺。

FILAMENT WINDING PROCESS

Under a certain controlling tension, winding resin-impregnated fiberglass rovings onto a running mandrel as per a certain preset way to form the final composites after solidification. It divides into traditional and continuous



缠绕用无捻粗纱 ROVING FOR FILAMENT WINDING

产品介绍 Product Introduction

缠绕用ECR玻璃纤维直接无捻粗纱，主要适用于增强不饱和聚酯树脂、乙烯基树脂、环氧树脂、聚氨酯树脂等，可用于制造各种直径规格的玻璃钢输水及化工防腐管道、耐高压的输水、输油管道、压力容器、化学储罐、汽车、电线支架和绝缘材料等。

Filament winding roving is mainly compatible with unsaturated polyester, polyurethane, vinyl ester, epoxy and phenolic resins. It is widely used in various pipes, pressure vessels, chemical storage tanks, automobile, cable trays and insulation materials.



产品特点 Product Properties

- 张力求均匀
- 毛羽少
- 浸透速度快而充分
- 卓越的机械性能
- Even tension
- No fuzz
- Fast and complete wet-out
- High mechanical properties

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR22-2000D-601	±5	≤0.10	0.40-0.70	≥0.40	22	聚酯树脂 乙烯基树脂 环氧树脂 聚氨酯树脂 UP, VE, EP
ECR17-2400D-601	±5	≤0.10	0.40-0.70	≥0.40	17	
ECR24-2400D-601	±5	≤0.10	0.40-0.70	≥0.40	24	
ECR24-4800D-601	±5	≤0.10	0.40-0.70	≥0.40	24	
ECR24-9600D-601	±5	≤0.10	0.40-0.70	≥0.40	24	

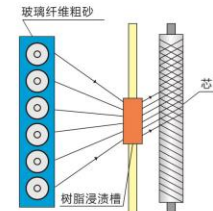


高压管道用无捻粗纱工艺

高压管道用玻璃纤维在控制张力和预定成型的条件下，浸渍树脂胶液连续地缠绕在芯模或内衬上，在室温或加热条件下使之固化制成一定形状制品的工艺。

PRESSURE PIPE PROCESS

Under the condition of controlling tension and preforming, Winding resin-impregnated fiberglass rovings onto a mandrel or lining to form the composites to a certain shape after solidification process at room temperature or heating condition.

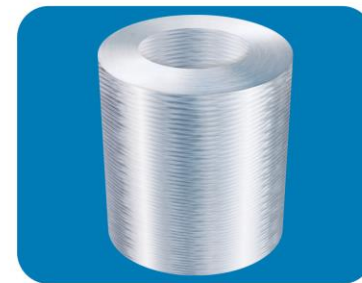


高压管道用无捻粗纱 DIRECT ROVING FOR HIGH PRESSURE PIPE

产品介绍 Product Introduction

高压管道用直接无捻粗纱专为增强环氧树脂而设计，采用ECR玻璃配方，经涂覆专用硅烷基浸渍剂，主要用于制造耐高压的管道、储罐和压力容器，具有机械强度高抗疲劳性能好的优点。

Direct roving for pressure pipe is specially designed for reinforcing epoxy resin. Adopting ECR glass formula and coated by specialized silane sizing it mainly used into high pressure pipe, storage tank and pressure container. It has advantage of high mechanical strength and good fatigue resistance.



产品特点 Product Properties

- 浸透速度快而完全
- 耐磨性能好
- 赋予制品优异的机械强度及抗疲劳性能
- 具有优异的耐化学腐蚀性
- Fast and complete wet-out
- Good abrasion resistance
- Providing excellent property of Mechanical strength and fatigue resistance
- Excellent mechanical corrosion resistance

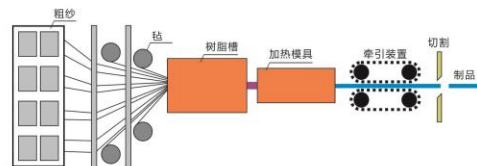
技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR13-2400A-603	±5	≤0.10	0.40-0.70	≥0.40	13	环氧树脂 EP
ECR17-1200D-603	±5	≤0.10	0.40-0.70	≥0.40	17	
ECR17-2000D-603	±5	≤0.10	0.40-0.70	≥0.40	17	
ECR17-2400D-603	±5	≤0.10	0.40-0.70	≥0.40	17	



拉挤工艺

将粗纱在牵引设备的牵引作用下经过树脂槽浸渍，然后进入到加热模具中固化，经过切割形成最终制品。



PULTRUSION PROCESS

By drawing through a pulling device, impregnating fiberglass rovings in resin tank and curing in heating mold, then cutting to form the finished product.

拉挤用无捻粗纱 ROVING FOR PULTRUSION

产品介绍 Product Introduction

拉挤用ECR玻璃纤维直接无捻粗纱，主要适用于增强不饱和聚酯树脂、乙烯基树脂、酚醛树脂等，制品可广泛应用于建筑、通讯、电绝缘等各个领域。

ECR roving for pultrusion is mainly compatible with unsaturated polyester, vinyl ester and phenolic resins. Pultrusion products can be widely applied in building, communication, insulation field.



产品特点 Product Properties

- 张拉力均匀
- 浸透速度快而充分
- 毛羽少
- 卓越的机械性能
- Even tension
- Fast and complete wet-out
- Low fuzz
- Excellent mechanical performance

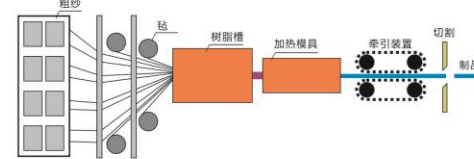
技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR17-2400D-601	±5	≤0.10	0.40-0.70	≥0.40	17	不饱和聚酯树脂、 乙烯基树脂、 酚醛树脂 UP、VE、PF
ECR24-2400D-601	±5	≤0.10	0.40-0.70	≥0.40	24	
ECR24-4800D-601	±5	≤0.10	0.40-0.70	≥0.40	24	
ECR24-9600D-601	±5	≤0.10	0.40-0.70	≥0.40	24	



拉挤工艺

将粗纱在牵引设备的牵引作用下经过树脂槽浸渍，然后进入到加热模具中固化，经过切割形成最终制品。



PULTRUSION PROCESS

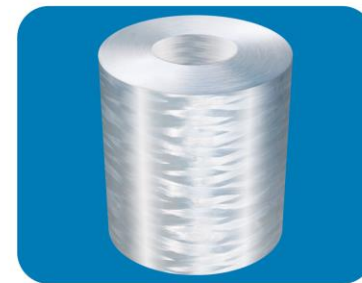
By drawing through a pulling device, impregnating fiberglass rovings in resin tank and curing in heating mold, then cutting to form the finished product.

拉挤绝缘材料用无捻粗纱 DIRECT ROVING FOR INSULATION COMPOSITES

产品介绍 Product Introduction

拉挤绝缘材料用无捻粗纱专为增强环氧绝缘棒而设计，采用ECR玻璃配方，经涂覆专用硅烷基湿润剂，主要用于制造绝缘子芯棒、绝缘杆、绝缘支柱等电力传输配送系统产品。

ECR roving for pultrusion insulation composites is designed for reinforced epoxy insulating rod, treated with special silane sizing, mainly used into electricity transmission system such as insulator core rod, insulating pole and insulating brace.

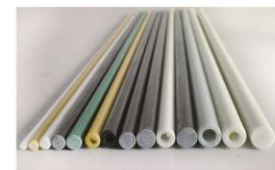


产品特点 Product Properties

- 纤维强度高
- 集束性及成带性好
- 与环氧树脂良好的相容性
- 赋予制品良好的电气性能
- 赋予绝缘材料优异的机械性能
- High strength
- Good strand integrity and tapability
- Compatible with epoxy resin
- Perfect electrical performance to the insulation composites
- Perfect mechanical performance to the insulation composites

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECER16-2400A-611	±5	≤0.10	0.40-0.70	≥0.40	16	环氧树脂 EP
ECER16-4800A-611	±5	≤0.10	0.40-0.70	≥0.40	16	
ECER16-9600A-611	±5	≤0.10	0.40-0.70	≥0.40	16	
ECER16-19200A-611	±5	≤0.10	0.40-0.70	≥0.40	16	

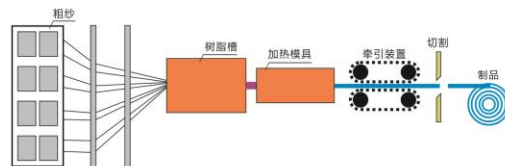


光缆加强芯用纱工艺

将粗纱在牵引设备的牵引作用下经过树脂槽浸渍，然后进入到加热模具中固化，经过卷绕形成最终制品。

OPTICAL CABLE REINFORCED CORE PROCESS

By drawing through a pulling device, impregnating fiberglass rovings in resin tank and curing in heating mold, then cutting to form the finished product.



光缆加强芯用无捻粗纱

ROVING FOR OPTICAL CABLE REINFORCED CORE

产品介绍 Product Introduction

光缆加强芯用无捻粗纱，主要适用于增强乙烯基树脂，制品可广泛应用于建筑、通讯、电绝缘等各个领域。

Roving for optical cable reinforced is compatible with vinyl ester resin, the finished products is widely used in the field of building, communication, electrical insulation etc.



产品特点 Product Properties

- 张力均匀
- 卓越的机械性能
- 浸透速度快而充分
- 线密度均匀
- 毛羽少
- Even tension
- Excellent mechanical properties
- Fast and complete wet-out
- Even linear density
- Low fuzz

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR13-300D-602	±3	≤0.05	0.45-0.65	≥0.40	13	乙烯基树脂 VE
ECER15-600D-602	±3	≤0.05	0.45-0.65	≥0.48	15	
ECER17-1200D-602	±3	≤0.05	0.45-0.65	≥0.48	17	

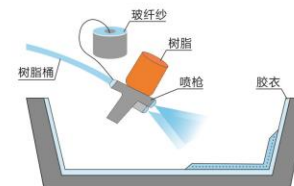


喷射工艺

喷射成型工艺是利用喷射枪将纤维切断、喷散、树脂雾化，并使两者在空间混合后，沉积在模具上，然后用压辊压实的一种成型方法。

SPRAY UP PROCESS

Spray up forming process is a kind of process that cutting the fiber, spraying the strands and atomizing resin synchronously by spray gun, falling the mixture into a mould after mixed in the space, then compacting the mixture by compression roller to form final composites.



喷射用无捻粗纱

ROVING FOR SPRAY-UP

产品介绍 Product Introduction

喷射用无捻粗纱主要适用于增强不饱和聚酯树脂。具有良好的分散性和低静电，树脂浸透性好。广泛应用于卫浴、造船等领域。

Roving for spray-up is compatible with unsaturated polyester resin. It delivers properties of low static, excellent dispersion and good wet out in resins. It is mainly used in bathroom, vessels and etc.



产品特点 Product Properties

- 张力均匀
- 毛羽少
- 浸透速度快而充分
- 分散性好
- 卓越的机械性能
- Even tension
- Low fuzz
- Fast and sufficient wet out
- Excellent dispersibility
- High mechanical properties

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECER13-2400A-823	±5	≤0.10	1.05-1.40	≥0.40	13	不饱和树脂 UP
ECER13-3200A-823	±5	≤0.10	1.05-1.40	≥0.40	13	
ECER13-4800A-823	±5	≤0.10	1.05-1.40	≥0.40	13	
ECER13-2400A-823P	±5	≤0.10	1.05-1.40	≥0.40	13	

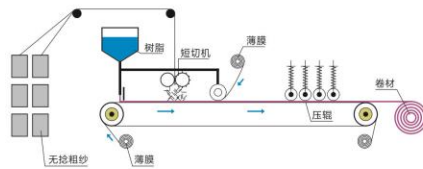


片状膜塑料工艺

由树脂和添加剂搅匀所形成的树脂糊加到下薄膜上，然后将无捻粗纱短切沉降在树脂糊上，再往上面覆盖一层薄膜，经熟化形成半成品。

SMC PROCESS

Putting the sizing paste which mixed up with sizing and additives onto the bottom layer foil, then cutting the fiberglass roving and falling the strand onto the sizing paste, finally covering a foil on the top. Thus sandwich material is ready to form the semi-products after curing.



片状膜塑料用无捻粗纱 ROVING FOR SMC

产品介绍 Product Introduction

SMC用无碱玻璃纤维复合无捻粗纱适用于增强不饱和聚酯树脂、乙烯基树脂等，产品的切割性能好，分散性好，毛羽少，浸透快，静电小。可用于制造各种汽车部件，如保险杠、后盖箱、门、汽车顶棚等，建材业：可用于制造SMC门、椅子、卫生洁具、水箱、天花板等，电子电气业：可用于制造各种电气部件，娱乐休闲业：可用于制造各种运动器具。

Roving for SMC is compatible with' unsaturated polyester, vinyl ester resin, and etc, it delivering good dispersion after chopping, low fuzz, fast wet out and low static. Its applications cover: 1.automotive parts, such as bumper, rear cover box, door, headliner; 2. building & construction industry, like SMC door, chair sanitary ware, water tank, ceiling; 3.electronic & electrical industry, variety electric parts.

产品特点 Product Properties

- 优良的集束性能
- 低静电
- 流动性好
- 优良的短切和分散性能
- 毛羽少
- Excellent concentration property
- Low static
- Good mold flow
- Excellent choppability and dispersibility
- Low fuzz

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR13-4800A-822	±5	≤0.10	1.15-1.40	≥0.40	13	不饱和聚酯树脂、 乙烯基树脂 UP VE
ECR13-2400A-822	±5	≤0.10	1.15-1.40	≥0.40	13	
ECR13-2400A-829	±5	≤0.10	1.15-1.40	≥0.40	13	

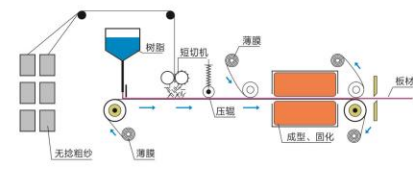


透明板材用无捻粗纱工艺

将配制好的树脂涂覆到匀速运行的薄膜上，通过刮刀来控制树脂的厚度，再将短切的玻璃纤维原丝均匀分布到树脂上，经过浸渍后将上膜覆盖在树脂糊上，进入一定温度和装有模具的烘箱进行固化和成形。

PANEL PROCESS

In the Continuous Panel process, the resin mix is uniformly deposited onto the moving film at the constant speed. The thickness of the resin is controlled by the draw-knife. The fiberglass roving is chopped, metered and uniformly distributed onto the resin. After chopping, the top film is laid-on forming a sandwich structure. The wet assembly travels through the curing oven before de-molding.



透明板材料用无捻粗纱 ROVING FOR PANEL

产品介绍 Product Introduction

透明板材用ECR玻璃纤维复合无捻粗纱，经涂覆硅烷基湿润剂，适用于不饱和聚酯树脂、亚克力树脂，具有良好的短切性和分散性，能在树脂中快速彻底浸透。

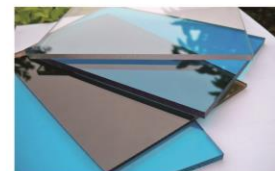
Coated by specialized silane sizing, it's compatible with unsaturated polyester resin and acrylic- based resin. it has excellent choppability and dispersibility and it could be fast wet out.

产品特点 Product Properties

- 硬挺度高
- 良好的分散性
- 原丝集束性好
- 良好的短切性
- 低静电
- High stiffness
- Excellent dispersibility
- Excellent concentration property
- Good choppability
- Low static

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	硬挺度 Stiffness mm	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR13-2400A-812	±5	≤0.10	0.45-0.70	105-125	≥0.40	13	不饱和聚酯树脂 UP

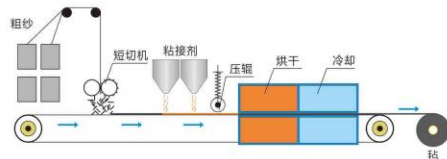


短切毡工艺

由玻璃纤维粗纱短切成一定长度后，无定向、均匀地降落在网带上，用聚酯粉末粘接剂（或乳剂粘接剂）粘结，加热成型后卷取成具有一定幅度和长度的片状产品。

PRODUCTION PROCESS

It is made of chopped fiber in specified length, randomly & evenly distributed on conveyor, bounded together by polyester powder or emulsion binder and cut into certain widths & lengths after heat forming.



短切用无捻粗纱

ROVING FOR CHOPPED STRAND MAT

产品介绍 Product Introduction

短切毡玻璃纤维无捻粗纱适用于不饱和聚酯树脂、乙烯基树脂，主要用于短切工艺。其成品主要用于汽车配件、电子电器、建筑等领域。

Roving for chopped strand mat is compatible with unsaturated polyester resin and vinyl resin, it s mainly used in chopped strand process. Finished product is mainly used in auto parts, electronics, machinery and construction materials, etc.



产品特点 Product Properties

- 毛羽少
- 浸透速度快
- 低静电
- 优良的短切和分散性能
- Low fuzz
- Fast wet-out
- Low static
- Excellent choppability and dispersibility

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 Lol%	硬挺度 Stiffness mm	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR13-2400A-810	±5	≤0.10	0.40-0.60	110-130	≥0.30	13	不饱和聚酯树脂、 乙烯基树脂 UP、VE
ECR13-3600A-816	±5	≤0.10	0.40-0.60	110-130	≥0.30	13	
ECR13-4800A-835	±5	≤0.10	0.40-0.60	110-130	≥0.30	13	

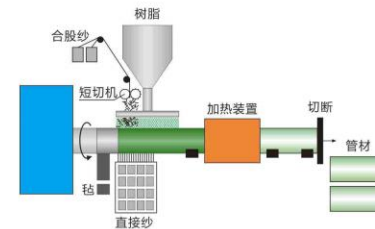


管道短切纱工艺

在采用缠绕生产管道的同时，将管道短切纱切成一定长度后，无定向、均匀的降下并固化在树脂内，起到更好的增加作用。

PRODUCTION PROCESS

In the meantime of filament winding process, chopping the roving and fling evenly and no directionally, to double reinforcing the resin.



管道短切纱

CHOP ROVING FOR PIPE

产品介绍 Product Introduction

管道短切用纱可与不饱和树脂、环氧树脂结合，是用于短切并专门应用于增强管道、储罐的玻璃纤维粗纱。

Chop roving for pipe is compatible with UP and epoxy. It is a kind of fiberglass roving that specialized for chopping and applied in reinforcing pipe and tank.



产品特点 Product Properties

- 优良的短切和分散性能
- 低静电
- 毛羽少
- 浸透速度快
- Excellent chop ability and dispersibility
- Low static
- Low fuzz
- Fast wet-out

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 Lol%	硬挺度 Stiffness mm	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR13-2400A-826	±5	≤0.10	0.40-0.60	110-130	≥0.30	13	不饱和聚酯树脂、 环氧树脂 UP、EP

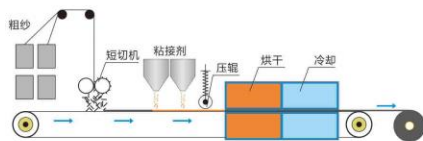


汽车顶棚用无捻粗纱工艺

将玻璃纤维均匀的铺散在涂有热塑性胶粘物的底衬层上，与PU板等多种材料传送到加热区域与冷却区域，使之经过加热复合和冷却定型后制成汽车用基材。

PRODUCTION PROCESS

Laying uniformly the strands onto bottom liner which coated by thermoplastic gooey, Conveyed to heating and cooling devices together with PU panel and other materials, to produce basic materials of automotive headliner through heating compounding and cooling pitching.



汽车顶棚用无捻粗纱 ROVING FOR AUTOMOTIVE HEADLINER

产品介绍 Product Introduction

主要为汽车顶棚而设计的一种增强型玻纤。适用于不饱和聚酯树脂、乙烯基树脂和聚氨酯树脂等。

Roving for automotive headliner is a kind of strengthen fiberglass which designed for automotive headliner, it is Compatible with unsaturated polyester resin, vinyl resin and polyurethane resin.



产品特点 Product Properties

- ◎ 硬度高
- ◎ 良好的分散性
- ◎ 原丝集束性好
- ◎ 良好的短切性
- ◎ 低静电
- ◎ High stiffness
- ◎ Excellent dispersibility
- ◎ Good strand integrity
- ◎ Excellent choppability
- ◎ low static

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	硬挺度 Stiffness mm	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR13-2400A-525	±5	≤0.10	1.20-1.50	120-160	13	不饱和聚酯树脂 乙烯基树脂 聚氨酯树脂 UP、VE、PU
ECR13-4800A-525	±5	≤0.10	1.20-1.50	120-160	13	



预浸料工艺

先将树脂制成糊状或薄膜状，然后与平行排列的纤维复合成为一个整体，经过加热成型产生制品。

PRODUCTION PROCESS

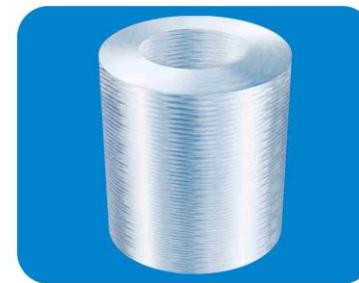
Forming the resin to paste or thin film shape, then combined it with the parallel laid fiberglass ,to produce the final products by thermoforming process.

预浸料用无捻粗纱 ROVING FOR PREPREG

产品介绍 Product Introduction

预浸料用ECR玻璃纤维直接无捻粗纱，主要适用于增强环氧树脂、异氰酸酯树脂、聚酯亚胺、双马来酞亚胺、酚醛等树脂，制品可广泛应用于飞机、高尔夫球杆、羽毛球杆、钓鱼竿及其他体育器材。

Ecr Roving for Prepreg is compatibel with epoxy, isocyanate resin, polyimide, bismaleimide, and phenolic resins. Prepreg products can be widely used in helicopter, golf clubs, badminton posts, fishing pole and other sport equipments.



产品特点 Product Properties

- ◎ 张力均匀
- ◎ 毛羽少
- ◎ 带宽均匀无扭结
- ◎ 卓越的机械性能
- ◎ 浸透速快而充分
- ◎ Even tension
- ◎ Low fuzz
- ◎ Even tapability and no twists
- ◎ High mechanical properties
- ◎ Fast and complete wet -out

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR13-600D-612	±5	≤0.10	0.40-0.70	≥0.40	13	环氧树脂、 异氰酸酯树脂、 聚酯亚胺、 双马来酞亚胺、 酚醛 PE、EP、ETC
ECR16-1200D-612	±5	≤0.10	0.40-0.70	≥0.40	16	
ECR16-2400D-612	±5	≤0.10	0.40-0.70	≥0.40	16	

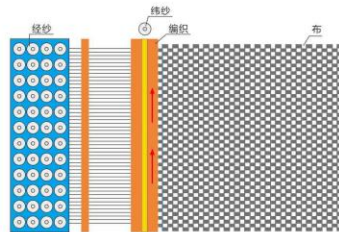


织物工艺

经编多轴向织物是将无捻粗纱在多轴向经编机上经编形成，经、纬纱线按照预设角度进行一层或多层排列。

PRODUCTION PROCESS

Fabric is formed by twisting roving on a multi-axial warp knitting machine. The weft threads are arranged one or more layers at a preset Angle.

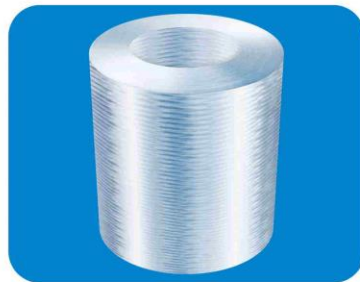


织物用无捻粗纱 ROVING FOR FABRICS

产品介绍 Product Introduction

使用无捻粗纱生产的织物适用于各种树脂增强，如环氧树脂、不饱和聚酯树脂、乙烯基树脂和酚醛树脂等。产品适用于风能领域，用于制造模具、风电叶片、机舱罩等。

Fabrics made from roving yarns are suitable for resins such as epoxy resin, unsaturated polyester resin, vinyl resin and phenolic resin etc. The product can be applied in the wind energy domain, manufacture mold, wind power blade, nacelle and so on.



产品特点 Product Properties

- ◎ 纱线耐磨性好
- ◎ 浸透快而完全
- ◎ 制品机械性能优良，弹性膜量高
- ◎ 优异的耐腐蚀性
- ◎ 良好的使用性
- ◎ Good property of abrasion resistance, less fuzz.
- ◎ Immersion fast and complete.
- ◎ High mechanical properties, high elasticity modulus
- ◎ Excellent corrosion resistance
- ◎ Perfect applicability

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture Content%	可燃物含量 LOI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR17-1200D-608	±5	≤0.10	0.40-0.70	≥0.40	17	环氧树脂、 不饱和聚酯树脂、 乙烯基树脂、 酚醛树脂 Unsaturated polyester resins, Vinylresins and phenolic resins
ECR15-600D-608	±5	≤0.10	0.40-0.70	≥0.40	15	
ECR13-200D-608	±5	≤0.10	0.40-0.70	≥0.40	13	
ECR13-300D-608	±5	≤0.10	0.40-0.70	≥0.40	13	



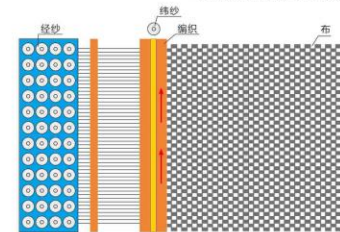
纺织工艺

纺织细纱按照生产加工方式不同可分为初捻纱和并捻纱，按照浸渍剂不同可分为淀粉型、硅烷型。

PRODUCTION PROCESS

Can provide single yarn and twist yarn, with different sizing starch type and silane type.

质量致尚 精益求精 RELIABLE PRODUCT QUALITY
STRIVING FOR PERFECTION



织物用纺织细纱 YARN FOR WEAVING

产品介绍 Product Introduction

中/无碱纺织细纱是中/无碱玻璃纤维并捻、加捻合股纱。具有强度高、耐腐蚀、耐高温、吸湿少等特点。主要用于织造各种增强、绝缘、耐腐蚀、隔热等用途的纺织品。本公司可提供4kg、8kg淀粉型、淀粉硅烷型奶瓶纱。

C&E-glass yarn is a kind of single or twist fiberglass yarn with the characteristics of high strength, corrosion resistance, heat resistance and low moisture absorption etc. Currently we can offer starch and silane type sizing in the package of 4kg or 8kg per plastic bobbin.



产品特点 Product Properties

- ◎ 线密度均匀
- ◎ 强度高
- ◎ 毛羽少
- ◎ 电绝缘、耐热、物化性能好
- ◎ Uniform linear density
- ◎ High strength
- ◎ Low fuzz
- ◎ Good electrical insulation, heat resistance

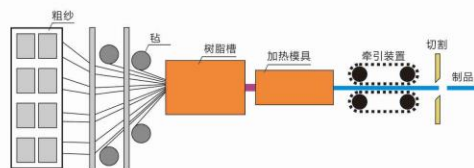
技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture Content%	可燃物含量 LOI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm
ECR11-136×1S28-365	±5	≤0.50	0.40-0.70	≥0.45	11
ECR11-136×1S28-366	±5	≤0.50	0.40-0.70	≥0.45	11
ECR11-100×1S28-365	±5	≤0.50	0.40-0.70	≥0.45	11
ECR11-200×1S28-365	±5	≤0.50	0.40-0.80	≥0.45	11
ECR11-270×1S28-365	±5	≤0.50	0.40-0.80	≥0.45	11
ECR11-270×1S28-365	±5	≤0.50	0.40-0.80	≥0.45	11
ECR11-410×1S28-365	±5	≤0.50	0.40-0.80	≥0.45	11



拉挤工艺

将粗纱在牵引设备的牵引作用下经过树脂槽浸渍，然后进入到加热模具中固化，经过切割形成最终制品。



PULTRUSION PROCESS

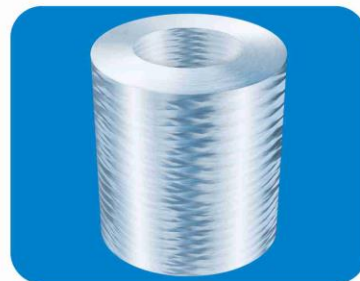
By drawing through a pulling device, impregnating fiberglass rovings in resin tank and curing in heating mold, then cutting to form the finished product.

聚氨酯拉挤用无捻粗纱 ECR GLASS FIBER ROVING FOR PU PULTRUSION

产品介绍 Product Introduction

聚氨酯拉挤用无捻粗纱是专为增强聚氨酯而设计，采用ECR玻璃配方，经涂覆专用硅烷基浸润剂，主要用于制造窗框、桁（héng）架（jià）（truss）塔。

ECR Glass fiber roving for PU Pultrusion is special designed for Polyurethane with coating special sizing to get the better function for pultrusion, which mainly used in produce for window frame, derrick tower.



产品特点 Product Properties

- 张力均匀
- 浸透速度快而充分
- 毛羽少
- 卓越的机械性能
- Even tension
- Fast and complete wet-out
- Low fuzz
- Excellent mechanical performance

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LoI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR17-1200D-681	±5	≤0.10	0.40-0.70	≥0.40	17	聚氨酯 PU
ECR17-1700D-681	±5	≤0.10	0.40-0.70	≥0.40	17	



水切丝

将水切丝溶于白水中均匀分散经过成型、喷胶、烘干形成薄毡。

WET CHOPPED STRANDS

Dissolved the wet chopped strands totally in the pulp water, mix and disperse the filament on the molding under certain process to get the formed layer, then spray the binder before dry process to get the fiberglass tissue..

薄毡用水切丝 WET-LAID TISSUE USED WET CHOPPED STRANDS

产品介绍 Product Introduction

主要用于湿法毡生产

Mainly used in wet-laid tissue



产品特点 Product Properties

- 优良的水中分散性
- Excellent dispersibility in water

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture Content%	可燃物含量 LOI%	长度 Length mm	单丝纤维直径 Filament Diameter μm
ECR13-12-838	±5	8-10%	0.03-0.05	12mm	13
ECR13-24-838	±5	8-10%	0.03-0.05	24mm	13
ECR16-32-838	±5	8-10%	0.03-0.05	32mm	16

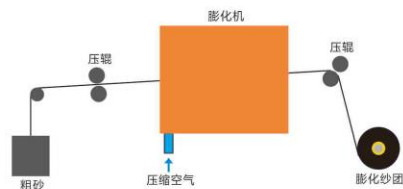


膨化用无捻粗纱工艺

将粗纱引入膨化机中，在压缩空气气流作用下，将粗纱打散膨化，然后再将膨化后的粗纱用于汽车消音填充降噪音用。

PRODUCTION PROCESS

Leading the roving into the Bulking machine, with the effect of the compressed air flow, bulking the roving. The Texturizing roving can be used as a filler in the automobile muffler to reduce the noise.

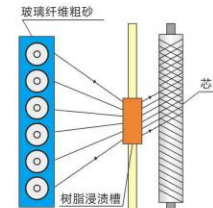


管道用无捻粗纱工艺

管道用玻璃纤维在控制张力和预定成型的条件下，浸渍树脂胶液连续地缠绕在芯模或内衬上，在室温或加热条件下使之固化制成一定形状制品的工艺。

PIPE PROCESS

Under the condition of controlling tension and preforming, Winding resin-impregnated fiberglass rovings onto a mandrel or lining to form the composites to a certain shape after solidification process at room temperature or heating condition.

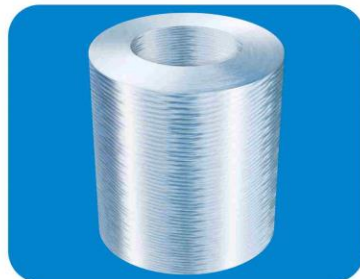


膨化用无捻粗纱 ROVING FOR TEXTURIZING

产品介绍 Product Introduction

膨化用玻璃纤维无捻粗纱采用硅烷型浸渍剂，主要用于膨化工艺。生产的膨化纱主要用于过滤、汽车消音器、密封、保温等领域。

Roving for texturizing is treated with silane sizing, it is mainly used in texturizing process, Finished products is widely used in filtration, automotive muffler, seal and heat preservation.



产品特点 Product Properties

- 耐温性能好
- 毛羽少
- 张力均匀
- 线密度均匀
- Good temperature resistance
- Low Fuzz
- Uniform tension
- Uniform linear density

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture Content%	可燃物含量 LOI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm
ECR11-660D-605	± 7	≤ 0.10	0.15-0.35	≥ 0.30	11
ECR13-660D-605	± 7	≤ 0.10	0.15-0.35	≥ 0.30	13
ECR17-1000D-605	± 7	≤ 0.10	0.15-0.35	≥ 0.30	17
ECR24-2400D-605	± 7	≤ 0.10	0.15-0.35	≥ 0.30	24
ECR24-4800D-605	± 7	≤ 0.10	0.15-0.35	≥ 0.30	24

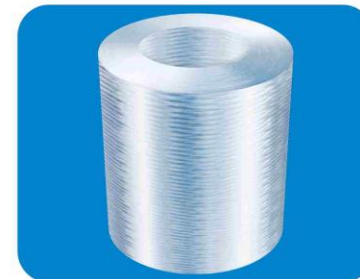


环氧管道用无捻粗纱 DIRECT ROVING FOR PIPE

产品介绍 Product Introduction

环氧管道用直接无捻粗纱专为增强环氧树脂而设计，采用ECR玻璃配方，经涂覆专用硅烷基浸渍剂，主要用于制造耐高压的管道、储罐和压力容器，具有机械强度高抗疲劳性能好的优点。

Direct roving for pressure pipe is specially designed for reinforcing epoxy resin. Adopting ECR glass formula and coated by specialized silane sizing it mainly used into high pressure pipe, storage tank and pressure container. It has advantage of high mechanical strength and good fatigue resistance.



产品特点 Product Properties

- 浸透速度快而完全
- 耐磨性好
- 赋予制品优异的机械强度及抗疲劳性能
- 具有优异的耐化学腐蚀性
- Fast and complete wet-out
- Good abrasion resistance
- Providing excellent property of Mechanical strength and fatigue resistance
- Excellent mechanical corrosion resistance

技术指标 Technical Data

产品代码 Product Code	线密度偏差 Linear Density Tolerance%	含水率 Moisture content%	可燃物含量 LOI%	断裂强度 Tensile Strength N/TEX	单丝纤维直径 Filament Diameter μm	适用树脂类型 Compatible Resin
ECR13-2400A-609	± 5	≤ 0.10	0.40-0.70	≥ 0.40	17	环氧树脂 EP
ECR17-1200D-609	± 5	≤ 0.10	0.40-0.70	≥ 0.40	17	

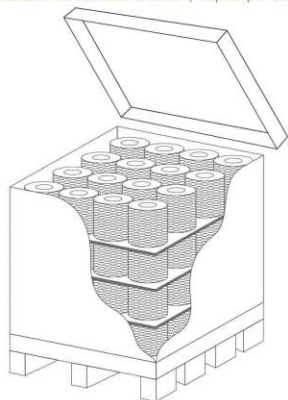


产品包装及贮存 PACKGING & STORAGE

玻璃纤维粗纱 FIBERGLASS ROVING

每个纱团用热收缩膜或拉伸膜进行包装,然后放入托盘或纸箱,每个托盘可放入48个或64个纱团,每个纱团重量15~18kg,可根据用户要求增加纱团重量,但最多不能超过24kg,也可将纱团装入纸箱,每箱一卷。

The spool shall be packed with heat shrinkage plastic film or PE stretched film, then put it into cardboard carton or on pallet, 48 or 64 spools on one pallet. spool weight is 15~ 18kgs,maximum 24kg, or packed with cardboard carton, 1 spool per carton.



集装箱装量:1×20尺柜可装10个大托盘,10个小托盘,净重约20吨。
Loading quantity of 1 × 20ft container:
10 big pallets and 10 small pallets, net weight is approx 20T.

(订货时请注明)

- 1.产品代号
- 2.公称码数即粗纱Tex值
- 3.订货总重量
- 4.包装方式
- 5.如有特殊要求请注明

Please indicate the following information when placing the order

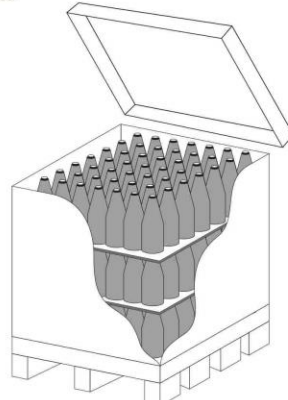
- 1.Product code
- 2.Linear density(Tex)
- 3.Order quantity
- 4.Packing requirement
- 5.For any special request, please mark it.

奶瓶纱 PLASTIC BOBBIN YARN

每个奶瓶纱用塑料袋进行包装,然后放入托盘,每个托盘可码放147个纱,每个纱重量4公斤±0.5和8公斤±0.5 两个规格。

1×20尺柜可装约10吨。

Fiberglass plastic bobbin yarn is packed with PE bag and stacked on pallets. Each pallet stacks 144 bobbins, each bobbin weights 4±0.5 kgs or 8±0.5 kg. Loading capacity for 20ft is approx 10t.

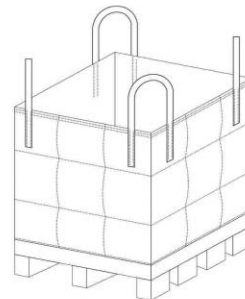


产品包装及贮存 PACKGING & STORAGE

吨袋包装 JUMBO BAG

包装规格为1吨/包,内层PE袋,外层吨包,装车时底层加木盖板,单层存放。

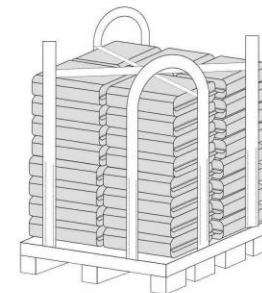
1ton/bag, PE inner layer, bottom layer wood cover when loading, single layer storage.



编织袋包装 PP BAG

包装规格为25kg/袋,40袋/托。

25kg/bag, 40 bags/pallet



贮存

如无特殊要求,产品应堆放于干燥凉爽处,如若不用,请勿打开包装物,以免受潮。

STORAGE

Unless otherwise specified, the product should be stocked in dry and cool area, don't open the package when not used to avoid damp.