



312T

拉挤用直接无捻粗纱

Direct Roving for Pultrusion

产品说明 Product Description

312T 无捻粗纱为无碱连续单股直接纱，表面涂覆硅烷基浸润剂，适用于增强不饱和聚酯树脂、乙烯基树脂、聚氨酯树脂、环氧树脂等多种热固性树脂体系，具有良好通用性。

利用 312T 产品制备得到的玻璃钢复合材料，拉伸、弯曲、剪切等机械性能优异，可用于多种拉挤型材及其他高性能拉挤制品的生产。

312T Direct Roving coated with a silane-based sizing is compatible with unsaturated polyester, vinyl ester, polyurethane and epoxy resins.

Composites prepared with 312T have excellent tensile, flexural and shear properties. 312T is suitable for pultrusion process to manufacture pultruded profiles with high performance.



产品特点 Product Features

- ◎ 与多种树脂相容
- ◎ 浸透快速而完全

·Multi-resin compatibility
·Fast and full wet-out

- ◎ 制品机械性能优良
- ◎ 适用于多种拉挤工艺

·Excellent mechanical properties of parts
·Suitable for a variety of pultrusion processes

规格代号 Specification

玻璃类型 Glass type	E					
浸润剂类型 Sizing type	硅烷 Silane					
典型纤维直径 Typical filament diameter (μm)	17	21	23	24	31	32
典型线密度 Typical linear density (tex)	1200, 2400	2000	4400	4800	9600	17600
示例 Example	EDR17-2400-312T					

机械性能 Mechanical Properties

机械性能 Mechanical properties	单位 Unit	实验值 Value	树脂 Resin	测试方法 Test method
拉伸强度 Tensile strength	MPa	2140	聚酯 Polyester	ASTM D2343
拉伸模量 Tensile modulus	GPa	78.80	聚酯 Polyester	ASTM D2343

以上数据为实验室针对EDR17-1200-312T产品的具体实验值，仅供参考。

The above data are actual experimental values for EDR17-1200-312T and to be used for reference only.

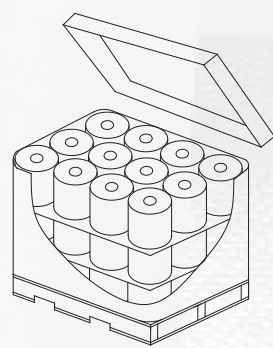
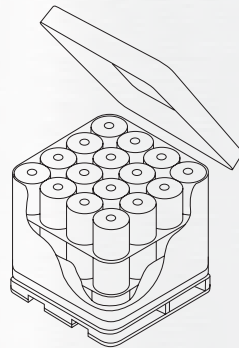
技术指标 Technical Parameters

项目 Item	线密度偏差 Linear density variation (%)	含水率 Moisture content (%)	可燃物含量 Sizing content (%)	断裂强度 Breakage strength (N/tex)
检测方法 Test method	ISO 1889	ISO 3344	ISO 1887	ISO 3341
指标 Standard range	± 4	≤ 0.07	0.58 ± 0.10 0.70 ± 0.15 (17600 tex)	≥ 0.40 (≤ 4400 tex) ≥ 0.30 (4401 ~ 9600 tex) ≥ 0.25 (> 9600 tex)
行业要求或国标 Industry requirement or NS	± 5	≤ 0.15	± 0.2	≥ 0.35 (≤ 4400 tex) ≥ 0.30 (4401 ~ 9600 tex) ≥ 0.25 (> 9600 tex)

包装信息 Packaging

项目Item	单位unit	指标Standard			
典型包装方式 Typical packaging method	/	采用托盘包装 Packed on pallets.			
典型纱团高度 Typical package height	mm (in)	260 (10.2)			
纱团内径 Package inner diameter	mm (in)	160 (6.3)			
典型纱团外径 Typical package outer diameter	mm (in)	280 (11.0)		310 (12.2)	
典型纱团重量 Typical package weight	kg (lb)	17 (37.5)		23 (50.7)	
层数 Number of layers	层 (layer)	3	4	3	4
每层纱团个数 Number of packages per layer	个 (pcs)	16		12	
每托纱团个数 Number of packages per pallet	个 (pcs)	48	64	36	48
每托重量 Net weight per pallet	kg (lb)	816 (1799.0)	1088 (2398.6)	828 (1825.4)	1104 (2433.9)
托盘长度 Pallet length	mm (in)	1140 (44.9)		1270 (50.0)	
托盘宽度 Pallet width	mm (in)	1140 (44.9)		960 (37.8)	
托盘高度 Pallet height	mm (in)	940 (37.0)	1200 (47.2)	940 (37.0)	1200 (47.2)

包装图片 Package picture



产品使用建议 *Tips for product usage*

- 本产品在 18 个月内使用最佳，使用前应保存在原包装内。建议使用时遵循先到先用原则，避免产品存放时间过长，出现分散不良、结块、毛羽增多等现象。
- 避免不同牌号的产品混合使用，如需混用，请寻求技术支持。
- 使用前调理纱线的温湿度与环境温湿度平衡，使用时对环境温湿度进行适当控制。建议使用温度控制在 15℃ ~ 30℃、湿度 60%±15% 最佳。
- *The product is best used within 18 months after production and should be stored in its original packaging before use. Customers are advised to follow the “first-in, first-out” method in warehousing to avoid long-term storage of a certain product, which may otherwise lead to poor dispersion, caking or fuzz.*
- *Please avoid mixing products of different specifications in usage. In case of such mixing, please turn to our technical staff for help.*
- *The temperature and humidity of the product should be conditioned to be close or equal to the ambient temperature and humidity before use. And the ambient temperature and humidity should be properly controlled during the use, where it is recommended to keep the temperature at 15°C-30°C and humidity at 60% ± 15%.*

产品防护建议 *Tips for product protection*

- 产品使用时注意防护，避免产品擦毛、变形、损伤等情况。
- 产品拆开后建议尽快使用，未使用完的产品建议内衬袋重新扎紧并做好防护，降低污染风险。
- *Care should be taken when using the product to prevent it from scratch, deformation or damage.*
- *The product should be used as soon as possible after having been unpackaged. For the unused part of the product, the inner lining should be installed back and tightened again and protective measures should be taken to avoid the risk of contamination.*

工装维护建议 *Tips for maintaining accessories*

- 刀辊、皮辊、张力棒、瓷眼、螺杆等相关工艺附件作好定期保养、更换，及时清理毛羽及黏结物，使用时请合理控制张力并保证张力均匀性。
- *The process accessories such as blade rollers, rubber rollers, tension bars, ceramic guide rings and screws should be maintained and/or replaced regularly, and the fuzz and agglomerations should be cleared in due time. When using the product, please ensure that the tension is reasonably controlled and uniform.*

生产安全建议 *Tips for safety production*

- 接触玻璃纤维产品时，对玻璃纤维敏感者建议穿戴 PVC 或橡胶类手套，防止出现皮肤过敏。
- 搬运玻璃纤维产品时，建议穿戴劳保鞋，防止产品掉落砸伤脚面。
- *People who are allergic to glass fiber product are advised to wear PVC or rubber gloves when handling the product to prevent harm to skin.*
- *When carrying the glass fiber product, it is recommended to wear protective shoes to prevent the product from falling and injuring the foot.*

装卸贮存建议 *Tips for product handling and storage*

- 在没有特殊要求的情况下，玻璃纤维产品应贮存在干燥、阴凉的地方，防止受潮。最佳存储条件为温度 -10℃ ~ 35℃，相对湿度≤80%。为确保安全，避免损坏产品，托盘的堆码高度不应超过三层。当堆放两层或三层高时，要求正确地、平稳地移动上面的托盘。
- 液压车和叉车在装卸铲运过程中，叉齿之间的距离应尽量放宽至托盘的进叉口外缘，进叉深度应大于整个托盘深度的 2/3 以上，进叉深度不要超出托盘深度，防止叉车叉角破坏前面的托盘包装及包装里面的货物。
- 在场地允许的情况下，不同货物其规格或尺寸不相同，应根据不同品种、等级、批次等因素多货物分开堆码，以便收发、保管。货垛的高度要适度，不能压坏底层货物和地坪，并与屋顶、照明灯保持一定距离为宜。
- *Unless otherwise specified, the fiberglass products should be stored in a dry, cool and moisture proof area. The best temperature and humidity should be maintained at -10°C ~ 35°C and ≤80% respectively. To ensure safety and avoid damage to the product, the pallets should be stacked not more than three layers high. When the pallets are stacked in two or three layers, special care should be taken to correctly and smoothly move the upper pallet.*
- *During the loading and unloading operations, the distance between the forks should be widened to match the outer edges of the pallet's entry slots. The insertion depth should exceed two-thirds of the entire pallet depth but must not extend beyond the pallet's full depth. This prevents the fork tips from damaging the adjacent pallet and its contained products.*
- *Categorized Stacking Requirements: Where space permits, separate products by specifications, categories, grades, or batches for efficient storage and retrieval; stack heights must not compromise the integrity of bottom-layer goods or the floor surface; maintain adequate clearance from ceilings and lighting fixtures.*



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