



# 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
- ◎ 制品机械性能优良
- ◎ 适用于多种拉挤工艺

·Multi-resin compatibility

·Fast and full wet-out

·Excellent mechanical properties of parts

·Suitable for a variety of pultrusion processes

#### 规格代号 Specification

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

#### 技术指标 Technical Parameters

| 项目<br>Item           | 线密度偏差<br>Linear density variation | 含水率<br>Moisture content | 可燃物含量<br>Sizing content                | 断裂强度<br>Breakage strength  |
|----------------------|-----------------------------------|-------------------------|--|--|
| 单位<br>Unit           | %                                 | %                       | %                                      | N/tex  |
| 检测方法<br>Test method  | ISO 1889                          | ISO 3344                | ISO 1887                               | ISO 3341   |
| 指标<br>Standard range | ± 4                               | ≤ 0.07                  | 0.58 ± 0.10<br>0.70 ± 0.15 (17600 tex) | ≥ 0.40 (≤ 4400 tex)<br>≥ 0.30 (4401 ~ 9600 tex)<br>≥ 0.25 (> 9600 tex) |

#### 机械性能 Mechanical Properties

| 机械性能<br>Mechanical properties | 单位<br>Unit | 实验值<br>Value | 树脂<br>Resin  | 测试方法<br>Test method |
|-------------------------------|------------|--------------|--------------|---------------------|
| 拉伸强度<br>Tensile strength      | MPa        | 2140         | 聚酯 Polyester | ASTM D2343          |
| 拉伸模量<br>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.

#### 使用说明 Instructions

◎ 本产品可在12个月内使用最佳，使用前应保存在原包装内。

·The product is best used within 12 months after production, and should be kept in the original package before use.



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### Direct Roving for Pultrusion

#### 使用说明 Instructions

- ◎ 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。
- ◎ 产品使用时注意防护，避免产品擦毛、损伤等情况。

·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.

·Care should be taken when using the product to prevent it from being scratched or damaged.

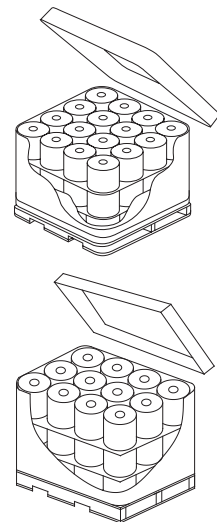
#### 包装信息 Packaging

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

#### 贮存 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  $-10^{\circ}\text{C} \sim 35^{\circ}\text{C}$ ，相对湿度  $\leq 80\%$ 。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。

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  $-10^{\circ}\text{C} \sim 35^{\circ}\text{C}$  and  $\leq 80\%$  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.



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