

# For Filament Winding and pultrusion

**Direct Roving** 

310 Direct Roving is coated with a silane-based sizing compatible with epoxy resins and designed for filament winding and pultrusion applications.

310 is suitable for use in insulation rods, hollow insulation bushings, and insulation stanchions, and is widely used in power generation, transmission, and distribution systems.

#### **Product Features**

- O High fiber strength
- © Good integrity and ribbonization
- O Compatibility with epoxy resin
- O Complete and fast wet-out in resins
- O Good moisture resistance and low fuzz
- Good mechanical properties

## Identification

Glass Type	E		
Type of Size	Silane		
Size Code	310		
Linear Density (tex)	1200	2400	4800
Filament Diameter(um)	17	24	24



#### **Technical Parameters**

	Linear Density (%)	Moisture Content (%)	Size Content (%)	Breakage Strength (N/Tex)	
ISO1889		ISO3344	ISO1887	ISO3341	
	±5	≤ 0.10	0.60±0.10	≥0.40 (≥2400tex) ≥0.50 (<2400tex)	

#### **Mechanical Properties**

Mechanical Properties	Unit	Value	Resin	Method
Tensile Strength	MPa	2368	EP	ASTM D2343
Tensile Modulus	MPa	79694	EP	ASTM D2343
Shear strength	MPa	68	EP	ASTM D2344
Shear strength retention (72 hr boiling)	%	95	EP	/

The above date are actual experimental values for EDR17-1200-310 and for reference only.

#### 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  $15^\circ\text{C}\!\sim\!35^\circ\text{C}$  and  $35\%\sim65\%$ . 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.

## Packaging

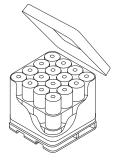
\* The product can be packed on pallet or in small cardboard boxes

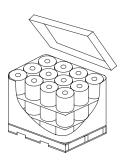
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Package height mm (in)	260 (10)	260 (10)
Package inside diameter mm (in)	160 (6.3)	160 (6.3)
Package outside diameter mm (in)	275 (11)	310 (12.2)
Package weight kg (lb)	15.6 (34.4)	22 (48.5)

Number of layers	3	4	3	4
Number of doffs per layer	16		12	
Number of doffs per pallet	48	64	36	48
Net weight per pallet kg (lb)	750 (1653.4)	1000 (2204.6)	792 (1744.5)	1056 (2326)

Pallet length mm (in)	1120 (44)		1270 (50)	
Pallet width mm (in)	1120 (44)		960 (	37.8)
Pallet height mm (in)	940 (37)	1180 (46.5)	940 (37)	1180 (46.5)







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