



# 111A

## Single End Roving for Weaving and Knitting

### PRODUCT DESCRIPTION

Single-End Rovings are produced by pulling individual fibers directly from the bushing and winding them onto a roving package ready for shipment. The uniform distribution of a proprietary sizing system ensures an excellent resin-to-glass binding through uniform distribution of the binding agent. This results in maximum strand integrity.

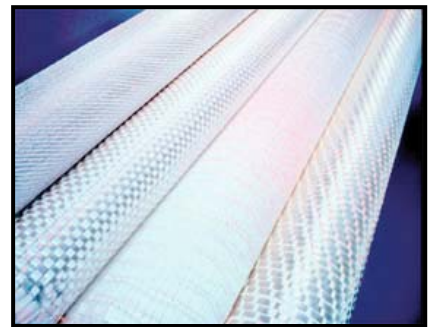
Single-End Rovings are manufactured using the T30® Roving state-of-the-art technology of Owens Corning, in conjunction with statistical process control in manufacturing facilities certified to ISO 9001.



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### PRODUCT APPLICATION

111A is specifically designed for use in knitting and weaving applications in polyester, vinyl ester, and epoxy resin systems. 111A is designed to maximize fast and uniform wet out of the fibers in all resin systems.



### FEATURES AND PRODUCT BENEFITS

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|---|--|
| <ul style="list-style-type: none"> <li>• Excellent Processing</li> </ul>    | <ul style="list-style-type: none"> <li>• Low fuzz properties which equate to low clean-up and high machines efficiencies</li> <li>• Excellent package run out at speeds as low as 15cm/min (6in/min) and as high as 700 m/min (2500 ft/min).</li> <li>• Virtually 100% transfer efficiency with Tack-Pak® packaging</li> </ul> |
| <ul style="list-style-type: none"> <li>• Multi -Resin Compatible</li> </ul> | <ul style="list-style-type: none"> <li>• Excellent adhesion with polyester, vinyl ester and epoxy resins.</li> <li>• Multi resin compatibility allows a change in resin systems without the need for the time consuming effort of changing the glass in the creel</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Fast Wet Out</li> </ul>            | <ul style="list-style-type: none"> <li>• Fast and Uniform wet-out allow to optimize part fabrication time, increasing productivity.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Available globally</li> </ul>      | <ul style="list-style-type: none"> <li>• Global manufacturers can use product in all regions resulting in lower design and qualifications costs.</li> </ul>  |

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## Single-End Roving for Weaving and Knitting

### PRODUCT AVAILABILITY

Yield	Tex
250	200, 275, 300, 320, 408, 410, 480, 600, 740, 900, 1200, 2400, 4800, 8800

### MECHANICAL PROPERTIES

The following data was generated using production material 111A 450 Yield (1100 tex)

Strand Tensiles : ASTM D 2343	Strength (MPa)	Strength (Ksi)
Anhydride/ DER 331 Epoxy resin	2560	370
Polyester E701 Resin	2500	360

Interlaminar Shear Strength NOL ring : ASTM D 2344	Dry shear strength (MPa)	Dry shear strength (psi)	shear strength Retention 72 hr boil (%)
Anhydride/ DER 331 Epoxy resin	69.8	10130	96 %
Polyester F701 Resin	62.1	9010	87 %

### PACKAGING

Rovings are available in a single-end internal-pull package. Each pallet weighed about 1 ton. Pallets are stretch wrapped for load stability. All doffs are wrapped with Tack-Pak® or shrinkable film for protection during transport. Full doffs are available in weights between 20 kg (45 lb.) and 40 kg (88 lb.) and they can be packaged in bulk or Creel-Pak® format. More information is available in the Customer Acceptance Standards.

### STORAGE

Unless otherwise specified, it is recommended to store glass fiber products in a cool, dry area. The packaging is not waterproof. Be sure to protect the product from the weather and other sources of water. The glass fiber products must remain in their original packaging material until the point of usage. If these conditions are maintained, the glass fiber product should not undergo significant changes when stored for one year. Beyond one year after delivery, the product might evolve, specifically if stored outside the recommended conditions.

The best storage conditions are: temperatures between 22°C and 23°C and humidity between 60% and 65%.

The product should be stored in the workshop, within its original packaging, 48 hours prior to its utilization.



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