

## Technical Data

## TCR Woven Roving

### Product Introduction

W1-AB Woven Rovings are composed of TCR direct rovings woven into a fabric. The input rovings are boron-free and fluoride-free glass fiber. They provide higher mechanical properties (modulus of elasticity) than E glass, superior chemical corrosion resistance, especially very similar acid resistance with traditional ECR glass. Without any content of B<sub>2</sub>O<sub>3</sub> and F<sub>2</sub>, TCR glass is environmental-friendly throughout all its production process.

The construction gives bi-directional (0°/90°) reinforcement and the strength of continuous filaments. The type of construction confers to the fabric an excellent dimensional stability during handling. W1-AB is ideal for hand and machine production of boats, containers, aircraft and automotive parts, home furnishings, sports equipment, corrosion-resistant tanks, translucent panels, and other parts with large areas.

### Product Description

All W1-AB Woven rovings are manufactured to meet ISO 9001 standards. These products have obtained the quality certification of Norway Boat code. W1-AB is designed to be compatible with most resins and is widely used in a multitude of applications.

### Packaging

W1-AB Woven Roving is wound into a roll on a cardboard inner tube with an inside diameter of 8cm (3.1"). All densities are 23cm (9") in diameter. Each roll is wrapped with a plastic bag and placed in a cardboard box. 12 or 16 boxes are placed horizontally on a pallet, which is stretch wrapped.

### Storage

Unless otherwise specified, it is recommended to store glass fiber products in a cool, dry area. Temperature



should not exceed 35 °C (95 °F) and the relative humidity should be kept below 75%. Fiberglass products must remain in packaging material until just prior to their use. If these conditions are respected, the glass fiber product should not undergo significant changes when stored for extended periods of time.

### Stacking

To ensure safety and avoid damage to the product, skids should not be stacked more than two high.

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### Customer Benefits

Advantages in reducing costs and contributing to end-product quality

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Uniform weight and construction minimize the potential for air entrapment and weak areas in the laminate. This helps produce stronger, smoother parts

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Drapes well, lays easily on radii and corners, and conforms easily to intricate shapes and patterns

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Reduces fabrication time

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Wets out faster and more evenly to accelerate rolling and brushing

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## Comparison of TCR Woven Roving (W1-AB) Input with E-glass & Advantex Roving

Glass Type	W1-AB Input	E	Advantex
Density (g/cm <sup>3</sup> )	2.55-2.60	2.54-2.60	2.53-2.60
Tensile Strength (MPa) ASTM D 2343	2250-2350	2150-2250	2250-2350
Tensile Modulus (GPa) ASTM D 2343	80-82	73-75	80-82
Glass Softening Point (°C)	905-920	835-850	890-905
Acid Resistance, 10% H <sub>2</sub> SO <sub>4</sub> , 96°C, 48hr, Weight Retention	97.0%	61.8%	95.18%
Acid Resistance, 10% H <sub>2</sub> SO <sub>4</sub> , 96°C, 96hr, Weight Retention	95.48%	/	94.47%

### Product data

ID Number	Filament Diameter (Microns)	Density (g/m <sup>2</sup> , Oz/yd <sup>2</sup> )	Linear Density (TEX/Yield)	Construction (ends/inch)	Thickness (mm/inch)	Weave Structure
W1-180-AB	17	600/18	1200/413 (warp)	6.4 (warp 0°)	0.55/0.022	Plain
			1200/413 (weft)	6.4 (weft 90°)		
W1-240-AB	24	800/24	2400/207 (warp)	4.6 (warp 0°)	0.85/0.033	Plain
			2400/207 (weft)	4.0 (weft 90°)		

ID Number	Sizing Type	% Organic Solid	Standard Widths (mm/in)	Length/roll (m/feet)	Roll Weight (kg/lb)	Compatible Resin
W1-180-AB	Silane	0.55 ± 0.2	965/38	66/216	40/88	Polyester /
			1270/50	66/216	50/110	Vinyl ester
			1520/60	66/216	60/132	
W1-240-AB	Silane	0.55 ± 0.2	1000/39	50/164	40/88	Polyester /
			1270/50	50/164	50/110	Vinyl ester
			1520/60	50/164	60/132	

### Disclaimer of Liability

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