



# VeTron™ High Performance Glass Roving

High-Strength Solutions for Your Toughest Reinforcement Challenges

AGY's VeTron™ high performance glass roving answers the composites industry's need for a vinyl ester compatible reinforcement with higher performance than regular E-Glass and lower costs than aramid and carbon fibers. AGY's global network of people and facilities are ready to help you develop innovative solutions to your most difficult reinforcement challenges.

### Product Application

This product provides ease of processing as well as unrivaled structural performance and is used wherever customers need high performance reinforcement at an affordable price in electronics, marine and alternative energy applications such as:

- Fiber optic cables
- Windmill blades
- Racing boats

### Product Solutions

VeTron provides superior modulus and strength for the most demanding applications. VeTron allows 15% more rigidity and 35% more strength than E-Glass at a lower price than S-2 Glass® fiber. In addition to greater mechanical performance, VeTron features a lower density of less than 2.5 g/cm<sup>3</sup> (2497 lb/ft<sup>3</sup>) superior acid resistance to E-CR glass with good electrical properties.

### Product Description

VeTron products are high performance glass single end roving with vinyl ester compatible sizing suitable for pultrusion, weaving and filament winding. VeTron rovings consist of numerous P-filament (18μ) or V-filament (26μ) continuous glass strands, gathered without mechanical twist in a single bundle.

### Processes

- Weaving
- Pultrusion



Windmill Turbine

VeTron Glass Roving

Features	Benefits
Zero catenary smooth run-out under a variety of condition and speeds	Excellent processing with low fiber
25-35% higher strength than E-Glass composites at the same fiber volume fraction, 10-15% higher modulus	Higher performance, lighter products
VeTron glass rovings have a specially engineered size that exhibits outstanding strength retention after water boil tests	Resistant to water damage
Quick wet-out	The VE1 sizing system allows rapid, uniform wet-out of the entire strand in vinyl ester and polyester resins. This allows the processor to optimize part fabrication time
VeTron high performance glass has better acid, alkali and temperature resistance than regular glass fiber	Durable
VeTron high performance glass is boron-free	Environmentally friendly
The high performance technology manufacturing process features state-of-the-art control systems allowing unusually tight control of linear density (tex/yield)	Consistent product performance and reliability

## PRODUCT INFORMATION

### Available Products

	Linear density TEX (g/km)	Yield (yd/lb)	Nominal Strand Solids %w/w LOI	Filament Diameter (microns)	Filament Diameter (in)	Approximate # Filaments
VE-1-AB-1200X	1200	410	0.5	18	0.00075	2,000
VE-1-AB-2400	2400	205	0.5	26	0.00102	2,000

### Typical Composite Properties

VARTM laminate of 24 osy PW fabric in vinyl ester resin system

	E-Glass Standard	VeTron VE-1-AB-2400	VeTron Premium Over E-Glass
<b>O° Tension to ASTM D638 Type III</b>			
Average strength, ksi (MPa)	55 (379)	91 (626)	65%
Average modulus, msi (GPa)	3.7 (25.7)	5.0 (34.0)	34%
<b>O° Tension to SACMA 1R-94 (modified)</b>			
Average strength, ksi (MPa)	59 (409)	76 (527)	29%
Average modulus, msi (GPa)	4.4 (30.1)	5.6 (39.0)	28%

### Packaging

Package # Descriptions	4044 Tubeless		5044 Tubeless	
	Metric (cm)	English (in)	Metric (cm)	English (in)
Outside diameter	22.0	8.68	TBD	TBD
Inside diameter	16.2	6.38	16.2	6.38
Traverse	26.0	10.25	26.0	10.25
Avg. package weight	6.8 kg	15 lb	36 kg	80 lb
<b>Pallet Type</b>	<b>Carton</b>		<b>Carton</b>	
Packages/pallet	60		21	
Pallets/typical truckload	45		TBD	
<b>Carton Dimensions</b>	Metric (cm)	English (in)	Metric (cm)	English (in)
Length	110	43.3	110	43.3
Width	110	43.3	110	43.3
Height with pallet	94	37.0	94	37.0

### Additional References

Customer acceptance standard: RF-TBD

VeTron is a trademark of AGY. S-2 Glass is a registered trademark of AGY.

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