

Corrosion Resistance • Superior Strength
Life Cycle Cost Savings • Maintenance Free

Tuff Span FRP Roofing & Siding Panels
Important Product Breakthrough!!!
FM Approved Vinyl Ester Panels with Outstanding UV Protection

After extensive research and development, Enduro Composites is pleased to announce its new FM Approved, Tuff Span Vinyl Ester cladding panels. Users and plant personnel love the value these new, fiberglass reinforced plastic (FRP) roofing and siding panels deliver:

Value for Users and Plant Personnel

- New Tuff Span Vinyl Ester offers superior corrosion resistance to premium grade, iso-polyester.
- New Vinyl Ester panels are the strongest profiled FRP panels available worldwide.
- New Tuff Span Vinyl Ester offers higher strength retention at elevated temperatures compared to premium grade, iso-polyester.
- New Vinyl Ester panels with UV protective coating offers superior color retention to iso-polyester without coatings and equal to ones with coatings.
- New Tuff Span Vinyl Ester panels are available with FM approval.



Plant personnel know the superior corrosion resistance and value of vinyl ester over polyester materials. The real accomplishments with the new products is the obtaining of FM approval and development of comparable UV protection to our polyester panels and superior to other FRP panels. These accomplishments are the result of years of joint research and collaboration with raw material suppliers.

Like other Tuff Span FRP panels, the materials have high content of glass fiber reinforcements strategically placed in straight and continuous, bidirectional alignment. The Vinyl Ester panels offer better strength, stiffness, and retention of structural properties at elevated temperatures.

Offering unmatched end user benefits and life-cycle cost savings, Tuff Span has long been recognized as the optimum cladding panel for demanding structural and environmental conditions. With its new Vinyl Ester panels, Enduro Composites has further separated itself from alternative materials.

Tuff Span FM Approved and FR Vinyl Ester panels are available from Enduro in a wide range of profiles in opaque colors or translucent cream for natural light transmission.

Tuff Span Materials	FM Vinyl Ester			Vinyl Ester FR					
	10	13	16	150	200	250	300	400	450
Nominal Weight, Oz/SF	10.5	13.5	16.5	8	9.5	10.5	12	14	16
Nominal Glass Content	33% by wt.			48% by wt.					
Smoke Development, ASTM E-84	≤300			≤450					
Flame Spread Rating, ASTM E-84	Class 1: 15 or less			Class 1: 25 or less					
FM Approvals	Standard 4880, 4881			Not Applicable					
Standard Colors									
Gray, White, Beige, Shale, Stone White-R, Translucent FM Cream							Contact Enduro for other colors.		