



Manufacturer of Engineered FRP Pultrusions

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Pultruded Rod

Technical Data

Property	Test Method	Condition	Unit	Polyester	EHS	Supersil	
Mechanical				Class F-155	Class F-155	Class H-200	
Ultimate Tensile Strength	ASTM D-638	RT	PSI	70,000	100,000	70,000	
Flexural Strength	ASTM D-790	RT	PSI	70,000	100,000	70,000	
		100°C	PSI	25,000		35,000	
		150°C	PSI	15,000		20,000	
Flexural Modulus	ASTM D-790	RT	PSI	3 x 10 ⁶	6 x 10 ⁶	3 x 10 ⁶	
		100°C	PSI	2 x 10 ⁶		2.5 x 10 ⁶	
		150°C	PSI	1.5 x 10 ⁶		2.0 x 10 ⁶	
Impact Strength	ASTM D-256	RT	Ft-lb/in notch	30	50	30	
Compressive Strength	ASTM D-695						
		Flatwise	RT	PSI	20,000	20,000	20,000
Lengthwise		RT	PSI	40,000	40,000	40,000	
Electrical							
Electric Strength	ASTM D-149						
		Perpendicular (1/8" thick)	In Oil	VPM	300	300	300
		Parallel	In Oil	KV/in	50	50	50
Power Factor 60 Hz	ASTM D-150			0.03	0.03	0.03	
Dielectric Constant 60 Hz	ASTM D-150			5.0	5.0	5.0	
Arc Resistance	ASTM D-495		Sec	100	100	120	
Other							
Thermal Coefficient of Expansion	ASTM D-696		in/in/°F	3 x 10 ⁻⁶	3 x 10 ⁻⁶	3 x 10 ⁻⁶	
Thermal Conductivity			BTU-in/hr/sq-ft°F	4	5	4	
Weight Loss	200 hrs @ 150°C		%	1.00		0.17	
	200 hrs @ 200°C		%	6.10		0.75	
Extractables in Freon 22			%	1.05		0.19	
Specific Gravity	ASTM D-792			1.95	1.95	1.95	
Water Absorption	ASTM D-349	24 hrs	%	0.30	0.10	0.30	
Color (Standard)				White	Clear	Gray	

Material Grade Guideline

Polyglas Polyester - General Purpose Grade for in-place temperatures up to 155°C (class F materials). Polyglas Polyester is a recognized component in most UL listed insulation systems requiring 130°C, 155°C, and 180°C temperature ratings.

Polyglas EHS - Extra High Strength, this grade provides very high flexural and tensile strength and modulus.

Polyglas Supersil - High temperature grade for in-place temperatures up to 200°C (class H material). Polyglas Supersil is a recognized component in most UL listed insulation systems requiring 180°C, 200°C, and 220°C temperature ratings.

Other Grades Available

Polyglas FR - UL Listed (file E55403) flame retardant electrical grade material.

Polyglas TR - UL Listed (file E55403) track resistant, flame retardant electrical grade material.

Polyglas C - Corrosion resistant vinyl ester. Liberty Pultrusions stocks a number of sizes and grades of material in 96 inch lengths.

Special colors and resin systems available.

The above data is based on results achieved in the test methods indicated and is provided for informational purposes only.