



Manufacturer of Engineered FRP Pultrusions

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Pultruded Rod

Technical Data

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

Material Grade Guideline

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

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

Other Grades Available

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.

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.