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Fiberglass Round Hollow Tube Properties

The Following is a list of Properties of the basic resin systems used to Pultrude our various diameters of Round Hollow Tubes.

STR (Standard Resin) – 155°C General Purpose Rod

PROPERTIES OF PULTRUDED ROUND TUBE:

MECHANICAL	TEST METHOD	DIRECTION	UNIT	STR
Flexural Stress	ASTM D-790	Longitudinal Transverse	psi	40,000 10,000
Flexural Modulus	ASTM D-790	Longitudinal Transverse	psi x 10^6	1.8 1
Tensile Stress	ASTM D-638	Longitudinal Transverse	psi	40,000 6,500
Tensile Modulus	ASTM D-638	Longitudinal Transverse	psi x 10^6	2.5 0.8
Compressive Stress	ASTM D-695	Longitudinal Transverse	psi	40,000 10,000
Compressive Modulus	ASTM D-695	Longitudinal Transverse	psi x 10^6	2.3 0.8
Modulus of Elasticity		Longitudinal	psi x 10^6	2.5
Notched IZOD Impact	ASTM D-256	Longitudinal Transverse	Ft.-lbs./in.	28 4
Shear Strength Short Beam	ASTM D-2344	Longitudinal Transverse	psi	4,500
Hardness - Barcol	ASTM D-2583	Perpendicular		40

ELECTRICAL	TEST METHOD	DIRECTION	UNIT	STR
Electric Strength In Oil	ASTM D-149	Perpendicular Parallel	V/mm KV/in	300 50
Power Factor 60 Hz	ASTM D-150			0.03
Arc Resistance	ASTM D-495		seconds	120
Dielectric Constant 60 Hz	ASTM D-150			5

OTHER	TEST METHOD	DIRECTION	UNIT	STR
Thermal Coefficient of Expansion	ASTM D-696	Longitudinal	In/in/°F	3 x 10^{-6}
Thermal Conductivity		Longitudinal	BTU/sf/hr/°F/in	4
24-HR Water Absorption	ASTM D-570	Longitudinal	% max., by wt	.06
Specific Gravity / Density	ASTM D-792	Longitudinal	$10^{-3}\mathrm{g/mm^3}$	1.95

Results obtained with this data cannot be guaranteed and final determination of the suitability of any material for use contemplated or the manner of use is the sole responsibility of the user.