



Composites for Today's Challenges

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Lamitex® G11 Tube Technical Data

Lamitex® G11 epoxy convolute wrapped tubes are reinforced with a woven glass fabric. This material is primarily used for mechanical, electrical and electronic applications where extremely high mechanical strengths are required at high temperatures. Lamitex G11 meets or exceeds NEMA G11 specifications, has excellent resistance to chemicals and retains its electrical properties in high humidity environments.

<u>Mechanical Properties</u>	<u>Test Method:</u>			<u>Conditioning</u>	
	<u>EN 61212-2</u>	<u>Standard</u>	<u>Test Specimen</u>	<u>IEC 212</u>	<u>Values</u>
Flexural Strength	4.1	ISO 178	id>3.937 inches	1	50,760 psi
Compressive Strength, Axial	4.2	ISO 604		1	36,260 psi
Cohesion between layers	4.3	EN 61212-2	id<3.937 inches	1	69,600 psi
Tensile Strength, Axial		ISO527		1	40,600 psi
 <u>Electrical Properties</u>					
Electric Strength in oil @ 90C:					
Perpendicular to Laminations	5.1	IEC 243-1	.118 inch wall thk	2	27.5 kV/m
Parallel to Laminations	5.1	IEC 243-1	>.118 inch wall thk	2	61 kV/inch
Insulation resistance after immersion in water	5.2	IEC 167	id>.315 inch and	4	10,000 M ohm
Permittivity:					
50Hz	5.3	IEC 250	or od>.394 inchs	3	4.5
1 MHz	5.3	IEC 250		3	4.5
Dissipation Factor:					
50Hz	5.3	IEC 250		3	0.01
1 MHz	5.3	IEC 250		3	0.01
 <u>Physical and Thermal Properties</u>					
Thermal endurance index @ 20,000 hrs	6.0	IEC 216		-	356°F T.I.
Density	7.2	IEC 1183-A	All	1	1.8 g/cm ³
Water Absorption (maximum)		ASTM D229		4	0.15%

- Conditioning:
- 1: 24h @ 23°C & 50%RH
 - 2: 24h @ 23°C & 50%RH + 1hr in oil at 90°C
 - 3: 96h @ 105°C + 1hr @ 23°C & 20%RH
 - 4: 24h @ 50°C + 24hr in water at 23°C

The standard length(s) for inside diameters .118" to .472" is 48 inches and for IDs >.472" to 49.2" is 48 and 63 inches

All values are average test results from extensive testing of typical production material. No warranty is implied or guaranteed and testing is recommended for each application.

Composite Tubes • Bearings • Molded Shapes • Rotary Vanes • Fabricated Parts • Vulcanized Fibre • High Temp Insulation

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