



# FRANKLIN

**PLASTICS & NON-METALLICS  
FOR INDUSTRY SINCE 1921**

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## Lamitex® Grade CE Tube Technical Data

Lamitex® grade CE phenolic convolute wrapped tubes are reinforced with a medium weave cotton fabric. They are used primarily for mechanical applications where impact resistance, low noise output and good wear resistance is needed. CE is well suited as a low-friction/high wear resistance material in aggressive and dust-filled environments. Examples of applications are bearing bushes, rudder bearings and guide rings for hydraulic cylinders.

<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>100 mm	1	100 Mpa
Compressive Strength, Axial	4.2	ISO 604		1	160 MPa
Cohesion between layers	4.3	EN 61212-2	id<100 mm	1	120 MPa
 <u>Electrical Properties</u>					
Electric Strength in oil @ 90C:					
Perpendicular to Laminations	5.1	IEC 243-1	3 mm wall thk	2	2.0 kV/mm
Parallel to Laminations	5.1	IEC 243-1	>3 mm wall thk	2	15 kV/25 mm
Insulation resistance after immersion in water	5.2	IEC 167	id>8mm and or od>10mm	4	100 M ohm
 <u>Physical and Thermal Properties</u>					
Thermal endurance index @ 20,000 hrs	6.0	IEC 216		-	120°C T.I.
Density	7.2	IEC 1183/A	All	1	1.25 g/cm <sup>3</sup>
Water Absorption	7.1	IEC 62/1		4	3.0 mg/cm <sup>2</sup>

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  
5: 96h @ 105°C + 1hr in oil at 90°C

The standard length for inside diameters >6.5 mm to 1000 mm is 1350 mm and for IDs >15 mm to 1250 mm is 1450 mm

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

**Epoxies • Phenolics • Melamine • Silicone • Sheets • Molded Shapes • Tubes • Cut to Size • Fabricated Parts**

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