FRANKLIN

Composites for Today's Challenges

Franklin Fibre - Lamitex Corp

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Lamitex® Grade C Cotton Phenolic Tubes

Lamitex® grade C 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. C 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.

Standards: NEMA LI-1	Grade C
Mil-I-24768	/16 Type FBM
EN 61212-3-1	PF CC 22
Din 7735	Hgw 2085

Availability: Grade C is also manufactured as round tubes (convolute wound), molded channel, angle, square and rectangular tubes and fabricated custom parts NEMA does not recommend Grade C for round molded tubes or rods because mold seams may be mechanically and electrically weak points.

			Conditioning	
Mechanical Properties	**Standard**	**Test Specimen**	**IEC 212**	**Values**
Flexural Strength	ISO 178	id>3.937 inches	1	90 Mpa / 13,500 psi
Compressive Strength, Axial	ISO 604		1	170 Mpa / 24,650 psi
Cohesion between layers	EN 61212-2	id<3.937 inches	1	130 Mpa / 18,850 psi
Electrical Properties				
Electric Strength in oil @ 90°C:				
Perpendicular to Laminations	IEC 243-1	.118 inch wall thk	2	2 kV/mm / 50.8 kVpm
Parallel to Laminations	IEC 243-1	>.118 inch wall thk	2	15 kV/25 mm / 15.2 kV/ in.
Insulation resistance after immersion in water	IEC 167	id>.315 inch and or od>.394 inches	4	100 M ohm
Physical and Thermal Properties				
Temperature Index		Electrical	-	125°C / 257°F
		Mechanical	-	115°C / 239°F
Density	IEC 1183-A	All	1	1.25 g/cm^3
Water Absorption	ASTM 229	.750" ID w/.125" wall	1	1.80%

Conditioning: 1: 24h @ 73°F & 50%RH
2: 24h @ 73°F & 50%RH + 1hr in oil at 194°F
3: 96h @ 221°F + 1hr @ 73°F & 20%RH
4: 24h @ 122°F + 24hr in water at 73°F

The standard lengths for inside diameters .112" to 49.2" is 57.1 inches

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.