FRANKLIN

Composites for Today's Challenges

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Lamitex® DN

DN is a strong synthetic fabric/phenolic composite formulated for applications that require exceptional dimensional stability, low moisture absorption properties and very low-friction characteristics. It has high wear resistance properties in aggressive and dust filled environments and can be lubricated with water, oil or grease. Example uses are: Bearing Bushings, Rudder Bearings and Guide Rings for hydraulic cylinders.

Mechanical Properties	Test Method	Test Specimen Thickness	Values	
Flexural Strength	ISO 178	ID >100 mm	85 MPa / 12,325 psi	*1
Compressive Strength	ISO 604		140 MPa / 20,300 psi	*1
Cohesion between layers		ID >100 mm	180 MPa / 26,100 psi	*1
Electrical Properties				
Electric Strength in oil @ 90°C:				
Parallel to Laminations	IEC 243-1	3.0 mm wall thickness	3 kV/mm	*2
Perpendicular to Laminations	IEC 243-1	3.0 mm wall thickness	40 kV/25 mm	*2
Permittivity: 50 Hz	IEC 250		4.0	*3
Dissipation Factor: 50 Hz	IEC 250		0.040	*3
Insulation resistance after immersion in water	IEC 167	ID >8 mm & or OD >10mm	5,000 MΩ	*4
Physical and Thermal Properties				
Thermal endurance index @ 20,000 hrs	IEC 216	≥3.0 mm	130°C	
Density	IEC 1183-A	All	1.15 g/cm^3	*1
Water Absorption	IEC 62-1	50x50x3 mm	1.0 mg/cm^2	*1

IEC 212 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