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ELECTRICAL INSULATION MATERIALS
SINCE 1921

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MATERIAL DATA SHEET

Material: Lamitex® Grade L Cotton/Phenolic Laminate Sheet

Description: Lamitex Grade L is a fine weave cotton/phenolic laminate intended for close tolerance machining and mechanical applications. It has good moisture resistance, mechanical strength, and dimensional stability and superior impact properties compared to paper based products. Grade L has good wear resistance when in contact with steel and other plastics and good chemical resistance when exposed to organic solvents and oils.

Standards: NEMA LI-1 Grade L
MIL-I-24768 / 15 Type FBI
EN 60893 PF CC 203
DIN 7735 Hgw 2083

Availability: Grade L is also manufactured as round tubes (convolute wound), molded channel, angle, square and rectangular tubes and fabricated custom parts.

Physical Properties	Test Condition	ASTM	Typical Values
Thickness			.125"
Specific Gravity		D792	1.34
Rockwell Hardness (M Scale)		D785	100
Moisture Absorption (maximum)		D229	1.60 %
Flexural Strength	Condition A: Lengthwise Crosswise	D229	16,500 psi 14,500 psi
Tensile Strength	Condition A: Lengthwise Crosswise		14,000 psi 10,000 psi
Compressive Strength	Condition A: Flatwise Edgewise	D695	38,000 psi 23,500 psi
Izod Impact Strength (.500" thick)	E48/50: Lengthwise Crosswise	D229	1.7 ft-lb/in.(notch) 1.35 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A	D229	2,000 lbs

Thermal & Electrical Properties

Temperature Index Electrical / Mechanical			115° C / 125° C
Coefficient of Thermal Expansion	x-axis / y-axis		18.0 / 19.0 in/in/°C x 10 ⁻⁶
U.L.® 94 Flammability Rating			94-HB
Minimum Dielectric Breakdown (step x step)	Condition A / D 48/50	D229	- - -
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D229	5.80 / 6.00
Maximum Dissipation @ 1 MHz	Condition A / D 24/23	D229	.055 / .070
Electrical Strength (short time)	Condition A	D229	- - -
Electrical Strength (step x step)	Condition A	D229	- - -

All information and suggestions pertaining to the properties and uses of the materials described herein are based upon tests and data believed to be accurate; however, the final determination regarding the suitability of any material for such use is the sole responsibility of the user. No warranty is expressed or implied, including, without limitation, warrant of merchantability or fitness for a particular purpose. Under no circumstances shall Franklin Fibre - Lamitex Corp. be liable for incidental or consequential loss or damage.