Current Industrial Composites

Sheeting · Tubes · Rods · Fabricated Parts · Epoxy · Phenolic

MATERIAL DATA SHEET

Material: Grade L Cotton/Phenolic Laminate Sheet

Description: Grade L is s 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

Physical Properties	Test Condition		ASTM	Typical Values
For Thickness				.125"
Specific Gravity			D792	1.34
Rockwell Hardness (M Scale)			D785	100
Water 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)	E48/40:	Lengthwise Crosswise	D229	1.7 ft-lb/in.(notch) 1.35 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A D 48/50		D229	2,000 lbs

Thermal & Electrical Properties	Test Condition	ASTM	Typical Values
Temperature Index Electrical / Mechanical			125° C
Volume resistivity			N/A
Surface resistivity			N/A
Dielectric Breakdown Voltage (step x step)	Condition A / D 48/50	D229	35 kV
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D229	5.3
Maximum Dissipation @ 1 MHz	Condition A / D 24/23 / D48 / 50	D229	.048
Dielectric Strength (short time)	Condition A	D229	360 Vpm
Arc Resistance	Condition A	D 495	N/A