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SINCE 1921

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MATERIAL DATA SHEET

Material: Lamitex® Grade G-3 Glass Phenolic Laminate Sheet

Description: Lamitex® G-3 glass/phenolic laminated sheet is frequently specified for its high mechanical strength, excellent arc resistance, heat resistance and low smoke emission and toxicity properties.

Standards: NEMA LI-1 Grade G-3
MIL-I-24768 / 18 Type GPG
EN 60893 PF GC 201
DIN Hgw 2072
British Standard 3953 PF-2

Availability: G-3 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	1.85
Rockwell Hardness (M Scale)		D785	110
Moisture Absorption (maximum)		D229	2.0%
Flexural Strength	Condition A: Lengthwise Crosswise	D229	40,000 psi 30,000 psi
Tensile Strength	Condition A: Lengthwise Crosswise		42,000 psi 34,000 psi
Compressive Strength	Condition A: Flatwise Edgewise	D695	76,000 psi 25,000 psi
Izod Impact Strength (.500" thick)	E48/50: Lengthwise Crosswise	D229	12.0 ft-lb/in. (notch) 11.0 ft-lb/in. (notch)
Bond Strength (.500" thick)	Condition A D 48/50	D229	1,570 lbs 1,400 lbs

Thermal & Electrical Properties

Temperature Index Electrical / Mechanical			140° C / 170° C
Coefficient of Thermal Expansion			1.8 cm/cm/°C x 10 ⁻⁵
U.L.® 94 Flammability Rating			94-HB
Dielectric Breakdown Voltage (step x step)	Condition A / D 48/50	D149	32.0 kV / 28.0 kV
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D150	0.046 / 0.047
Maximum Dissipation @ 1 MHz	Condition A / D 24/23	D150	6.14 / 6.27
Dielectric Strength (short time)	Condition A	D229	600 Vpm
Dielectric Strength (step x step)	Condition A	D229	450 Vpm
Arc Resistance	Condition A	D 495	180 seconds

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