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ELECTRICAL INSULATION MATERIALS
SINCE 1921

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MATERIAL DATA SHEET

Material: Lamitex® Grade G-11 Glass Epoxy Laminate Sheet

Description: Lamitex® G11 laminated sheet is a woven glass fabric composite impregnated with an epoxy resin. It is primarily used for mechanical, electrical and electronic applications where extremely high mechanical strengths are required at room and moderate temperatures. It is frequently specified for its excellent resistance to chemicals and retention of good electrical properties in dry and high humidity environments. G-11 is non-brominated, is not flame retardant and should not be confused with a similar glass epoxy grade FR-5 which is flame retardant.

Standards: NEMA LI-1 Grade G-11
MIL-I-24768 / 3 Type GEB
EN 60893 EP GC 203
DIN Hgw 2372.4

Availability: G-11 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	1.80
Rockwell Hardness (M Scale)		D785	100
Moisture Absorption (maximum)		D229	.15%
Flexural Strength	Condition A: Lengthwise Crosswise	D229	55,000 psi 45,000 psi
Tensile Strength	Condition A: Lengthwise Crosswise		40,000 psi 35,000 psi
Compressive Strength	Condition A: Flatwise Edgewise	D695	68,000 psi 35,000 psi
Izod Impact Strength (.500" thick)	E48/50: Lengthwise Crosswise	D229	9.5 ft-lb/in.(notch) 7.5 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A	D229	2200 lbs

Thermal & Electrical Properties

Temperature Index Electrical / Mechanical			170° C / 180° C
Coefficient of Thermal Expansion			9.0 cm/cm/°C x 10 ⁻⁶
U.L.® 94 Flammability Rating			94-HB
Dielectric Breakdown (step x step)	Condition A / D 48/50	D229	45.0 kV / 40.0 kV
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D229	5.20 / 5.40
Maximum Dissipation @ 1 MHz	Condition A / D 24/23	D229	.025 / .035
Electrical Strength (short time)	Condition A	D229	550 Vpm
Electrical Strength (step x step)	Condition A	D229	350 Vpm
Arc Resistance	Condition A	D 495	120 seconds

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.