



FRANKLIN

MANUFACTURERS & FABRICATORS OF
ELECTRICAL INSULATION MATERIALS
SINCE 1921

Composites for Today's Challenges

FRANKLIN FIBRE – LAMITEX CORPORATION

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MATERIAL DATA SHEET

Material: Lamitex® Grade GPO-3 Sheet

Description: Lamitex® GPO-3 is a random glass composite reinforced with a polyester flame retardant resin formulation. GPO-3 has good mechanical strength, dielectric strength, and excellent arc and carbon tracking resistance.

Standards: NEMA LI-1 Grade GPO-3
MIL-I-24768 / 6 Type GPO N3
EN 60893 UP GM 203
DIN Hm 2471
British Standard 3953 UP-5

Availability: GPO-3 is also manufactured as pultruded tubes, channel, angle, rod, and custom shapes. Custom parts are frequently manufactured by compression molding, injection molding of BMC (bulk molding compound) and fabricated from sheets or shapes.

Physical Properties	Test Condition	ASTM	Typical Values
Thickness			.125"
Specific Gravity		D792	1.81
Rockwell Hardness (M Scale)		D785	100
Moisture Absorption (maximum)		D570	.25%
Flexural Strength	Condition A: Lengthwise Crosswise	D790	26,000 psi 22,500 psi
Tensile Strength	Condition A: Lengthwise Crosswise	D638	11,200 psi 9,500 psi
Compressive Strength	Condition A: Flatwise	D229	33,000 psi
Izod Impact Strength (.500" thick)	E48/50	D229	8.9 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A	D229	850 lbs
	E48/50	D229	800 lbs

Thermal & Electrical Properties

Temperature Index Electrical / Mechanical			120° C / 140° C
Coefficient of Thermal Expansion			2.0 in/in/°C x 10 ⁻⁵
U.L.® 94 Flammability Rating			94-V0
Electric Strength Perpendicular (short time)	In Air / In Oil	D149	450 Vpm / 584 Vpm
Maximum Permittivity @ 60 Hz	Condition A	D229	4.50
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D229	4.30 / 4.40
Dissipation Factor @ 60 Hz	Condition A	D150	.013
Dissipation Factor @ 1 MHz	Condition A	D150	.010
Inclined Plane Track Resistance	Condition A	D2303	> 300 minutes
Electrical Strength Parallel (step x step)	In Oil	D149	47 kV
Arc Resistance	Condition A	D 495	181 seconds

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