THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

GPO-3 Custom & Specialty Profiles

Glass Polyester Composite

GPO-3 is a UL-recognized, glass fiber reinforced thermoset polyester composite manufactured through the pultrusion process. Engineered for electrical insulation applications requiring excellent flame resistance, arc resistance, and dimensional stability, GPO-3 offers a balance of mechanical strength and electrical performance. The material exhibits UL 94 V-0 flammability performance and a Relative Thermal Index (RTI) of 130°C, making it suitable for bus supports, standoff insulators, barriers, channels, angles, and other structural insulating components used in low- and medium-voltage electrical equipment.

The Gund Company fabricates insulation materials to the exact specifications and drawings specified by our customers. We offer our customers the proper product for their specific application.
A variety of dimensions and diameter sizes are available. Product colors vary according to material type.

		ASTM/ISO/IEC		
PROPERTIES		**Test Method**	**Units**	**Typical Values**
PHYSICAL	Density	ASTM D792	g/cm^3	1.9
	Water Absorption	ASTM D570	%	0.11
	Specific Gravity	ASTM D792		1.85
THERMAL	Thermal Class	UL 746-B	°C	130
	Thermal Conductivity	ASTM C-177	BTU·in/(hr·ft²·°F)	1.9
	Flammability Rating	UL 94	Class	V-0
MECHANICAL	Compressive Strength	ASTM D695	ksi	33
	Shear Strength	ASTM D732	ksi (MPa)	13.0 (90)
	Flexural Modulus	ASTM D790	PSI × 10^6	1.2
	Tensile Modulus	ASTM D638	PSI × 10^6	1.7
	Flexural Strength: LW, Condition E-48/50 (0.062")	ASTM D790	ksi	18 min.
	Flexural Strength: CW, Condition E-48/50 (0.062")	ASTM D790	ksi	18 min.
	IZOD Impact Strength: Lengthwise	ASTM D256	ft-lb/in	45
	Impact Strength	ASTM D256	ft-lb/in, Notched	15.5
	Tensile Strength	ASTM D638	ksi	17.5
	Bonding Strength	ISO 1092	kgf	392.1
	Flexural Strength: at Room Temperature	ISO 178	MPa	130 min.
	Flexural Strength: at 130°C	ISO 178	MPa	65 min.
	IZOD Impact Strength: Parallel to Laminations	ISO 180	kJ/m²	35 min.
ELECTRICAL	High Voltage Tracking Rate	UL 746-A	mm/min	0
	High Voltage Arc Resistance	ASTM D495	Seconds	300+
	Volume Resistivity	ASTM D257	Ω-cm	10^{15}
	Breakdown Voltage: Condition A (0.062")	ASTM D149	kV	40 min.
	Breakdown Voltage: Condition D-48/50 (0.062")	ASTM D149	kV	15 min.
	Electric Strength: Perpendicular, in Oil S/T (0.062")	ASTM D149	V/mil	300 min.
	Dielectric Strength: Perpendicular	ASTM D149	VPM	568
	Arc Resistance	ASTM D495	Seconds	180
	Tracking Resistance	ASTM D2303	min	500
	Electric Strength: Perpendicular, 90°C in Oil (1.5 mm)	IEC 60243-1	kV/mm	12 min.
	Breakdown Voltage: Parallel, Stepped, 90°C in Oil (3 mm)	IEC 60243-1	kV	35 min.
	Insulation Resistance (After Water Immersion)	IEC 60167	MΩ	5 x 10^2 min.
	Comparative Tracking Index (CTI)	IEC 60112	V	500 min.

PROFILES



The data supplied are typical values. They are not to be considered specification values. All of the information, suggestions, and recommendations about these properties and uses of the products herein are based on tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the contemplated application, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty - expressed or implied - including, without limitation, warranties of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.