



MANUFACTURERS OF
ELECTRICAL INSULATION MATERIALS

INSULATING COMPONENTS FOR
POWER SYSTEMS EQUIPMENT

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MATERIAL DATA SHEET

Item: PolyPro FR™, Flame Retardant Polypropylene

Description: PolyPro FR™ is a Flame Retardant Polypropylene with a complete range of thicknesses for electrical insulation applications in electrical and electronic equipment. It has high mechanical strength with a proven track record in a wide range of applications in which tear strength and puncture resistance are critical.

PolyPro Fr™ is suitable for outdoor use with respect to exposure to ultraviolet light, water exposure, and immersion in accordance with UL 746C.

This material offers excellent fabrication and formability characteristics allowing the production cost of insulation components to remain low. Because of this, PolyPro FR provides a lower cost alternative for designs incorporating the use of materials such as Formex, Nomex 410, Valox, Mylar Polyester Film, Vulcanized Fibre, Duroid, FR 700, and Quin-T products. PolyPro FR and Formex are considered suitable equivalents according to UL.

Availability:	Sheets:	Thickness:	English Units 0.010" to 0.125"	SI Units 0.25 mm to 3.18 mm
		Sheet Sizes:	24" x 24", 48" x 96"	61 cm x 61 cm, 121.92 cm x 243.84 cm

Fabricated Parts: The Gund Company custom fabricates insulation materials to the exact specifications and drawings of our customers

Key Characteristics	Test Method	Units - English (SI)	Typical Values
Color	--	--	Black
Density	ASTM D-792	lbs./in. ³ (gm./cc)	0.037 (1.035)
Oxygen Index	ASTM D-2863	%	28
Water Absorption	ASTM D-570	%	0.01
Heat Deflection Temperature (66 psi, 0.125")	ASTM D-648	°F (°C)	185 (85)
Tensile Strength, Yield (23°C, 0.125")	ASTM D-638	psi (MPa)	4,400 (30.3)
Tensile Elongation, Yield (23°C, 0.125")	ASTM D-638	%	>100
Flexural Modulus (23°C, 0.125")	ASTM D-790	kpsi (MPa)	210 (1,448)
Flexural Strength (23°C, 0.125")	ASTM D-790	psi (MPa)	5,900 (40.7)
Izod Impact Strength (23°C, 0.125")	ASTM D-256	ft.lbs./in. (J/m)	1.2 (64)
Dielectric Strength (0.01")	ASTM D-149	Volts/mil	2,200
Volume Resistivity	ASTM D-257	ohm-cm	1.5 x 10 ¹⁷
Dielectric Constant	ASTM D-150	--	2.30
Dielectric Breakdown (0.01")	ASTM D-149	Volts	22,000
Dissipation Factor	ASTM D-150	--	0.0009
Comparative Tracking Index	ASTM D-363	--	600+

All of the information, suggestions, and recommendations pertaining to the properties and uses of the products herein are based upon tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the use contemplated, 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 warranty of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.