



# THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

## POLYPRO FR Flame Retardant Polypropylene



<b>Item:</b>	<b>PolyPro FR - Flame Retardant Polypropylene</b>		
<b>Description:</b>	PolyPro FR® is a flame retardant polypropylene that carries a UL 94 V-0 flame class rating with features that make it an economical choice for electrical insulation applications. The material is available in a range of standard thicknesses from 0.010" to 0.125". PolyPro FR® can be fabricated into a wide range of designs using cost-effective fabrication methods such as die cutting or knife cutting. It also exhibits excellent formability characteristics allowing it to be quickly formed into three-dimensional shapes. PolyPro FR® provides a lower-cost alternative for designs incorporating the use of materials such as Formex®, Nomex® 410, and Valox®. PolyPro FR from The Gund Company is UL, RoHs, and REACH certified to ensure reliability, safety, and consistency. UL File Number: E228440		
<b>Availability:</b>	<b>Units:</b>	English Units (in)	SI Units (mm/cm)
	<b>Sheet Size:</b>	24 x 24 or 48 x 96	61cm x 61cm or 122cm x 244cm
	<b>Roll Width:</b>	24 or 48	61cm or 122cm
	<b>Thickness:</b>	0.010 to 0.125	0.25mm to 3.18mm
	<b>Fabricated Parts:</b>	The Gund Company custom fabricates insulation materials to the exact specifications and drawings of our customers.	

\*Standard colors of PolyPro FR®II are black and white. Custom colors, sheet, and roll sizes are available upon request.

Key Characteristics	Test Method	Units - English	Typical Values	PolyPro FR 10	PolyPro FR 17
Density	ASTM D-792	lbs/in3 (gm/cm3)	0.037 (1.035)	0.037 (1.035)	0.037 (1.035)
Oxygen Index	ASTM D-2863	%	28	28	28
Water Absorption	ASTM D-570	%	0.01	0.01	0.01
Flammability	UL 94	--	VTM-0 / V-0	VTM-0	V0
Heat Deflection Temp (66 psi, 0.0125")	ASTM D-648	oF (oC)	185 (85)	235 (113)	235 (113)
Tensile Strength, Yield <sup>1</sup>	ASTM D-882	psi (MPa)	4,400 (30.3)	5,194	4648
Tensile Elongation, Yield <sup>1</sup>	ASTM D-882	%	>100	>100	>100
Flexural Modulus <sup>1</sup>	ASTM D-790	ksi (MPa)	210 (1,448)	311	303
Flexural Strength <sup>1</sup>	ASTM D-790	psi (MPa)	5,900 (40.7)	8,052	7,905
IZOD Impact Strength <sup>1</sup>	ASTM D-256	ft-lbs/in (J/m)	1.2 (64)	0.13	0.22
Dielectric Strength <sup>2</sup>	ASTM D-149	Volts/mil	2,200	19,900	24,800
Volume Resistivity	ASTM D-257	ohm-cm	1.0 x 10 <sup>16</sup>	1.0 x 10 <sup>16</sup>	1.0 x 10 <sup>16</sup>
Dielectric Constant	ASTM D-150	--	2.30	2.3	2.3
Dielectric Breakdown <sup>2</sup>	ASTM D-149	Volts	22,000	1.0 x 10 <sup>16</sup>	1.0 x 10 <sup>16</sup>
Dissipation Factor	ASTM D-150	--	0.0009	0.0009	0.0009
Comparative Tracking Index	ASTM D-3638	--	600+	600+	600+



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**PolyPro<sup>®</sup> FR**

## Comparison Chart

Key Characteristics	Test Method	Units - English	PolyPro EV 10	PolyPro EV 17	PolyPro FR 10	PolyPro FR 17	Propellis FR	Propellis HT	G-Flex YT510	G-Flex YT510
Standard Color	--	--	Blue	Blue	Black/White	Black/White	Light Green	Amber	Tan	Tan
Thickness	--	--	0.010	0.017	0.010	0.017	0.007	0.007	0.002	0.005
Density	ASTM D792	lbs/in <sup>3</sup> (g/cm <sup>3</sup> )	0.033 (0.91)	0.033 (0.91)	0.037 (1.035)	0.037 (1.035)	0.049	0.049	(0.79)	(0.9)
Compressive Strength	ASTM D695	PSI	6,000	6,000	6,000	6,000	(1.36)	(1.36)	--	--
Tensile Strength (LW)	ASTM D638	PSI	5,200	4,800	5,200	4,700	15000	15000	2,500	24,500
Tensile Strength (CW)	ASTM D638	PSI	3,200	3,200	3,200	3,200	21000	21000	400	5,200
Tensile Elongation, Yield	ASTM D882	%	>200	>200	>100	>100	15000	15000	7	11.5
RTI Electrical	UL746B	°F (°C)	230 (110)	230 (110)	230 (110)	230 (110)	266 (130)	310 (155)	410 (210)	410 (210)
RTI Mechanical	UL746B	°F (°C)	230 (110)	230 (110)	230 (110)	230 (110)	266 (130)	310 (155)	(210)	(210)
Dielectric Strength	ASTM D149	Volts/mil	2000	1500	2,000	1,500	1,000	1,000	406	508
Dielectric Breakdown	ASTM D149	Volts	19,900	24,800	19,900	24,800	7,100	7,100	1,500	2,000
Dielectric Constant	ASTM D150	--	2.2	2.2	2.3	2.3	4.4	4.7	1.6	1.6
Dissipation Factor	ASTM D150		0.0009	0.0009	0.0009	0.0009	0.014	0.015	.004	.004
Flammability	UL 94	--	n.r	HB	V0	V0	FR	HB	VTM-0	VTM-0
Available Thicknesses	--	in	0.01- 0.125	0.01- 0.125	0.01- 0.125	0.01- 0.125	0.005-0.013	0.005-0.013	0.002-0.030	0.002-0.030

Data supplied above are typical values and are not to be considered specification values. 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 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 warranty of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.