



THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

POLYPRO EV Polypropylene Based Insulating Film



Item:	PolyPro EV Polypropylene Based Insulating Film			
Description:	PolyPro EV is a polypropylene based insulating film used primarily in electric vehicle battery cells and modules. Serving as a dielectric barrier in cylindrical and prismatic configurations, PolyPro EV is an economical and versatile solution. It exhibits excellent formability characteristics and can be converted to flat and three-dimensional shapes to fit many battery geometries. PolyPro EV provides a low-cost alternative to other insulating films such as Formex [®] ,			
Availability:	Material Format:	Thickness:	English Units (in) 0.005 – 0.030	SI Units (mm/cm) 0.13 – 0.76
		Roll Width:	48	1220
	Coatings:	Custom colors available		

Key Characteristics	Test Method	Units - English	PolyPro EV 5-10	PolyPro EV 17-30
Standard Color	--	--	Black or Blue	Black or Blue
Density	ASTM D792	lbs/in ³ (gm/cm ³)	0.033 (0.91)	.033 (0.91)
Compressive Strength	ASTM D695	psi	6,000	6,000
Water Absorption	ASTM D570	%	0.01	0.01
Heat Deflection Temp (66 psi, 0.0125")	ASTM D648	°F (°C)	235 (113)	235 (113)
Tensile Strength	ASTM D638	psi	5,200	4,800
Tensile Elongation, Yield	ASTM D882	%	>100	>100
RTI Electrical	UL746B	°F (°C)	230 (110)	230 (110)
RTI Mechanical	UL746B	°F (°C)	230 (110)	230 (110)
Dielectric Strength	ASTM D149	Volts/mil	2000	1500
Dielectric Breakdown	ASTMD149	Volts	19,900	24,800
Dielectric Constant	ASTM D150	--	2.2	2.2
Dissipation Factor	ASTM D150		0.0009	0.0009
Volume Resistivity	ASTM D257	ohm-cm	1.0 x 10 ¹⁶	1.0 x 10 ¹⁶
Flammability	UL 94	--	n.r	HB



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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 ³ (g/cm ³)	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.