



# THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

## PROPELLIS Flexible Composite Solution



<b>Item:</b>	<b>Propellis FR and Propellis HT</b>			
<b>Description:</b>	Propellis™ is a fully cured, single-layer woven glass fabric that is impregnated with high temperature epoxy resin. Used in EV battery and charger applications, Propellis FR™ and Propellis HT™ offers exceptional dielectric strength in a lower profile and at higher temperatures when compared to other flexible insulation materials. Unlike other woven glass epoxy sheets, Propellis™ materials can be cut and formed from rolls which significantly reduces manufacturing time and application development.			
<b>Availability:</b>	<b>Material Format:</b>		English Units (in)	SI Units (mm/cm)
		Thickness:	0.005 - 0.013	0.13 - 0.33
	Roll Width:	36 - 50	914 - 1270	
<b>Coatings:</b>	The Gund Company can provide Propellis exclusively with Propellis TIB epoxy adhesive. Other adhesives upon request.			

Key Characteristics	Test Method	Units	Propellis FR	Propellis HT
Standard Color	--	-	Light Green	Amber
Thickness	--	--	0.007	0.007
Density	ASTM D792	lbs/in <sup>3</sup> (g/cm <sup>3</sup> )	0.049 (1.36)	0.049 (1.36)
Compressive Strength	ASTM D695	psi	15000	15000
Tensile Strength	ASTM D638	psi	21000	21000
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RTI Electrical	UL746B	°F (°C)	266 (130)	310 (155)
RTI Mechanical	UL746B	°F (°C)	266 (130)	310 (155)
Dielectric Strength	ASTM D149	Volts/mil	1,000	1,000
Dielectric Breakdown	ASTM D149	Volts	7,100	7,100
Dielectric Constant	ASTM D150	--	4.4	4.7
Dissipation Factor	ASTM D150	--	0.014	0.015
Flammability	UL94-V0	--	FR	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 <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

AS9100C Certified | ISO/AS9100 Certified QMS | RoHS Compliant | ITAR Compliant

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