

G-Flex™ APA

Flexible Insulation Laminates



G-Flex™ APA are laminates that combine G-Flex™ aramid paper and polyester film. The material is also available with our G-Flex™ aramid papers and electrical grade polyester film - bonded with a proprietary high-temperature adhesive system. Aramid paper provides excellent electrical insulation properties. Polyester film dramatically increases the dielectric strength, overall durability, puncture/tear resistance, and tensile/burst strength. G-Flex™ APA laminates will not delaminate or blister at high temperatures. Applications include slot/phase/end turn insulation, ground/wrapper insulation, dry-type transformers, and punched/fabricated parts.

The Gund Company custom 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. Additional data and samples are available on request.

	ASTM	ASTM TYPICAL VALUES (PER LAMINATION GRADE)									
RTIES	Test Method	Units	2/2/2	2/5/2	3/3/3	3/5/3	5/5/5	2/10/2	5/10/5	3/7.5/3	
Moisture Content	ASTMD644	%	1.16	-	1.33	-	1.60	1.46	-	1.55	
Thickness		mil	7	10	10	12	16	15	21	14.5	
Thickness		mm	0.17	0.25	0.25	0.3	0.4	0.37	0.53	0.36	
Thickness		in.	0.007	0.010	0.010	0.012	0.016	0.015	0.021	0.014	
Yield		vd²/lb	3.02	1.90	2.05	1.62	1.22	1.19	0.87	1.27	
Yield		lb/yd ²	0.33	0.53	0.49	0.62	0.82	0.84	1.14	0.78	
Tensile Strength (lb/in)	ASTM D828	MD	86	126	140	171	210	200	246	206	
Tensile Strength (lb/in)	ASTM D828	CD	57	114	100	137	160	188	240	183	
Tear Strength (lb.)	ASTM D1004	MD	8.5	17	16	26	27	20	35	30	
Tear Strength (lb.)	ASTM D1004	CD	7	12	11	18	18.5	14	31	22	
Prockdown Voltage (PDV)	ACTM 140	lav.	0	16	12	16	10	20	25	18	
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Dielectric Strength	A31W1149	V	11,000	16,000	13,000	17,000	19,000	20,000	22,000	19,500	
	Moisture Content Thickness Thickness Thickness Yield Yield Tensile Strength (lb/in) Tensile Strength (lb/in) Tear Strength (lb.)	Moisture Content Thickness Thickness Thickness Thickness Tyield Yield Tensile Strength (lb/in) Tensile Strength (lb/in) Tear Strength (lb.) Tear Strength (lb.) ASTM D828 Tear Strength (lb.) ASTM D1004 Breakdown Voltage (BDV) ASTM 149	Moisture Content ASTMD644 Moisture Content Thickness Thickness Thickness Thickness Thickness Thickness Tin. Yield Yield Yield Tensile Strength (lb/in) Tensile Strength (lb/in) Tear Strength (lb.) Tear Strength (lb.) ASTM D1004 ASTM D1004 ASTM D1004 CD Breakdown Voltage (BDV) ASTM 149 kV	Noisture Content	Moisture Content ASTMD644 % 1.16 - Thickness mil 7 10 Thickness mm 0.17 0.25 Thickness in. 0.007 0.010 Yield yd²/lb 3.02 1.90 Yield lb/yd² 0.33 0.53 Tensile Strength (lb/in) ASTM D828 MD 86 126 Tensile Strength (lb/in) ASTM D828 CD 57 114 Tear Strength (lb.) ASTM D1004 MD 8.5 17 Tear Strength (lb.) ASTM D1004 CD 7 12 Breakdown Voltage (BDV) ASTM 149 kV 9 16	Noisture Content	Noisture Content	Noisture Content	Moisture Content	Moisture Content	

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.



G-FLEX™ APA Flexible Insulated Laminates (cont.)

G-Flex™ APA flex laminate is The Gund Company's brand of flex laminated aramid paper and polyester film. The Gund Company has used its broad engineering and application knowledge, extensive testing, and global relationships to bring our customers the G-Flex™ APA flex laminate.

G-Flex™ APA flex laminate is manufactured from 100% aramid fiber paper and polyester film laminated together with a patented high-temperature adhesive. It carries a Temperature Index (TI) of 210°C, a VTM-O Flame Rating, and full UL approval (File #: TBD). This flexible laminate offers higher inherent dielectric strength, mechanical toughness, flexibility, and resilience. Applications for G-Flex™ APA include stator slot liners, phase insulations, coil wrap, conductor wrap, and other insulation applications for the electrical industry.



HEAT RESISTANT: G-Flex™ APA has long-lasting thermal stability. It can be used for many hours at high temperatures while maintaining excellent dimensional stability. It will not embrittle, soften, or melt when exposed temporarily at high temperatures of 300°C.

FLAME RESISTANT: It is inherently flame-resistant. It does not self-burn or melt in the room air, is not combustion-supporting, and has a self-extinguishing property.

ELECTRICAL INSULATION: The meta-aramid fiber and the polyester film have excellent electrical insulation properties. The dielectric strength of meta-aramid paper plus the polyester film can provide more than 20kV/mm.

UNDERWRITERS LABORATORIES (UL) RECOGNIZED: At 210°C insulation.

SOLD WORLDWIDE: Directly from The Gund Company and readily available in 12 locations.

UL-CERTIFIED PRODUCT: File number TBD.

EXCELLENT PROPERTIES: Superior Dielectric Breakdown strength

Additional constructions are available upon request.



COMMON APPLICATIONS

- Slot Liners
- Wire Wraps
- Phase Insulation
- Slit into Tape Width
- Coil Wraps
- Pole Collars







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