THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

G-Flex™ APA

Flexible Insulation Laminates

G-FLEX FLEXIBLE INSULATION SOLUTIONS

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		TYPICAL VALUES (PER LAMINATION GRADE)							
PROPERTIES		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
PHYSICAL	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
MECHANICAL	Yield		yd^2/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
ELECTRICAL	Breakdown Voltage (BDV)	ASTM 149	kV	9	16	12	16	18	20	25	18
	Dielectric Strength	ASTM 149	V	11,000	16,000	13,000	17,000	19,000	20,000	22,000	19,500

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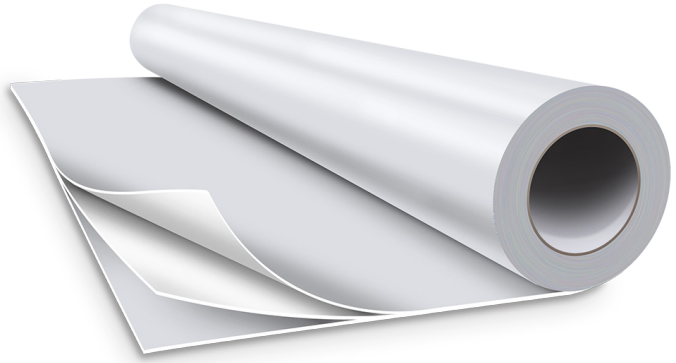
G-FLEX™ APA Flexible Insulated Laminates (cont.)

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.



G-FLEX™ APA FLEX LAMINATE BENEFITS

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.

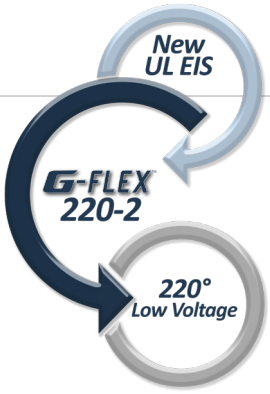
UL-CERTIFIED PRODUCT: File number TBD.

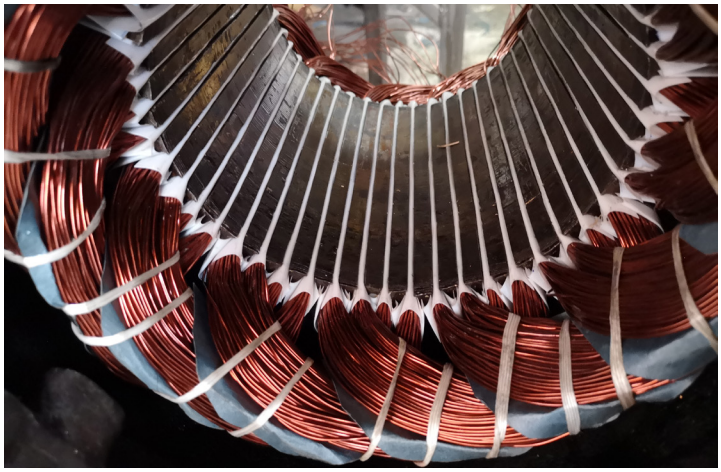
EXCELLENT PROPERTIES: Superior Dielectric Breakdown strength

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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