



THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

TRANSFORMER MATERIAL COMPARATIVE DATA SHEET

Product Grade	The Gund Co	Kraft Paper	S2S Hardboard	Pressboard	Ranprex Laminated Wood	HP1 Low Power Factor	G-10	G-11H	Threaded Rods & Nuts	Nomex	G-Flex™ Meta-Aramid Paper YT510	Dogbone (Rod) NTR N155/N220	GPO-3	APO-1	N155	N220	U205	Standoff Insulators	Filament Wound Tube	Tapes (Intertape)
	NEMA	--	--	--	--	HP1	G-10	G-12	--	--	--	--	GPO-3	GPO-1	GPO-1	GPO-1	GPO-5	--	--	--
	IFC	--	--	--	--	--	EPGC 201	EPGC 308	--	--	--	--	UPGM 203	UPGM 202	UPGM 201	UPGM 201	UPGM 205	--	--	--
Construction		Cellulosic Paper	Compressed Wood Fiber (Cellulosic)	Cellulosic Board	Compressed Wood Veneers	Paper Phenolic	Glass Epoxy	Glass Epoxy	Glass Polyester	Aramid Paper	Aramid Paper	High Temp Pultruded Glass Fiber	Glass Polyester	Glass Polyester	High-Temp Glass Polyester	High-Temp Glass Polyester	Glass Polyester	Glass Polyester	Glass Epoxy	
Standard Thickness	in.	0.008-4.000	0.125, 0.187, 0.220	0.008-4.000	0.393 - 4.724	0.125-2.000	.006-5.00	.006-5.00	-	.002 - .03	.002 - .03	-	0.118-2.000	0.031-2.000	0.031-2.000	0.031-2.000	0.118-2.362	-	-	
	mm	0.2 - 101.6	3, 4.75, 5.6	0.2 - 101.6	10 - 120	3.18 - 50.8	0.15 - 127	0.15 - 127	M10 - 1.5 - M20 - 2.5	0.05 - 0.76	0.05 - 0.76	-	3-50.8	0.79-50.8	0.79-50.8	0.79-50.8	3 - 60	-	-	
Mechanical Properties	Units																			
Tensile Strength, Lengthwise	ksi	14	6.6	14		21		41	41	12 ¹	12 ¹	60	9	9.5	12	11	21.75	5.6		
Compressive Strength	ksi	30	12.7	30	75	45		70	55			45	33	33	40	32	60	21.3	20	
Flexural Strength, LW	ksi	20	6.2	20	160	33	80	80	60			80	23	20	26	32	37.7	12.8		
Shear Strength	ksi	12.8	6.4	12.8			25					3	13	13		12				
IZOD Impact Strength, LW	ft.-lbs./in.		1.6		41	2	15	11				40	9.3	8.5	9.5	11.0	54.72	4.68		
Electrical Properties	Units																			
Arc Resistance	Seconds						130					180	192	180	150	180				
Dielectric Strength	V/mil	700	362	700	7000 - 20000	680	485	485	40	460 ¹	406 ¹		550	450	450	550	331	254	250	
Breakdown Voltage	kV	40	44	40	>80	45	50		> 45		0.81	70	50	> 40	30	50	38			
Physical Properties	Units																			
Specific Gravity	lb./in. ³		0.125	0.039 - 0.045	0.025 - 0.050	0.0545	0.067	0.069	0.069	0.026	0.028	1.9	0.065	0.066	0.066	0.061	1.9	1.9	0.065"- 0.72"	
Thermal Properties	Units																			
Relative Temperature Index	°C	105	105	105	105	105	130	180	180	220	210	155 - 220	130	130	155	210	155	130	130,180	
Flame Resistance	Class	UL 94 HB		UL 94 HB			UL 94 HB	UL 94 HB	ASTM D-635	UL 94 V-0	VTM 0		UL 94 V-0	UL94 HB	UL 94 V-0	E323105	UL 94 V-0	UL 94 V-0	UL 94 HB	

1: Material property at 2mil thickness

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 the suitability of any material described herein for the use contemplated, 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. The Gund Company will not be liable for incidental or consequential loss or damage.

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