

THE GUND COMPANY

Manufacturers & fabricators of engineered material solutions

Item:	Phenolic Resin Cotton Cloth (NEMA Grades C, CE & LE)							
Description:	NEMA Grades C, CE & LE are cotton based phenolic laminates that provide more mechanical strength than paper grades. The finer surface allows for better machinability. These characteristics make phenolic resin cotton cloth materials ideal for mechanical applications such as gears, pinions, bearings, etc.							
Standards:	NEMA LI-1: Grades C, CE & LE IEC 60893: PFCC 201, 203, 305 MIL-I-24768: 16 - FBM, 14 - FBG, 13 - FBE							
Availability:	Laminate Sheets:		English Units (in)	SI Units (cm)				
		Sheet Size:	36 x 48, 39 x 48, 36 x 72 48 x 48, 48 x 96, 48 x 108	91.4 x 122, 99 x 122, 91.4 x 182.2 122 x 122, 122 x 243.8, 122 x 274.3				
		Thickness:	0.008 - 4.0	0.2 mm - 101.6 mm				
	abricated Parts: The Gund Company custom fabricates insulation materials to the exact s and drawings of our customers.							

Koy Characteristics		Test Method	Units - English (SI)	Typical Values		
Key Characteristics		Test Method		NEMA C	NEMA CE	NEMA LE
Standard Color				Natural	Natural	Natural/Black
Specific Gravity				1.37	1.37	100
Moisture Absorption		ASTM D-570	%	3.5	2.0	1.90
Tensile Strength	Lengthwise	ASTM D-638	ksi (MPa)	12 (83)	11 (75)	13 (90)
(0.125")	Crosswise	A31WI D-030		9.7 (67)	9 (62)	9 (62)
Compressive Strength, F	latwise (0.5")	ASTM D-695	ksi (MPa)	34 (234)	34 (234)	36 (248)
Flowural Strongth	Lengthwise	ASTM D-695	ksi (MPa)	18 (124)	17.5 (121)	22 (152)
Flexural Strength	Crosswise	ASTM D-095		17 (117)	15 (103)	16 (110)
Shear Strength		ASTM D-732	ksi (MPa)	14 (97)	14 (96)	13.5 (93)
Donal Strongth	Lengthwise		lb (kg)	2,500 (1,134)	1,700 (634)	1,900 (709)
Bond Strength	Crosswise	ASTM D-732		2,300 (1,043)		
IZOD Impact Strength	Lengthwise		ft-lb/in	1.95	1.95	1.35
(0.50")	Crosswise	ASTM D-732		1.75	1.75	1.10
Arc Resistance		ASTM D-495	Seconds	15	15	15
Maximum Operating Te	mperature		°C	125	125	125
Proakdown Valtago (0.0	67")	Condition A	kV	20	40	40
Breakdown Voltage (0.0	02)	Condition D - 48/50		5	3	3
Rockwell Hardness			M Scale	100	100	
Flammability Rating		UL 94	Class	HB	HB	HB
Diele stuie Chuene att. (0.0)		Condition A)//:	400	550	50
Dielectric Strength (0.06	DZ)	Condition D - 48/50	V/mil	150	300	5

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 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. Under no circumstances shall we be liable for incidental or consequential loss or damage. TGCR1015