MANUFACTURERS OF
ELECTRICAL INSULATION MATERIALS

INSULATING COMPONENTS FOR POWER SYSTEMS EQUIPMENT

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MATERIAL DATA SHEET

Item: NEMA Grade G-11 Glass Epoxy Laminate

Description: NEMA Grade G-11 is a high-pressure laminate manufactured from a glass cloth substrate impregnated with a high temperature epoxy resin system. This grade meets or exceeds all specifications for NEMA G-11 material with the additional benefit of an increased temperature rating of 180°C (Class H), while standard NEMA G-11 materials meet only Class F thermal requirements. NEMA G-11 is halogen-free, which, has been linked to the chemical attack on metal based electrical components.

Standards:

NEMA LI-1	Grade G-11
IEC 60893	EP GC 203
MIL-I-24768	/ 3 - GEB

Availability:

		English Units	SI Units
Laminate Sheets:	Thickness:	.010” to 4.0”	0.2 mm to 101.6 mm
	Sheet Sizes:	Up to 48” x 120”	Up to 122 cm x 305 cm

Fabricated Parts: The Gund Company custom fabricates insulation materials to the exact specifications and drawings of our customers

Key Characteristics	Test Method	Units - English (SI)	Typical Values
Standard Color	--	--	Green
Density	ISO 1183/A	g/cc	2.0
Thermal Endurance	IEC 216	°C	180
Moisture Absorption (.394”)	ISO 62/1	%	0.05
Tensile Strength (.125”)	ISO 527	psi (MPa)	34,800 (240)
Compressive Strength, Flatwise	ISO 604	psi (MPa)	72,500 (500)
Flexural Modulus (.125”) LW CW	ISO 178	ksi (MPa)	4,200 (28,957) 4,000 (27,579)
Flexural Strength, 23°C 120°C 150°C	ISO 178	psi (MPa)	58,823 (400) 46,650 (280) 33,300 (200)
Dielectric Strength, Perp. at 90°C	IEC 243	V/mil	330
Breakdown Voltage, Perp. at 90°C	IEC 243	kV	40

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