



MANUFACTURERS OF
ELECTRICAL INSULATION MATERIALS

INSULATING COMPONENTS FOR
POWER SYSTEMS EQUIPMENT

The Gund Company, Inc
St. Louis, Missouri – USA

TEL - 314.423.5200
FAX - 314.423.9009

MATERIAL DATA SHEET

Item: Low Power Factor Paper Phenolic Laminate, Grade NP613

Description: Grade NP613 is constructed from electrical grade kraft paper and a specially modified epoxy resin system. It is designed to be used in oil filled transformer tap changers, coil support plates, and terminal panels.

Availability:	Laminate Sheets:	Thickness:	English Units .062" to 2.0"	SI Units 1.5 mm to 50 mm
		Sheet Sizes:	36" x 48", 39" x 48", 36" x 72", 48" x 48", 48" x 96"	91 cm x 122 cm, 99 cm x 122 cm, 91 cm x 183 cm, 122 cm x 122 cm, 122 cm x 244 cm

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

Key Characteristics	Units - English (SI)	Typical Values
Specific Gravity	--	1.35
Rockwell Hardness (.062")	M Scale	90
Moisture Absorption (.250", .500", .750")	%	0.90, 0.59, 0.34
Flexural Strength (.250"), LW CW	psi (MPa)	27,000 (185) 22,000 (151)
IZOD Impact Strength (.500"), LW CW	ft.-lb./in.	1.25 1.00
Compressive Strength (.500"), Flatwise	psi (MPa)	40,000 (275)
Bond Strength (.500")	lbs. (kg)	1,000 (453)
Maximum Operating Temperature	°C	140
Flammability Rating	Class	UL 94 HB
Breakdown Voltage (.500"), Condition A D-48/50 Transformer Oil	kV	> 40 6 > 70
Permittivity (.250")	--	4.6
Dissipation Factor (.062")	--	0.04

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