

### Applications

- Terminal boards
- Bearings, gears
- Gaskets, washers
- Wear strips

### Advantages

- Strong and stiff
- Outstanding electrical properties
- Excellent bearing and wear properties
- Good creep resistance
- Dimensionally stable
- Fungus resistant

### Grades

- Paper
- Cotton Canvas
- Cotton Linen
- Glass
- Nylon
- Kevlar®
- Teflon®

*NOTE: Several grades of this material are available. For additional information regarding this plastic, contact your Emco Industrial Plastics representative or call (800) 292-9906.*

### MILSpecs

NEMA N-1 per MIL-I-24768/9 NPG

### Phenolics, Nylon Reinforced [ Phenolics, Nylon Reinforced ]

Phenolics are the result of polymerization between layers of paper, canvas, linen, or glass cloth impregnated with synthetic thermosetting resins. These industrial laminates are a popular alternative to acrylic, because of its high resistance to flexing.

The base material (paper, linen cotton, cotton canvas, or glass cloth) and resin combination used is dependent upon the intended application of the finished product. Physical strength, resiliency, ease and versatility of fabrication, and excellent electrical properties make phenolics useful as support components in a wide range of mechanical and electrical applications.

N-1 Nylon Fabric / Phenolic (NP101): Specified for good impact strength and excellent electrical properties under high humidity conditions. Continuous operating temperature of 160°F.

Certifies to NEMA N-1 per MIL-I-24768/9 NPG.

### Brand Names

Norplex-Micarta, Garolite

*Emco Industrial Plastics doesn't claim to represent all of the manufacturers or trade name products listed. This list is intended as a guide of typical materials available for purchase from Emco Industrial Plastics, Inc. For additional information, contact an Emco Industrial Plastics representative at (800) 292-9906.*

### Availability

TYPE	SIZE	LENGTH	COLOR
Sheet	1/16" - 5" TH	Up to 39" x 48"; CTS	Natural, Dark Brown, Black
Tube	Available		

**Give us your cut-to-size dimensions. We will precision-cut these plastics to your exact size. Additional sizes and colors available upon request.**

### Properties

PHYSICAL PROPERTIES	UNITS	ASTM	RESULTS
Density	lb/in <sup>3</sup>	D792	1.25
Water Absorption, 24 hrs	%	D570	0.3
MECHANICAL PROPERTIES	UNITS	ASTM	RESULTS
Tensile Strength - Lengthwise	psi	D638	8000
Tensile Strength - Crosswise	psi	D638	8000
Flexural Strength - Lengthwise	psi	D790	14000
Flexural Strength - Crosswise	psi	D790	11000
Flexural Modulus - Lengthwise	psi	D790	700000
Flexural Modulus - Crosswise	psi	D790	550000
Compressive Strength	psi	D695	25000
Hardness, Rockwell R		D785	M90
IZOD Impact Strength Notched - Lengthwise	ft-lb/in	D256	3.4
IZOD Impact Strength Notched - Crosswise	ft-lb/in	D256	2.7
THERMAL PROPERTIES	UNITS	ASTM	RESULTS
Coefficient of Linear Thermal Expansion - Lengthwise	(x 10 <sup>-5</sup> in./in./°F)	D696	53 x 10 <sup>-6</sup>
Coefficient of Linear Thermal Expansion - Crosswise	(x 10 <sup>-5</sup> in./in./°F)	D696	67 x 10 <sup>-6</sup>
Max Operating Temp	°F		221
Flammability Rating		UL94	H - B
ELECTRICAL PROPERTIES	UNITS	ASTM	RESULTS
Dissipation Factor @ 1 MHz		D150	0.035

*NOTE: The property values presented above are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.*