



# THE GUND COMPANY

Manufacturers & fabricators of engineered material solutions

|               |   |  |  |
|---------------|---|--|--|
| Item:         | NEMA Grade G-9 Glass Melamine Laminate  |  |  |
| Description:  | NEMA Grade G-9 material is a woven glass cloth reinforced laminate with a melamine resin binder. Glass melamine insulating materials offer high mechanical strength. G-9 from The Gund Company has excellent flame arc resistance. Common applications include electric furnace insulation, circuit breaker components, switchboard panels, arc chutes, and motor wedges. |  |  |
| Standards:    | NEMA LI-1: Grade G-9  | IEC 60893: MF GC 201   | MIL-I-24678: /1-GME  |
| Availability: | Laminate Sheets:  | Thickness:   | English Units (in): .008 to 4.0 (in)<br>SI Units: .02 mm to 101.6 mm (mm)                |
|               |   | Sheet Sizes:   | English Units (in): 36 x 48 to 48 x 108 (in)<br>SI Units: 91.4 x 122 to 122 x 274.3 (cm) |
|               | Convolute Tubing:   | NEMA Grade G-9 is available in an infinite number of custom sizes  |  |
|               | 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           |
|---------------------|---------------------------|--------------------------|
| Standard Color      | --                        | Camel, Gray <sup>1</sup> |
| Specific Gravity    | lb/in <sup>3</sup> (g/cc) | 1.85                     |

<sup>1</sup> Custom colors are available upon request

### NEMA LI-1 G-9 Required Properties

| Key Characteristics          |                      | Test Method  | Units     | NEMA Required | Typical Values |
|------------------------------|----------------------|--------------|-----------|---------------|----------------|
| Breakdown Voltage (.125")    | Condition A          | ASTM D-149   | kV        | 60 min        | 65             |
|                              | Condition D - 48/50  |              |           | 55 min        | 60             |
| Permittivity (0.062")        | Condition A          | ASTM D-150   | --        | 7.20 max      | 6.50           |
|                              | Condition D - 24/23  |              |           | 7.40 max      | 6.70           |
|                              | Condition D - 48/50  |              |           | 7.50 max      | 7.00           |
| Dissipation Factor (0.062")  |                      | ASTM D-24/23 | --        | --            | 0.015          |
| IZOD Strength                | Length-Wise          | ASTM D-256   | ft-lbs/in | 7.0 min       | 12.5           |
|                              | Cross-Wise           |              |           | 5.5 min       | 8.5            |
| Flexural Strength (0.125")   | Length-Wise          | ASTM D-790   | ksi (MPa) | 55 min        | 73 (504)       |
|                              | Cross-Wise           |              |           | 35 min        | 56 (386)       |
| Bond Strength (0.500")       | Condition A          | ASTM D-229   | lbs (kg)  | 1,700 min     | 1,900 (862)    |
|                              | Condition D - 48/50  |              |           | 1,500 min     | 1,600 (726)    |
| Moisture Absorption (0.125") | Condition D - 24/23  | ASTM D-229   | %         | .70 max       | .40            |
|                              | Condition E - 24/23+ |              |           |               |                |
| Flammability Rating          |                      | UL94         | --        | --            | V-0            |