

Poly-Pad® 1000

Polyester-Based, Thermally Conductive Insulation Material

Features and Benefits

- Thermal impedance: 0.82°C-in²/W (@50 psi)
- Polyester based
- For applications requiring non-silicone conformal coatings
- Designed for silicone-sensitive applications requiring high performance



Poly-Pad 1000 is a fiberglass-reinforced insulator coated with a filled polyester resin. The material offers superior thermal resistance for high performance applications.

Polyester-based, thermally conductive insulators from Bergquist provide a complete family of material for silicone-sensitive applications. Poly-Pads are ideally suited for applications requiring conformal coatings or applications where silicone contamination is a concern (telecomm and certain aerospace applications). Poly-Pads are constructed with ceramic-filled polyester resins coating either side of a fiberglass carrier or a film carrier. The Poly-Pad family offers a complete range of performance characteristics to match individual applications.

| TYPICAL PROPERTIES OF POLY-PAD 1000 | | | | | |
|---|------------------|------------------|-------------|------|------|
| PROPERTY | IMPERIAL VALUE | METRIC VALUE | TEST METHOD | | |
| Color | Yellow | Yellow | Visual | | |
| Reinforcement Carrier | Fiberglass | Fiberglass | — | | |
| Thickness (inch) / (mm) | 0.009 | 0.229 | ASTM D374 | | |
| Hardness (Shore A) | 90 | 90 | ASTM D2240 | | |
| Breaking Strength (lbs/inch) / (kN/m) | 100 | 18 | ASTM D1458 | | |
| Elongation (%45° to Warp and Fill) | 10 | 10 | ASTM D412 | | |
| Tensile Strength (psi) / (MPa) | 7000 | 48 | ASTM D412 | | |
| Continuous Use Temp (°F) / (°C) | -4 to 302 | -20 to 150 | — | | |
| ELECTRICAL | | | | | |
| Dielectric Breakdown Voltage (Vac) | 2500 | 2500 | ASTM D149 | | |
| Dielectric Constant (1000 Hz) | 4.5 | 4.5 | ASTM D150 | | |
| Volume Resistivity (Ohm-meter) | 10 ¹¹ | 10 ¹¹ | ASTM D257 | | |
| THERMAL | | | | | |
| Thermal Conductivity (W/m-K) | 1.2 | 1.2 | ASTM D5470 | | |
| THERMAL PERFORMANCE vs PRESSURE | | | | | |
| Pressure (psi) | 10 | 25 | 50 | 100 | 200 |
| TO-220 Thermal Performance (°C/W) | 4.70 | 4.25 | 3.74 | 3.27 | 2.89 |
| Thermal Impedance (°C-in ² /W) (1) | 1.30 | 1.02 | 0.82 | 0.61 | 0.43 |

1) The ASTM D5470 test fixture was used. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

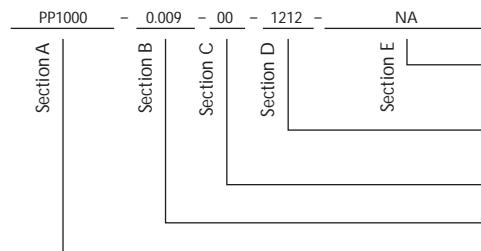
Typical Applications Include:

- Power supplies
- Automotive electronics
- Motor controls
- Power semiconductors

Configurations Available:

- Sheet form, die-cut parts, and roll form
- With or without pressure sensitive adhesive

Building a Part Number



Standard Options

◀ example

NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

1212 = Standard configuration dash number, 1212 = 12" x 12" sheets, 12/250 = 12" x 250' rolls, or 00 = custom configuration

AC = Adhesive, one side
00 = No adhesive

Standard thicknesses available: 0.009"

PP1000 = Poly-Pad 1000 Material

Note: To build a part number, visit our website at www.bergquistcompany.com.

Sil-Pad®: U.S. Patents 4,574,879; 4,602,125; 4,602,678; 4,685,987; 4,842,911 and others



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