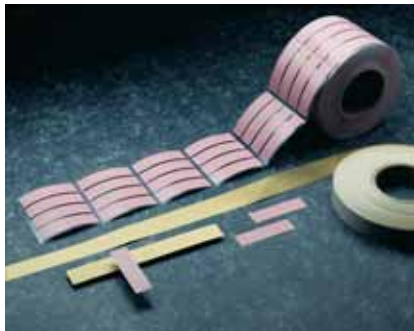


### Features and Benefits

- Thermal impedance: 0.45°C-in<sup>2</sup>/W (@50 psi)
- High value material
- Smooth and highly compliant surface
- Electrically isolating



The Sil-Pad 800 family of thermally conductive insulation materials is designed for applications requiring high thermal performance and electrical isolation. These applications also typically have low mounting pressures for component clamping.

Sil-Pad 800 material combines a smooth and highly compliant surface characteristic with high thermal conductivity. These features optimize the thermal resistance properties at low pressure.

Applications requiring low component clamping forces include discrete semiconductors (TO-220, TO-247 and TO-218) mounted with spring clips. Spring clips assist with quick assembly but apply a limited amount of force to the semiconductor. The smooth surface texture of Sil-Pad 800 minimizes interfacial thermal resistance and maximizes thermal performance.

| TYPICAL PROPERTIES OF SIL-PAD 800  |                  |                  |             |      |      |      |
|--|------------------|------------------|-------------|------|------|------|
| PROPERTY   | IMPERIAL VALUE   | METRIC VALUE     | TEST METHOD |      |      |      |
| Color  | Gold             | Gold             | Visual      |      |      |      |
| Reinforcement Carrier  | Fiberglass       | Fiberglass       | —           |      |      |      |
| Thickness (inch) / (mm)  | 0.005            | 0.127            | ASTM D374   |      |      |      |
| Hardness (Shore A)   | 91               | 91               | ASTM D2240  |      |      |      |
| Elongation (%45° to Warp and Fill)   | 20               | 20               | ASTM D412   |      |      |      |
| Tensile Strength (psi) / (MPa)   | 1700             | 12               | ASTM D412   |      |      |      |
| Continuous Use Temp (°F) / (°C)  | -76 to 356       | -60 to 180       | —           |      |      |      |
| <b>ELECTRICAL</b>  |                  |                  |             |      |      |      |
| Dielectric Breakdown Voltage (Vac)   | 1700             | 1700             | ASTM D149   |      |      |      |
| Type 3 Electrodes  | 3000             | 3000             | ASTM D149   |      |      |      |
| Dielectric Constant (1000 Hz)  | 6.0              | 6.0              | ASTM D150   |      |      |      |
| Volume Resistivity (Ohm-meter)   | 10 <sup>10</sup> | 10 <sup>10</sup> | ASTM D257   |      |      |      |
| Flame Rating   | V-O              | V-O              | U.L. 94     |      |      |      |
| <b>THERMAL</b>   |                  |                  |             |      |      |      |
| Thermal Conductivity (W/m-K)   | 1.6              | 1.6              | ASTM D5470  |      |      |      |
| <b>THERMAL PERFORMANCE vs PRESSURE</b>   |                  |                  |             |      |      |      |
|  | Pressure (psi)   | 10               | 25          | 50   | 100  | 200  |
| TO-220 Thermal Performance (°C/W)  |                  | 3.56             | 3.01        | 2.45 | 2.05 | 1.74 |
| Thermal Impedance (°C-in <sup>2</sup> /W) (1)  |                  | 0.92             | 0.60        | 0.45 | 0.36 | 0.29 |
| 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. |                  |                  |             |      |      |      |

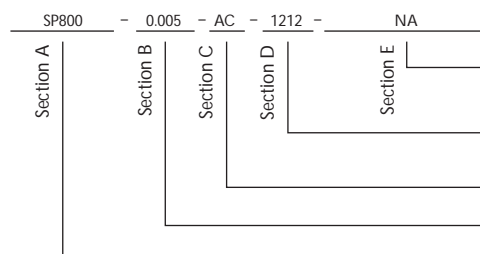
### Typical Applications Include:

- 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

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

\_\_\_ = 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: 0.005"

SP800 = Sil-Pad 800 Material

Note: To build a part number, visit our website at [www.bergquistcompany.com](http://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



[www.bergquistcompany.com](http://www.bergquistcompany.com)

The Bergquist Company - North American Headquarters  
18930 West 78th Street  
Chanhassen, MN 55317  
Phone: 800-347-4572  
Fax: 952-835-0430

The Bergquist Company - European Headquarters  
Bramenberg 9a, 3755 BT Eemnes  
Netherlands  
Phone: 31-35-5380684  
Fax: 31-35-5380295

The Bergquist Company - Asia  
Room 15, 8/F Wah Wai Industrial Centre  
No. 38-40, Au Pui Wan Street  
Fotan, Shatin, N.T. Hong Kong  
Ph: 852.2690.9296  
Fax: 852.2690.2344

All statements, technical information and recommendations herein are based on tests we believe to be reliable, and THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MARKETABILITY AND FITNESS FOR PURPOSE. Sellers and manufacturers' only obligation shall be to replace such quantity of the product proved to be defective. Before using, user shall determine the suitability of the product for its intended use, and the user assumes all risks and liability whatsoever in connection therewith. NEITHER SELLER NOR MANUFACTURER SHALL BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE, DIRECT, INCIDENTAL OR CONSEQUENTIAL, INCLUDING LOSS OF PROFITS OR REVENUE ARISING OUT OF THE USE OR THE INABILITY TO USE A PRODUCT. No statement, purchase order or recommendations by seller or purchaser not contained herein shall have any force or effect unless in an agreement signed by the officers of the seller and manufacturer.

PDS\_SP\_800\_12.08