

# Sil-Pad® I500ST

Electrically Insulating, Thermally Conductive, Soft Tack Elastomeric Material

## Features and Benefits

- Thermal impedance: 0.23°C-in<sup>2</sup>/W (@50 psi)
- Naturally tacky on both sides
- Pad is repositionable
- Excellent thermal performance
- Auto-placement and dispensable



Bergquist Sil-Pad I500ST (Soft Tack) is a fiberglass reinforced thermal interface material that is naturally tacky on both sides. Sil-Pad I500ST exhibits superior thermal performance when compared to the competitors' thermal interface materials. Sil-Pad I500ST is supplied in sheet form or roll form for exceptional auto-dispensing and auto-placement in high volume assemblies. Sil-Pad I500ST is intended for placement between an electronic power device and its heat sink.

## TYPICAL PROPERTIES OF SIL-PAD I500ST

| PROPERTY                                      | IMPERIAL VALUE   | METRIC VALUE     | TEST METHOD |      |      |      |
|---|------------------|------------------|-------------|------|------|------|
| Color   | Blue             | Blue             | Visual      |      |      |      |
| Reinforcement Carrier                         | Fiberglass       | Fiberglass       | —           |      |      |      |
| Thickness (inch) / (mm)                       | 0.008, 0.012     | 0.203, 0.305     | ASTM D374   |      |      |      |
| Hardness (Shore A)                            | 75               | 75               | ASTM D2240  |      |      |      |
| Breaking Strength (lbs/inch) / (kN/m)         | 1.9              | 0.34             | ASTM D1458  |      |      |      |
| Elongation (%45° to Warp and Fill)            | 22               | 22               | ASTM D412   |      |      |      |
| Tensile Strength (psi) / (MPa)                | 238              | 1.6              | ASTM D412   |      |      |      |
| Continuous Use Temp (°F) / (°C)               | -76 to 356       | -60 to 180       | —           |      |      |      |
| <b>ELECTRICAL</b>                             |                  |                  |             |      |      |      |
| Dielectric Breakdown Voltage (Vac)            | 3000             | 3000             | ASTM D149   |      |      |      |
| Dielectric Constant (1000 Hz)                 | 6.1              | 6.1              | ASTM D150   |      |      |      |
| Volume Resistivity (Ohm-meter)                | 10 <sup>11</sup> | 10 <sup>11</sup> | ASTM D257   |      |      |      |
| Flame Rating                                  | V-O              | V-O              | UL 94       |      |      |      |
| <b>THERMAL</b>                                |                  |                  |             |      |      |      |
| Thermal Conductivity (W/m-K)                  | 1.8              | 1.8              | ASTM D5470  |      |      |      |
| <b>THERMAL PERFORMANCE vs PRESSURE</b>        |                  |                  |             |      |      |      |
|   | Pressure (psi)   | 10               | 25          | 50   | 100  | 200  |
| TO-220 Thermal Performance (°C/W)             |                  | 1.54             | 1.52        | 1.51 | 1.49 | 1.46 |
| Thermal Impedance (°C-in <sup>2</sup> /W) (1) |                  | 0.37             | 0.28        | 0.23 | 0.21 | 0.20 |

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.

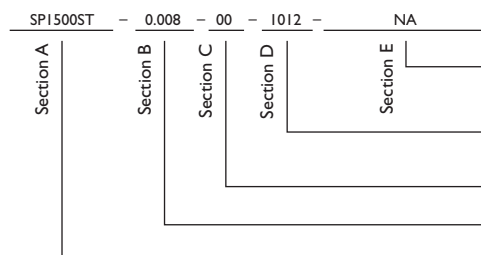
## Typical Applications Include:

- Power supplies
- Automotive electronics
- Motor controls

## Configurations Available:

- Sheet form, die-cut parts and slit-to-width roll form
- Also available in 12 mil thickness

## 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.

\_\_\_ = Standard configuration dash number, 1012 = 10" x 12" sheets, 10/250 = 10" x 250' rolls (8 mil only), or 00 = custom configuration

00 = No adhesive

Standard thicknesses available: 0.008", 0.012"

SPI500ST = Sil-Pad I500ST 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



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