

## High Performance Insulator for Low-Pressure Applications

### Features and Benefits

- Thermal impedance: 0.61°C-in<sup>2</sup>/W (@50 psi)
- Electrically isolating
- Low mounting pressures
- Smooth and highly compliant surface
- General-purpose thermal interface material solution



The true workhorse of the Sil-Pad product family, Sil-Pad 900S thermally conductive insulation material, is designed for a wide variety of applications requiring high thermal performance and electrical isolation. These applications also typically have low mounting pressures for component clamping.

Sil-Pad 900S material combines a smooth and highly compliant surface characteristic with high thermal conductivity. These features optimize the thermal resistance properties at low pressures.

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 and apply a limited amount of force to the semiconductor. The smooth surface texture of Sil-Pad 900S minimizes interfacial thermal resistance and maximizes thermal performance.

TYPICAL PROPERTIES OF SIL-PAD 900S						
PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD			
Color	Pink	Pink	Visual			
Reinforcement Carrier	Fiberglass	Fiberglass	—			
Thickness (inch) / (mm)	0.009	0.229	ASTM D 374			
Hardness (Shore A)	92	92	ASTM D 2240			
Elongation (%45° to Warp and Fill)	20	20	ASTM D 412			
Tensile Strength (psi) / (MPa)	1300	9	ASTM D 412			
Continuous Use Temp (°F) / (°C)	-76 to 356	-60 to 180	—			
<b>ELECTRICAL</b>						
Dielectric Breakdown Voltage (Vac)	5500	5500	ASTM D 149			
Type 3 Electrodes	8300	8300	ASTM D 149			
Dielectric Constant (1000 Hz)	6.0	6.0	ASTM D 150			
Volume Resistivity (Ohm-meter)	10 <sup>10</sup>	10 <sup>10</sup>	ASTM D 257			
Flame Rating	V-O	V-O	U.L. 94			
<b>THERMAL</b>						
Thermal Conductivity (W /m-K)	1.6	1.6	ASTM D 5470			
<b>THERMAL PERFORMANCE vs PRESSURE</b>						
	Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)		3.96	3.41	2.90	2.53	2.32
Thermal Impedance (°C-in <sup>2</sup> /W) (1)		0.95	0.75	0.61	0.47	0.41

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.

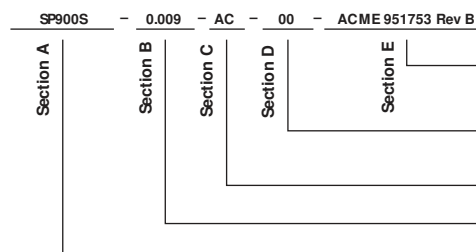
### Typical Applications Include:

- 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.

— = 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"

SP900S = Sil-Pad 900S 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.