

High Performance Insulator for Low-Pressure Applications

Features and Benefits

- Thermal impedance:
0.61°C-in²/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 D374
Hardness (Shore A)		92		92		ASTM D2240
Elongation (%45° to Warp and Fill)		20		20		ASTM D412
Tensile Strength (psi) / (MPa)		1300		9		ASTM D412
Continuous Use Temp (°F) / (°C)		-76 to 356		-60 to 180		—
ELECTRICAL						
Dielectric Breakdown Voltage (Vac)		5500		5500		ASTM D149
Type 3 Electrodes		8300		8300		ASTM D149
Dielectric Constant (1000 Hz)		6.0		6.0		ASTM D150
Volume Resistivity (Ohm-meter)		10 ¹⁰		10 ¹⁰		ASTM D257
Flame Rating		V-O		V-O		U.L. 94
THERMAL						
Thermal Conductivity (W/m-K)		1.6		1.6		ASTM D5470
THERMAL PERFORMANCE vs PRESSURE						
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-in²/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.						

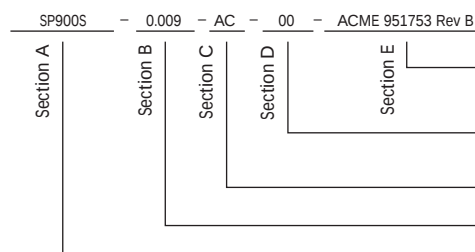
Typical Applications Include:

- 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

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

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.

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

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

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