

## Foil-Format Grease Replacement for Maximum Heat Transfer

### Features and Benefits

- Thermal impedance: 0.22°C-in<sup>2</sup>/W (@50 psi)
- Maximum heat transfer
- Aluminum foil coated both sides
- Designed to replace thermal grease



Q-Pad II is a composite of aluminum foil coated on both sides with thermally / electrically conductive Sil-Pad rubber. The material is designed for those applications in which maximum heat transfer is needed and electrical isolation is not required. Q-Pad II is the ideal thermal interface material to replace messy thermal grease compounds.

Q-Pad II eliminates problems associated with grease such as contamination of reflow solder or cleaning operations. Unlike grease, Q-Pad II can be used prior to these operations. Q-Pad II also eliminates dust collection which can cause possible surface shorting or heat buildup.

TYPICAL PROPERTIES OF Q-PAD I				
PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD	
Color	Black	Black	Visual	—
Reinforcement Carrier	Aluminum	Aluminum	—	—
Thickness (inch) / (mm)	0.006	0.152	ASTM D374	—
Hardness (Shore A)	93	93	ASTM D2240	—
Continuous Use Temp (°F) / (°C)	-76 to 356	-60 to 180	—	—
ELECTRICAL				
Dielectric Breakdown Voltage (Vac)	Non-Insulating	Non-Insulating	ASTM D149	—
Dielectric Constant (1000 Hz)	NA	NA	ASTM D150	—
Volume Resistivity (Ohm-meter)	10 <sup>2</sup>	10 <sup>2</sup>	ASTM D257	—
Flame Rating	V-O	V-O	U.L.94	—
THERMAL				
Thermal Conductivity (W/m-K)	2.5	2.5	ASTM D5470	—
THERMAL PERFORMANCE vs PRESSURE				
Pressure (psi)	10	25	50	100
TO-220 Thermal Performance (°C/W)	2.44	1.73	1.23	1.05
Thermal Impedance (°C-in <sup>2</sup> /W) (I)	0.52	0.30	0.22	0.15
Thermal Impedance (°C-in <sup>2</sup> /W) (I)	0.52	0.30	0.22	0.15

!) 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:

- Between a transistor and a heat sink
- Between two large surfaces such as an L-bracket and the chassis of an assembly
- Between a heat sink and a chassis
- Under electrically isolated power modules or devices such as resistors, transformers and solid state relays

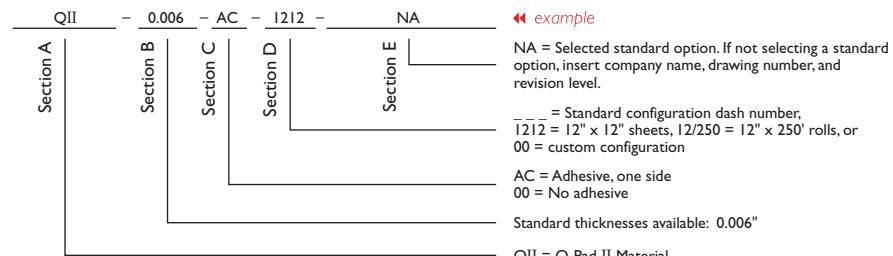
### Configurations Available:

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

### Building a Part Number

### Standard Options

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



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



[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 - Europe  
Bramenberg 9a, 3755 BT Eemnes  
Netherlands  
Phone: 31-35-5380684  
Fax: 31-35-5380295

The Bergquist Company - China  
Rm. 7C, Aihe Mansion  
No. 629 Ling Ling Road  
Shanghai, China 200030  
Ph: 86-21-6464-2206  
Fax: 86-21-6464-2209

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\_QP\_II\_0207