



# BERGQUIST SIL PAD TSP 3500

Known as BERGQUIST SIL-PAD 2000  
November 2018

## PRODUCT DESCRIPTION

Higher Performance, High Reliability Insulator.

|                                       |                                                      |
|---------------------------------------|------------------------------------------------------|
| <b>Technology</b>                     | Silicone                                             |
| <b>Appearance</b>                     | White                                                |
| <b>Reinforcement Carrier</b>          | Fiberglass                                           |
| <b>Total Thickness</b><br>, ASTM D374 | 0.254 to 0.508mm                                     |
| <b>Application</b>                    | Thermal management,<br>Thermally conductive adhesive |
| <b>Operating Temperature Range</b>    | -60 to 200°C                                         |

## FEATURES AND BENEFITS

- Thermal impedance: 0.33°C-in<sup>2</sup>/W @ 50 psi
- Optimal heat transfer
- High Thermal Conductivity: 3.5 W/m-K

## TYPICAL APPLICATIONS

- Power supplies
- Motor controls
- Power semiconductors
- Aerospace
- Avionics

BERGQUIST SIL PAD TSP 3500 is a high performance, thermally conductive insulator designed for demanding aerospace and commercial applications. BERGQUIST SIL PAD TSP 3500 is a silicone elastomer formulated to maximize the thermal and dielectric performance of the filler/binder matrix.

The result is a grease-free, conformable material capable of meeting or exceeding the thermal and electrical requirements of high reliability electronic packaging applications.

## TYPICAL PROPERTIES

### Physical Properties

|                               |     |
|-------------------------------|-----|
| Hardness, Shore A, ASTM D2240 | 90  |
| Flammability Rating, UL 94    | V-0 |

### Electrical Properties

|                                              |                    |
|----------------------------------------------|--------------------|
| Dielectric Breakdown Voltage, ASTM D149, Vac | 4,000              |
| Dielectric Constant, ASTM D150 @ 1,000 Hz    | 4.0                |
| Volume Resistivity, ASTM D257, ohm-meter     | 1×10 <sup>11</sup> |

### Thermal Properties

|                                           |     |
|-------------------------------------------|-----|
| Thermal Conductivity, ASTM D5470, W/(m-K) | 3.5 |
|-------------------------------------------|-----|

## Thermal Performance vs. Pressure

### TO-220 Thermal Performance

|           |      |
|-----------|------|
| @ 0.01"   |      |
| @ 10 psi  | 2.61 |
| @ 25 psi  | 2.32 |
| @ 50 psi  | 2.02 |
| @ 100 psi | 1.65 |
| @ 200 psi | 1.37 |

### Thermal Impedance

|           |      |
|-----------|------|
| @ 0.01"   |      |
| @ 10 psi  | 0.57 |
| @ 25 psi  | 0.43 |
| @ 50 psi  | 0.33 |
| @ 100 psi | 0.25 |
| @ 200 psi | 0.2  |

I) 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.

## GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

### Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

## CONFIGURATIONS AVAILABLE

BERGQUIST SIL PAD TSP 3500 are supplied in:

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

### Conversions

(°C x 1.8) + 32 = °F  
kV/mm x 25.4 = V/mil  
mm / 25.4 = inches  
N x 0.225 = lb  
N/mm x 5.71 = lb/in  
psi x 145 = N/mm<sup>2</sup>  
MPa = N/mm<sup>2</sup>  
N·m x 8.851 = lb·in  
N·m x 0.738 = lb·ft  
N·mm x 0.142 = oz·in  
mPa·s = cP



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### Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)

[www.lifeelectronics.ru](http://www.lifeelectronics.ru)