



# BERGQUIST SIL PAD TSP K1300

Known as BERGQUIST SIL-PAD K-10  
November 2018

## PRODUCT DESCRIPTION

The High Performance Kapton Based Insulator.

<b>Technology</b>	Silicone
Appearance	Beige
Reinforcement Carrier	Kapton
Total Thickness , ASTM D374	0.15 ± 0.025 mm
<b>Application</b>	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-60 to 180°C

BERGQUIST SIL PAD TSP K1300 is the high performance insulator developed in conjunction with DuPont. BERGQUIST SIL PAD TSP K1300 combines special Kapton MT Polyimide film with boron nitride filled silicone rubber. The result is a product with good cut-through properties and excellent thermal performance.

BERGQUIST SIL PAD TSP K1300 is designed to replace ceramic insulators such as Beryllium Oxide, boron Nitride and Alumina. These insulators are expensive and they break easily. BERGQUIST SIL PAD TSP K1300 eliminates breakage and costs much less than ceramics.

## TYPICAL PROPERTIES

### Physical Properties

Hardness, Shore A, ASTM D2240	90
Breaking Strength, ASTM D1458, KN/m	5
Elongation, 45° to warp and fill, ASTM D412, %	40
Tensile Strength, ASTM D412, MPa	35

### Electrical Properties

Dielectric Breakdown Voltage, ASTM D149 (VAC, 6,000 min)	
Dielectric Constant, ASTM D150 @ 1,000 Hz	3.7
Volume Resistivity, ASTM D257, ohm-meter	$1 \times 10^{12}$

### Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m·K)	1.3
Thermal Resistance Bergquist Flat Plate Test Method, °C-in <sup>2</sup> /W	0.2
Thermal Vacuum Weight Loss (TML), as manufactured, NASA SP-R-0022A, %	0.36
Volatile Condensable Material (VCM), as manufactured, NASA SP-R-0022A, %	0.09

## 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 K1300 are supplied in:

- **Special Thicknesses**  
Available in a variety of thicknesses to meet customer requirements.
- **Tolerances**  
.015 inches are held on width, length, hole diameter and hole location.  
Contact the factory if tighter tolerances are required.
- **Sheet form**  
6" x 6", 6" x 12", 8" x 8", 10" x 10", or 12" x 12"  
Sheets are available from stock, with or without adhesive.
- **Roll form**  
Sil-Pad materials are available in roll form, with or without adhesive. Contact the factory.
- **Special Shapes**  
We produce thousands of specials. Tooling charges vary depending on tolerances and complexity of the part.

## Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 $\text{kV/mm} \times 25.4 = \text{V/mil}$   
 $\text{mm} / 25.4 = \text{inches}$   
 $\text{N} \times 0.225 = \text{lb/F}$   
 $\text{N/mm} \times 5.71 = \text{lb/in}$   
 $\text{psi} \times 145 = \text{N/mm}^2$   
 $\text{MPa} = \text{N/mm}^2$   
 $\text{N} \cdot \text{m} \times 8.851 = \text{lb} \cdot \text{in}$   
 $\text{N} \cdot \text{m} \times 0.738 = \text{lb} \cdot \text{ft}$   
 $\text{N} \cdot \text{mm} \times 0.142 = \text{oz} \cdot \text{in}$   
 $\text{mPa} \cdot \text{s} = \text{cP}$



## Disclaimer

### 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

**In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:**

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

**In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:**

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

**In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:**

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

**Trademark usage:** [Except as otherwise noted] All trademarks in this document are trademarks and/or registered trademarks of Henkel and its affiliates in the U.S. and elsewhere.

## Reference 2