



SIL PAD TSP K1300

Known as SIL-PAD K-10
November 2018

PRODUCT DESCRIPTION

The High Performance Kapton Based Insulator.

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

SIL PAD TSP K 1300 is the high performance insulator developed in conjunction with DuPont. SIL PAD TSP K 1300 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.

SIL PAD TSP K 1300 is designed to replace ceramic insulators such as Beryllium Oxide, boron Nitride and Alumina. These insulators are expensive and they break easily. 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)	6,000
Dielectric Constant, ASTM D150 @ 1,000 Hz	3.7
Volume Resistivity, ASTM D257, ohm-meter	1×10 ¹²

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K)	1.3
Thermal Resistance Flat Plate Test Method, °C-in ² /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

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

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



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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