



BERGQUIST SIL PAD TSP 2200

Known as BERGQUIST SIL-PAD 1750
November 2018

PRODUCT DESCRIPTION

For High Humidity, High Dielectric (U.L. 94 1950, IEC 950) Requirements.

Technology	Silicone
Appearance	Green
Reinforcement Carrier	Fiberglass
Total Thickness , ASTM D374	0.305mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-60 to 180°C

FEATURES AND BENEFITS

- Thermal impedance: 0.53°C-in²/W @ 50 psi
- Excellent dielectric strength retention after humidity exposure
- Elastomeric pad

TYPICAL APPLICATIONS

- High-voltage power supplies
- Motor controls
- High “hi-pot” requirements

The combination of high thermal conductivity and excellent dielectric strength retention after humidity exposure is formulated into BERGQUIST SIL PAD TSP 2200 elastomeric pad.

BERGQUIST SIL PAD TSP 2200 relies on processes that minimize the effect of high humidity on the electrical properties of finished material. Therefore, exposure to humid environments during assembly, or over long term operating conditions, will not severely affect the ability of the material to perform.

TYPICAL PROPERTIES

Physical Properties

Hardness, Shore A, ASTM D2240	85
Breaking Strength, ASTM D1458, KN/m	12
Elongation, 45° to warp and fill, ASTM D412,%	23
Tensile Strength, ASTM D412, MPa	10
Flammability Rating, UL 94	V-0

Electrical Properties

Dielectric Breakdown Voltage, ASTM D149, Vac	6,000
Dielectric Constant, ASTM D150 @ 1,000 Hz	4.0
Volume Resistivity, ASTM D257, ohm-meter	1×10 ¹²

Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K) 2.2

Thermal Performance vs. Pressure

TO-220 Thermal Performance, °C/W

@ 10 psi	3.11
@ 25 psi	2.87
@ 50 psi	2.42
@ 100 psi	2.08
@ 200 psi	1.9

Thermal Impedance, ASTM D5470, °C-in²/W ⁽¹⁾

@ 10 psi	0.86
@ 25 psi	0.68
@ 50 psi	0.53
@ 100 psi	0.39
@ 200 psi	0.28

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.

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 2200 are supplied in:

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

Conversions

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



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.

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