Technical Data Sheet

BERGQUIST GAP PAD TGP EMI1000

Known as BERGQUIST GAP PAD EMI 1.0
October 2018

PRODUCT DESCRIPTION

Thermally Conductive, Conformable EMI Absorbing Material.

Technology	Silicone
Appearance	Black
Reinforcement Carrier	Fiberglass
Thickness	0.508 to 3.175mm , ASTM D374
Inherent Surface Tack	1
Application	Thermal management, TIM (Thermal Interface Material)
Operating Temperature Range	-60 to 200ºC

FEATURES AND BENEFITS

- Thermal Conductivity: 1.0 W/m-K
- Electromagnetic Interference (EMI) absorbing
- Highly Conformable, low hardness
- Fiberglass reinforced for puncture, shear and tear resistance
- Electrically isolating

BERGQUIST GAP PAD TGP EMI1000 is a highly conformable, combination gap filling material offering both thermal conductivity performance and Electromagnetic Energy absorption (cavity resonances and/or cross-talk causing Electromagnetic Interference) at frequencies of 1GHz and higher. The material offers EMI suppression and 1.0 W/m-K thermal conductivity performance with low assembly stress. The soft nature of the material enhances wet-out at the interface resulting in better thermal performance than harder materials with a similar performance rating.

BERGQUIST GAP PAD TGP EMI1000 has an inherent, natural tack on one side of the material eliminating the need for thermally-impeding adhesive layers and allowing improved handling during placement and assembly. The other side is tack-free, again enhancing handling and rework, if required. BERGQUIST GAP PAD TGP EMI1000 is supplied with a protective liner on the material's tacky side.

TYPICAL APPLICATIONS

- Consumer electronics
- Telecommunications
- ASICs and DSPs
- PC applications

TYPICAL PROPERTIES OF CURED MATERIAL

Young's modulus is calculated using 0.01 in/min, step rate of strain with a sample size 0.79 inch² .

Relaxation stress @ 40 mil.

Physical Properties

Hardness, Shore 00 , Thirty second delay value , ASTM D2240, Bulk rubber		5
Heat Capacity, ASTM E1269, J/g-K		1.3
Density, Bulk rubber, ASTM D792, g/cc		2.4
Flammability, UL 94		V-0
Young's Modulus, ASTM D575	kPa (psi)	69 (10)

Electrical Properties

Dielectric Breakdown Voltage , ASTM D149, VAC	>1,700
Dielectric Constant, ASTM D150, 1,000Hz	6.0
Volume Resistivity, ASTM D257, ohm-meter	1×10^{10}

Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	1.0
Thermal Impedance, 0.040 inch ASTM D5470, ºC-in²/W:	
10% Deflection	1.53
20% Deflection	1.4
30% Deflection	1.25

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.

EMI Properties

Based on waveguide testing with 60 mil thickness testing

EMI Performance
ASTM D-5568-01, dB/cm:

@ 2.4, GHz	-2.8
@ 5, GHz	-5.5

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 GAP PAD TGP EMI1000 is available in the following configurations:

- Sheet form
- Die-Cut parts

Natural tack both sides with fiberglass.

STORAGE

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 25ºC (±3), 50% RH (±10) for a 12 months shelf life. Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

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/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = 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.

Reference 1

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Thermal Interface Products ***category:***

Click to view products by Henkel ***manufacturer:***

Other Similar products are found below :

7721-9PPS FGN80-2 PFM-172-60 A-40 174-9-230P 9601-7 5300AC 1.500G 08133 V6622C TVQF-1225-07S TP0001 4860 SC80-W2 V6516C A17713-06 A17713-05 A17653-05 A17690-06 A17775-03 A17690-05 A17653-02 A17689-02 A17690-04 A17775-05 A17775-06 A17690-08 A17690-02 A17689-06 A17653-06 A17690-12 A17653-03 A17536-02 A17689-03 A17536-10 A17752-13 A17752-04 A17752-07 A17634-12 19-36565-0001-1 A17752-09 22000-001A A17752-20 A17752-16 A17752-12 A17653-04 A17634-10 A17634-09 A17634-07 A17633-20 A17633-07