Technical Data Sheet

BERGQUIST GAP FILLER TGF 1000

Known as BERGQUIST GAP FILLER 1000
September 2018

PRODUCT DESCRIPTION

A thermally conductive, liquid gap filler material.

Technology	Silicone
Appearance (cured)	Gray
Appearance - Part A	Gray
Appearance - Part B	White
Cure	Room temperature cure or Cure at elevated temperatures
Application	Thermal management, TIM (Thermal Interface Material)
Mix Ratio by weight: Part A: Part B	1 : 1
Mix Ratio by volume: Part A: Part B	1 : 1
Solids Content, %	100
Operating Temperature Range	-60 to 175ºC

FEATURES AND BENEFITS

- Thermal Conductivity: 1.0 W/m-K
- Ultra-conforming, designed for fragile and low-stress applications
- Ambient and accelerated cure schedules
- 100% solids - no cure by-products
- Excellent low and high temperature mechanical and chemical stability

BERGQUIST GAP FILLER TGF 1000 is a thermally conductive, liquid gap filling material. It is supplied as a two-component, room or elevated temperature curing system. The material is formulated to provide a balance of cured material properties highlighted by a low modulus and good compression set (memory). The result is a soft, thermally conductive, form-in-place elastomer ideal for coupling “hot” electronic components mounted on PC boards with an adjacent metal case or heat sink.

Before cure, BERGQUIST GAP FILLER TGF 1000 flows under pressure like a grease. After cure, it does not pump from the interface as a result of thermal cycling. Unlike thermal grease, the cured product is dry to the touch. Unlike cured gap filling materials, the liquid approach offers infinite thickness with little or no stress during displacement and eliminates the need for specific pad thickness and die-cut shapes for individual applications. BERGQUIST GAP FILLER TGF 1000 is intended for use in thermal interface applications when a strong structural bond is not required.

TYPICAL APPLICATIONS

- Automotive electronics (HEV, NEV, batteries)
- Computer and peripherals
- Between any heat-generating semiconductor and a heat sink
- Telecommunications
- Thermally conductive vibration dampening

TYPICAL PROPERTIES OF UNCURED MATERIAL

Mixed Viscosity, Brookfield - RV, - Helipath, ASTM D2196, 25 °C, mPa·s (cP):	
Spindle TF, speed 20 rpm	100,000
Density, ASTM D792, g/cc	1.6
Pot Life @ 25 °C (time to double viscosity), minutes	15
Shelf Life @ 25ºC , days	180

TYPICAL CURE SCHEDULE

Cure Schedule

60 to 120 minutes @ 25°C
5 minutes @ 100°C

Rheometer - time to read 90% cure.

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Hardness, Shore 00, Thirty second delay value, ASTM D2240	20
Heat Capacity, ASTM E1269, J/g-K	1.0
Flammability, UL 94	V-0

Electrical Properties

Dielectric Strength, ASTM D149, V/mil	500
Volume Resistivity, ASTM D257, ohm-cm	1×10^{11}
Dielectric Constant , ASTM D150 @ 1,000 Hz	5.0

Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	1.0

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.

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CONFIGURATIONS AVAILABLE

BERGQUIST GAP FILLER TGF 1000 is available in the following configurations:

- Cartridges
- Kits

Application:

- Mixed and dispensed using dual tube cartridge packs with static mixers and a manual or pneumatic gun
- Mixed and dispensed using industry standard high volume mixing and dispensing document

STORAGE

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

Optimal Storage: 5 to 25ºC for a 6 month 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.
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