Technical Data Sheet

BERGQUIST GAP FILLER TGF 2000

Known as BERGQUIST GAP FILLER 2000
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PRODUCT DESCRIPTION

A thermally conductive, liquid gap filler material.

Technology	Silicone
Appearance (cured)	Pink
Appearance - Part A	Pink
Appearance - Part B	White
Cure	Room temperature cure or Heat cure
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 200ºC

FEATURES AND BENEFITS

- Thermal Conductivity: 2.0 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 2000 is a high performance, thermally conductive, liquid gap filling material supplied as a two-component, room or elevated temperature curing system. The material provides a balance of cured material properties 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 2000 flows under pressure like a grease. After cure, it does not pump from the interface as a result of thermal cycling and is dry to the touch.

Unlike cured Gap Filling materials, the liquid approach offers infinite thickness with little or no stress during displacement and assembly. BERGQUIST GAP FILLER TGF 2000 eliminates the need for specific pad thickness and die-cut shapes for individual applications.

BERGQUIST GAP FILLER TGF 2000 is intended for use in thermal interface applications when a strong structural bond is not required. As cured, BERGQUIST GAP FILLER TGF 2000 is formulated to have pliable low-modulus, properties.

TYPICAL APPLICATIONS

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

TYPICAL PROPERTIES OF UNCURED MATERIAL

Mixed Viscosity, Brookfield - RV, - Helipath, ASTM D2196, 25 °C, mPa·s (cP):	
Spindle TF, speed 20 rpm	300,000
Density, ASTM D792, g/cc	2.9
Pot Life @ 25ºC , time for viscosity to double:	
@ 15 minutes	
@ 60 minutes	
@ 600 minutes	
Shelf Life @ 25ºC , days	180

TYPICAL CURE SCHEDULE

Cure Schedule

1 to 2 hours @ 25°C
5 minutes @ 100°C

Alternative Cure Schedule 1

3 to 4 hours @ 25°C
15 minutes @ 100°C

Alternative Cure Schedule 2

3 days @ 25°C
1 hour @ 100°C

Rheometer - time to read 90% cure.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Hardness, Shore 00, Thirty second delay value, ASTM D2240	70
Heat Capacity, ASTM E1269, J/g-K	1.0
Flammability, UL 94	V-0

Electrical Properties

Dielectric Strength, ASTM D149, V/mil	500
Dielectric Constant , ASTM D150 @ 1,000 Hz	7
Volume Resistivity, ASTM D257, ohm-meter	1×10^{11}

Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	2.0

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.

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.

CONFIGURATIONS AVAILABLE

BERGQUIST GAP FILLER TGF 2000 is available in the following configurations:

- Cartridges
- Kits

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, in sealed containers with moisture barrier packaging.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb/F
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

Reference 4

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