Technical Data Sheet

BERGQUIST GAP FILLER TGF 4000

Known as BERGQUIST GAP FILLER 4000
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PRODUCT DESCRIPTION

A thermally conductive, liquid gap filler material.

Technology	Silicone
Appearance (cured)	Blue
Appearance - Part A	Blue
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: 4.0 W/m-K
- Extended working time for manufacturing flexibility
- Ultra-conforming, with excellent wet-out
- 100% solids - no cure by-products
- Excellent low and high temperature mechanical and chemical stability

BERGQUIST GAP FILLER TGF 4000 is a two-part, high thermal conductivity, liquid gap filling material. The mixed system will cure at room temperature and can be accelerated with the addition of heat. BERGQUIST GAP FILLER TGF 4000 offers an extended working time to allow greater flexibility in the customer's assembly process.

Liquid dispensed thermal materials offer infinite thickness variations and impart little to no stress on sensitive components during assembly. BERGQUIST GAP FILLER TGF 4000 exhibits low level natural tack characteristics and is intended for use in applications where a strong structural bond is not required.

As cured, BERGQUIST GAP FILLER TGF 4000 provides a soft, thermally conductive, form-in place elastomer that is ideal for fragile assemblies and filling unique and intricate air voids and gaps.

TYPICAL APPLICATIONS

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

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, High shear, Capillary, ASTM D5099, mPa·s (cP):	
1,500/ sec, Part A and B measured separately	50,000
Density, ASTM D792, g/cc	3.1
Working Time @ 25°C, Parallel plate rheometer, see reactivity application note, minutes	240
Shelf Life @ 25ºC , days	150

TYPICAL CURE SCHEDULE

Cure Schedule

24 hours @ 25°C
30 minutes @ 100°C

Parallel plate rheometer, see reactivity application note.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Hardness, Shore 00, Thirty second delay value, ASTM D2240	75
Heat Capacity, ASTM D1269, J/g-K	0.8
Flammability, UL 94	V-0

Electrical Properties

Dielectric Strength, ASTM D149, V/mil	450
Dielectric Constant , ASTM D150 @ 1,000 Hz	7.9
Volume Resistivity, ASTM D257, ohm-meter	1×10^{10}

Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	4.0

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 specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

CONFIGURATIONS AVAILABLE

BERGQUIST GAP FILLER TGF 4000 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 5 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

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Reference 1