Technical Data Sheet

BERGQUIST GAP FILLER TGF 1500

Known as BERGQUIST GAP FILLER 1500
October 2018

PRODUCT DESCRIPTION

A thermally conductive, liquid gap filler material.

Technology	Silicone
Appearance (cured)	Yellow
Appearance - Part A	Yellow
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: 1.8 W/m-K
- Optimized shear thinning characteristics for ease of dispensing
- Excellent slump resistance (stays in place)
- Ultra-conforming, with excellent wet-out for low stress interface applications
- 100% solids - no cure by-products
- Excellent low and high temperature mechanical and chemical stability

BERGQUIST GAP FILLER TGF 1500 is a two-part, high performance, thermally conductive liquid gap filling material, which features superior slump resistance and high shear thinning characteristics for optimized consistency and control during dispensing. The mixed system will cure at room temperature and can be accelerated with the addition of heat.

Unlike cured thermal pad materials, a liquid approach offers infinite thickness variations with little or no stress to the sensitive components during assembly. BERGQUIST GAP FILLER TGF 1500 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 1500 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)
- Telecommunications
- Computer and peripherals
- Between any heat-generating semiconductor and a heat sink

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, High shear, Capillary, ASTM D5099, mPa·s (cP):	
3,000/ sec, Part A and B measured separately	25,000
Density, ASTM D792, g/cc	2.7
Pot Life @ 25ºC , Parallel Plate Rheometer - Working life as liquid:	
@ 60 minutes	
@ 480 minutes	
Shelf Life @ 25ºC , days	180

TYPICAL CURE SCHEDULE

Cure Schedule

5 hours @ 25°C
10 minutes @ 100°C

Alternate Cure Schedule

3 days @ 25°C
30 minutes @ 100°C

Parallel plate rheometer, estimated time to read 90% cure.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Hardness, Shore 00, Thirty second delay value, ASTM D2240	50
Heat Capacity, ASTM D1269, J/g-K	1.0
Flammability, UL 94	V-0

Electrical Properties

Dielectric Strength, ASTM D149, V/mil	400
Dielectric Constant , ASTM D150 @ 1,000 Hz	6.4
Volume Resistivity, ASTM D257, ohm-meter	1×10^{10}

Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	1.8

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 1500 is available in the following configurations:

- Cartridges
- Kits
- With or without glass beads

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

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Reference 2