Technical Data Sheet

BERGQUIST® GAP FILLER TGF 2900LVO

May 2024

Product description

BERGQUIST® GAP FILLER TGF 2900LVO provides the following product characteristics:

Technology	Silicone
Appearance - Part A	Blue
Appearance - Part B	White
Appearance (cured)	Pale blue
Cure	Room temperature cure or Heat cure
Application	Thermal management, Gap filler (2K)
Mix Ratio by weight: Part A : Part B	1 : 1
Mix Ratio by volume: Part A: Part B	1 : 1
Operating temperature, °C	-40 to 150

BERGQUIST® GAP FILLER TGF 2900LVO is a silicone, 2-part room temperature curable gap filler suitable for use in a wide range of electronic assembly applications. With 2.9 W/(m.K) thermal conductivity and the possibility to achieve ultra-thin bondline thickness, it provides an excellent and versatile solution to optimize heat dissipation in challenging conditions.

This material is an exceptional choice for use in automotive, industrial and consumer applications.

Features and benefits

- Thermal conductivity: 2.9 W/(m.K)
- Low volatile outgassing (LVO)
- Outstanding Slump-Resistance
- Suited for ultra-thin bondline thickness
- Outstanding dispensing flow behavior
- Low abrasiveness
- High storage and sedimentation stability

Typical applications

- Automotive control modules
- Applications sensitive to siloxane outgassing
- High throughput manufacturing
- Applications where heat transfer needs to be optimized by material's thin bondline achievable

Typical properties of uncured material

BERGQUIST® GAP FILLER TGF 2900LVO Part A	
Viscosity, Pa·s:	
Low shear rate 1.0 s^{-1}, DIN 53019	1,300
High shear rate, 1,500 s^{-1}, ASTM D5099	54
Shelf-Life @ 25°C, days	270

BERGQUIST® GAP FILLER TGF 2900LVO Part B	
Viscosity, Pa·s:	
Low shear rate 1.0 s^{-1}, DIN 53019	1,300
High shear rate, 1,500 s^{-1}, ASTM D5099	51
Shelf-Life @ 25°C, days	270

Mixed properties

Bondline thickness, Internal*, µm	35
Density, ASTM D792, g/cc	2.97
Working time @ 25°C, ASTM D4473, min	120
Working time @ 40°C, ASTM D4473, min	20

*Adaptive compression speed, 0.1 MPa max stress, 25 mm diameter plate

Typical curing performance

Cure schedule, ASTM D4473	
@ 25°C, hour	12
@ 40°C, min	180
@ 100°C, min	< 5

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, ASTM D2240	55
Heat capacity, ASTM D1269, J/(g.K)	0.94
Flammability, UL 94	V-0
Siloxane content:	
ΣD4 – D6, ASTM F2466, ppm	ND*
ΣD7 – D10, ASTM F2466, ppm	< 40

*ND: Not Detectable

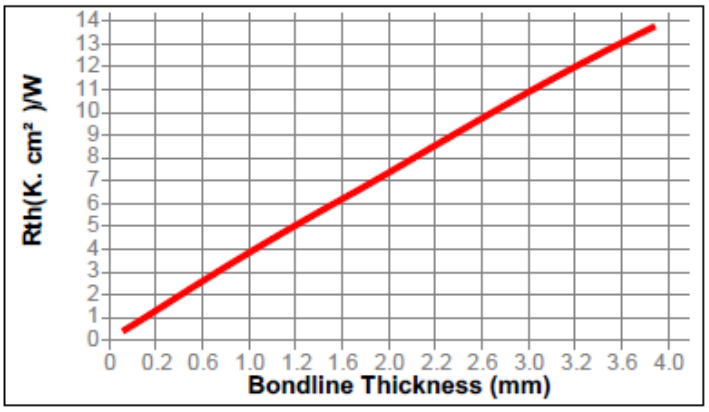
Electrical properties

Dielectric constant, ASTM D150 @ 0.1 – 20 GHz	6.78
Volume resistivity, DC, ASTM D257, Ω.m	1×10^{10}
Dielectric strength, AC, ASTM D149, kV/mm	>9

Thermal properties

Thermal conductivity, ASTM D5470, W/(m.K)	2.9
Thermal resistance, ASTM D5470, (K.cm²)/W:	
@ 0.2 mm	1.2
@ 1.0 mm	3.7
@ 2.0 mm	7.2

Bulk Thermal Resistance Rth vs Bondline Thickness



General information
For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

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 the specifications of 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 2900LVO is available in the following configurations:

Cartridges	50cc, 400cc, 1200cc
Pail	6 gallons

Storage
Store product in unopened container in controlled environment, ideally between 5 and 25°C.

Optimal Storage: 20°C for a 9 -month shelf life in original packaging.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 Henkel representative.

Shipping conditions
Short periods of time above the recommended storage temperature have not been shown to affect material's properties, negatively.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Additional information

Disclaimer
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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