

BERGQUIST GAP FILLER TGF 3010APS

April 2020

PRODUCT DESCRIPTION

A 2 part, 3.0 W/m-K, Silicone Free Gap Filler with High Dispense Rate.

Technology	Silicone free
Appearance - Part A	Black
Appearance - Part B	White
Appearance (cured)	Black
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 Range	-40 to 80°C

FEATURES AND BENEFITS

- Thermal Conductivity: 3.0 W/m-K
- Dispensable liquid, 2K Silicone free Gap Filler
- Room temperature cure - no oven required
- Extremely high dispense rate: >40 cc/sec
- Low compression stress during assembly

BERGQUIST GAP FILLER TGF 3010APS is a non-silicone, 2-part room temperature curable gap filler suitable for use in high throughput assembly applications. With a 3.0 W/m-K thermal performance, it provides an excellent silicone-free solution critical to power storage applications using lithium ion batteries.

This material is an exceptional choice for use in auto and consumer applications.

TYPICAL APPLICATIONS

- Automotive power storage
- Silicone sensitive applications
- Processes requiring high dispense rate
- Applications requiring high thermal transfer and low compressive stress

TYPICAL UNCURED PROPERTIES

BERGQUIST GAP FILLER TGF 3010APS Part A

Viscosity, mPa·s (cP):	
High shear rate 3000 s ⁻¹ , ASTM D5099	5,000
Low shear rate 1.0 s ⁻¹ , DIN 53019	425,000
Density, ASTM D792, g/cc	3.0
Storage Life @ 25°C, days	90

BERGQUIST GAP FILLER TGF 3010APS Part B

Viscosity, mPa·s (cP):	
High shear rate 3000 s ⁻¹ , ASTM D5099	20,000
Low shear rate 1.0 s ⁻¹ , DIN 53019	650,000
Density, ASTM D792, g/cc	3.0
Storage Life @ 25°C, days	90

Mixed Properties

Work Life @ 25°C, ASTM D4473, hours	4
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TYPICAL CURE SCHEDULE

Cure Schedule

- 24 hours @ 25°C, ASTM D4473
- 3 hours @ 80°C, ASTM D4473

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, 6.35 mm thick sample	75
Heat Capacity, ASTM D1269, J/g-K	0.87
Flammability, UL 94	V-0
Siloxane Content, ΣD4-D10, ASTM F2466, ppm	ND

Electrical Properties

Dielectric Strength, ASTM D149, V/mm	14,000
Dielectric Constant, ASTM D150 @ 1000 Hz	17
Volume Resistivity, ASTM D257, ohm-meter	1×10 ⁶

Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	3.0
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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 3010APS is available in the following configurations:

Cartridges	200cc, 400cc, 1200cc
Pail Kits	6gallons, 10gallons
Drum Kits	120 liters

SHIPPING CONDITIONS

Shipping conditions should be controlled between 10°C and 30°C, with limited exposure to higher /lower temperatures for less than 48 hours .

STORAGE

Store product in unopened container in controlled environment, ideally at 25°C.

Optimal Storage: 25°C for a 3-month shelf life, in sealed containers with moisture barrier packaging.

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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb/F}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{psi} \times 145 = \text{N/mm}^2$
 $\text{MPa} = \text{N/mm}^2$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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