Technical Data Sheet

BERGQUIST LIQUI BOND TLB SA3500

BERGQUIST LIQUI-BOND SA 3505
November 2018

PRODUCT DESCRIPTION

Thermally Conductive, Two-Part, Liquid Silicone Adhesive.

Technology	Silicone
Appearance - Part A	Brown
Appearance - Part B	Light gray
Appearance - Mixed	Light brown
Cure	Heat cure
Application	Thermal management, TIM (Thermal Interface Material)
Mix Ratio, Part A:Part B	1 : 1
Operating Temperature Range	-60 to 200ºC
UL Flammability Rating	UL 94 V-0

FEATURES AND BENEFITS

- Thermal Conductivity: 3.5 W/m-K
- Eliminates need for mechanical fasteners
- Room temperature storage
- Maintains structural bond in severe environment applications
- Heat cure

BERGQUIST LIQUI BOND TLB SA3500 is a high performance, thermally conductive, liquid adhesive. This material is supplied as a two-part material and requires no refrigeration.

The mixed material cures at elevated temperatures. As cured, BERGQUIST LIQUI BOND TLB SA3500 provides a strong bonding, form-in-place elastomer. The material's mild elastic properties assist in relieving CTE stresses during thermal cycling.

Liquid dispensed thermal materials offer infinite thickness variations and impart little to no stress on sensitive components during assembly. BERGQUIST LIQUI BOND TLB SA3500 is available with optional glass spacer beads to provide a consistent bond line and ensure dielectric integrity.

TYPICAL APPLICATIONS

- Power supplies
- Discrete component to heat spreader
- PCBA to housing

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, High shear, Capillary, ASTM D5099, Pa·s:	
Part A	45
Part B	30
600/ sec, Part A and B measured separately	
Density, ASTM D792, g/cc	2.9
Pot life @ 25 °C, based on 1/8" diameter bead, minutes	240
Shelf Life @ 25ºC , months	6

TYPICAL CURE SCHEDULE

Cure Schedule

20 minutes @ 125°C or
10 minutes @ 150°C

Time after cure temperature is achieved at the interface. Ramp time is application dependent.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Hardness, Shore A, 30 second delay, ASTM D2240	90

Electrical Properties

Dielectric Strength, ASTM D149, V/mm	10,000
Dielectric Constant, ASTM D150, 1,000 Hz	6.9
Volume Resistivity, ASTM D257, ohm-meter	1×10^{10}

Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	3.5

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

Shear Strength, ASTM D1002	MPa (psi)	3.15 (450)

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

- Supplied in cartridge or kit form

STORAGE

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 25ºC for a 6 month shelf life. 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

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

Disclaimer

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Reference N/A

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