



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 200°C
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 @ 25°C , 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	3.15
	(psi)	(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: 25°C 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

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

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.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage: [Except as otherwise noted] All trademarks in this document are trademarks and/or registered trademarks of Henkel and its affiliates in the U.S. and elsewhere.

Reference **N/A**

Americas
+1.888.943.6535

Europe
+32.1457.5611

Asia
+86.21.3898.4800

For the most direct access to local sales and technical support visit: www.henkel.com/electronics