

LOCTITE ABLESTIK 8008HT

May 2019

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 8008HT provides the following product characteristics:

Technology	Proprietary Hybrid Chemistry
Appearance	Silver
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> • Electrically conductive • Thermally conductive • Snap curable after B-stage • Low modulus • Stencil printing • Void-free bondline without bleed
Application	Die attach
Filler Type	Silver
pH	4.1

LOCTITE ABLESTIK 8008HT adhesive is designed for high power devices in high UPH environment. It offers a lead-free alternative to soft solder and eutectic and can potentially reduce the layers of backside metallization required. This material can be applied to a wafer backside by stencil printing and then B-staged in an oven. The adhesive can then be cured after die attach in an in-line process exhibiting a consistent, void-free bondline without bleed. LOCTITE ABLESTIK 8008HT should be used with a pressure sensitive dicing tape and is not compatible with UV dicing tapes.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	4.0
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	50,000
Work Life @ 25°C, hours	24
Shelf Life @ -40°C, days	365
Flash Point - See SDS	

TYPICAL PROCESS DATA

Recommended B-Stage Condition

30 minute ramp from 25°C to 120°C, hold 60 minutes @ 120°C

Alternate B-Stage Condition

10 minute ramp from 25°C to 120°C, hold 60 minutes @ 120°C

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

Snap Cure

20 seconds @ 170°C

Air box oven Cure

30 minutes ramp to 175°C + 60 minutes @ 175°C

Die Attach Condition

Temperature, °C

≥165

Force is dependent on die size and D/A temperature

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

Coefficient of Thermal Expansion, ppm/°C:	
Below Tg, ppm/°C	37
Above Tg, ppm/°C	62
Glass Transition Temperature (Tg) by TMA, °C	264
Thermal Conductivity, W/(m·K)	11
Tensile Modulus, DMTA :	
@ -65 °C	N/mm ² 9,703 (psi) (1,406,870)
@ 25 °C	N/mm ² 6,662 (psi) (965,950)
@ 150 °C	N/mm ² 3,821 (psi) (554,040)
@ 200 °C	N/mm ² 3,161 (psi) (458,320)
@ 250 °C	N/mm ² 2,451 (psi) (355,340)

Extractable Ionic Content, @ 100°C:	
Chloride (Cl ⁻)	<10
Sodium (Na ⁺)	<10
Potassium (K ⁺)	<10
Water Extract Conductivity, μmhos/cm	15
Moisture Absorption @ Saturation, wt.% @ 85°C/85%RH	0.53

Electrical Properties

Volume Resistivity, ohms-cm	0.00006
-----------------------------	---------

TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength :

2 x 2 mm Si die on Cu leadframe, kg-f

@25°C	@260°C
6.0	2.6

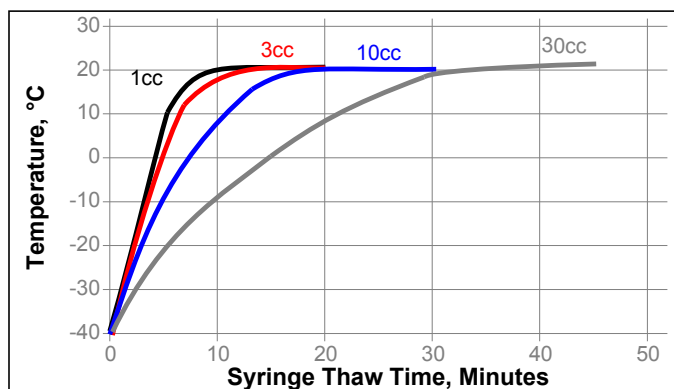
GENERAL INFORMATION

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

THAWING:

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.
3. Refer to the Syringe Thaw time chart for the thaw time recommendation.
4. DO NOT open the container before contents reach 22°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.

5. DO NOT re-freeze. Once thawed to 22°C, the adhesive should not be re-frozen.



DIRECTIONS FOR USE

1. Apply enough adhesive to the stencil to ensure complete filling of the stencil with a 15 to 20 mm diameter bead. Typically, this requires 20 to 50 cc of adhesive depending on the stencil size. For two-direction printing, double beading is recommended.

NOTE:

Please refer to the Wafer Backside Coating Applications and Data Package for this product to review process windows and recommendations for each step..

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.

STORAGE:

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

Optimal Storage: -40 °C. Storage below minus (-)40 °C or greater than minus (-)40 °C can adversely affect product properties.

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.

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 2

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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Loctite:](#)

[1276367](#)