

# LOCTITE ABLESTIK ATB 120U

June 2016

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK ATB 120U provides the following product characteristics:

<b>Technology</b>	Rubberized Epoxy
<b>Appearance</b>	Transparent
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Non-conductive</li> <li>• Fast cure</li> <li>• Thin bondline</li> <li>• Excellent gap filling ability</li> <li>• L2/260°C performance</li> </ul>
<b>pH</b>	3.5
<b>Application</b>	Die attach
<b>Filler Type</b>	Silica
<b>Typical Package Application</b>	Die to die stack
<b>Carrier Type</b>	Polyolefin
<b>Adhesive Thickness</b>	20µm
<b>Carrier Film Thickness</b>	85µm
<b>Total Thickness</b>	105 µm
<b>Wafer Size</b>	8 and 12 in

LOCTITE ABLESTIK ATB 120U adhesive film is formulated for use in wafer lamination processes. It combines process ease with the proven reliability.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, days	30
Shelf Life @ 5°C (from date of manufacture), days	274

## TYPICAL PROCESS DATA

### Wafer Backside Lamination

Temperature, °C	65 to 70
Pressure, psi	40
Taping Duration, ft/ minute	1

### Chip Attach

Temperature, °C	100 to 120
Pressure, kg-f	0.5 to 2
Attach Duration, second	1 to 2

## TYPICAL CURING PERFORMANCE

### Cure Schedule

30 minute ramp to 120°C + 30 minutes @ 120°C

### Alternate Cure Schedule

30 minute ramp to 90°C + 30 minutes @ 90°C +  
30 minute ramp to 120°C + 30 minutes @ 120°C

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 :	
Below Tg, ppm/°C	62
Above Tg, ppm/°C	238
Glass Transition Temperature (Tg) by TMA, °C	75
Thermal Conductivity, W/(m-K)	0.21
Tensile Modulus, DMTA :	
@ -65 °C	N/mm <sup>2</sup> 2,330 (psi) (337,940)
@ 25 °C	N/mm <sup>2</sup> 875 (psi) (126,880)
@ 100 °C	N/mm <sup>2</sup> 40 (psi) (5,360)
@ 150 °C	N/mm <sup>2</sup> 3.0 (psi) (385)
@ 200 °C	N/mm <sup>2</sup> 1.0 (psi) (175)
@ 250 °C	N/mm <sup>2</sup> 2.0 (psi) (230)

Extractable Ionic Content, ppm:	
Chloride (Cl-)	<10
Fluoride (F-)	<10
Sodium (Na+)	<10
Potassium (K+)	<10
Weight Loss @ 300°C, %	<1
Moisture Absorption @ Saturation, wt.% @ 1.5 85°C/85%RH	

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Miscellaneous

Die Shear Strength vs Temperature, kg-f:

2.5 X 2.5 mm Si die frontside, kg-f,

@25°C	@260°C
40	2

## 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.

## DIRECTIONS FOR USE

1. Ensure all surfaces to be bonded are free from surface contamination.
2. Adhesive must be completely used within the product's recommended work life.

3. Remove the tape reel from the moisture-resistant package and load into the tape application machine.
4. Store unused adhesive film in the original sealed moisture-resistant package until needed.

### Storage

These adhesive film should be stored at 5°C, in its original moisture resistant packaging. Partially used reels should be stored under dry conditions at 5°C.

To minimize moisture absorption, we recommend storing the adhesive film in the sealed moisture-resistant package until needed.

### Optimal Storage : 5 °C

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, Inc. 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 of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1

# Mouser Electronics

Authorized Distributor

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

[Loctite:](#)

[2900348](#)