

# LOCTITE ABLESTIK ABP 8100

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## PRODUCT DESCRIPTION

LOCTITE ABLESTIK ABP 8100 provides the following product characteristics:

<b>Technology</b>	Hybrid chemistry
<b>Appearance</b>	Gray paste
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Snap curable</li> <li>• High die shear strength on most metal substrate</li> <li>• Electrically conductive</li> </ul>
<b>Cure</b>	Snap Cure or Oven Cure
<b>Application</b>	Die attach
<b>Target Package(s)</b>	DIP and SO type packages

LOCTITE ABLESTIK ABP 8100 conductive die attach adhesive has been formulated for use in high throughput die attach applications. It is designed for use in small die size (<3 x 3 mm). It can also be used in a variety of package sizes.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	3.7
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	10,000
Work Life @ 25°C, hours	24
Shelf Life @ -40°C (from date of manufacture), days	365

## TYPICAL CURING PERFORMANCE

**Snap Cure Schedule**  
100 seconds @ 220°C

**Cure Schedule**  
30 minute ramp to 175°C, hold 60 minutes in N<sub>2</sub>

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 T <sub>g</sub> , ppm/°C	40
Above T <sub>g</sub> , ppm/°C	150
Glass Transition Temperature (T <sub>g</sub> ) by TMA, °C	47.4
Tensile Modulus:	
@ 25°C	N/mm <sup>2</sup> 4,395 (psi) (637,440)
@ 100°C	N/mm <sup>2</sup> 3,087 (psi) (447,730)
@ 250°C	N/mm <sup>2</sup> 1,003 (psi) (145,470)

Extractable Ionic Content, ppm:

Chloride (Cl <sup>-</sup> )	<10
Sodium (Na <sup>+</sup> )	<10
Potassium (K <sup>+</sup> )	<10

### Electrical Properties

Volume Resistivity, ohms-cm	4.40×10 <sup>-04</sup>
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## TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength:

2 X 2 mm (80 x 80 mil) Si die:

On Ag, kg-f:	
@ 25°C	8.1
@ 270°C	2.1
On PPF leadframe, kg-f:	
@ 25°C	7.0
@ 260°C	2.5

## 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. DO NOT open the container before contents reach 25°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.
4. DO NOT re-freeze. Once thawed to 25°C, the adhesive should not be re-frozen.

### DIRECTIONS FOR USE

1. Thawed adhesive should immediately be placed on dispense equipment for use.
2. If the adhesive is transferred to a final dispensing reservoir, care must be exercised to avoid entrapment of contaminants and/or air into the adhesive.
3. Adhesive must be completely used within the product's recommended work life.

### 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**

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.

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**Reference 1**