

# LOCTITE ABLESTIK 8385

August 2014

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK 8385 provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Appearance</b>	gray
<b>Cure</b>	Heat cure and Snap Cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>Electrically conductive</li> <li>Extremely low modulus of elasticity</li> <li>Low stress</li> <li>Low weight loss</li> </ul>
<b>Application</b>	Die attach
<b>Filler Type</b>	Silver

LOCTITE ABLESTIK 8385 conductive die attach adhesive has been formulated for use in high throughput die attach applications. It is designed for high throughput bonding applications. This adhesive can be snap cured using directed heat energy or hot energy plate curing techniques. In a conventional box or convection oven curing, it will cure rapidly at temperature as low as 120°C. In head gimbal operations, the low stress properties in the material is designed to control slider arm growth.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	≥4.5
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP)	9,500
Work Life @ 25°C, hours	6
Shelf Life @ -40°C, days	365
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Recommended Curing Conditions

15 minutes @ 125°C

### Weight Loss on Cure

10 x 10 mm Si die on glass slide, % 0.5

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

Glass Transition Temperature, °C	14
Tensile Modulus, DMTA :	
@ -65 °C	N/mm <sup>2</sup> 4,100 (psi) (590,000)
@ 25 °C	N/mm <sup>2</sup> 1,400 (psi) (200,000)
@ 100 °C	N/mm <sup>2</sup> 4.8 (psi) (700)

### Extractable Ionic Content, ppm:

Chloride (Cl <sup>-</sup> )	≤100
Sodium (Na <sup>+</sup> )	≤20
Potassium (K <sup>+</sup> )	≤10
Water Extract Conductivity, μmhos/cm	125
Water Absorption, %:	
85°C/85 RH	1.1
pH	7.3

## Electrical Properties

Bond Joint Resistance, ohm/0.5 sq inch ≤0.01

## TYPICAL PERFORMANCE OF CURED MATERIAL

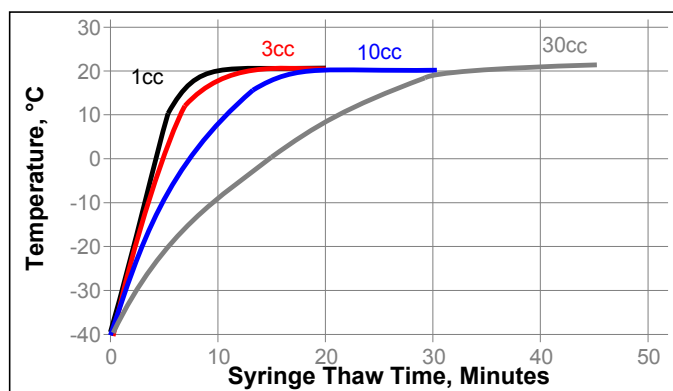
Die Shear Strength @25°C, kg-f/die 1.7  
after 85°C/85% RH exposure for 16 hrs

## GENERAL INFORMATION

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

### 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.
4. Apply enough adhesive to achieve a 25 to 50 μm wet bondline

thickness, dispensed with approximately 25 to 50 % filleting on all sides of the die.

5. Alternate dispense amounts may be used depending on the application requirements.
6. Star or crossed shaped dispense patterns will yield fewer bondline voids than the matrix style of dispense pattern.

#### 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

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

#### 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 0.1