

# LOCTITE ABLESTIK 843-1

April 2014

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK 843-1 provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Filler Type</b>	Silver
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>One component</li> <li>Solvent-free</li> <li>Electrically conductive</li> <li>High purity</li> <li>Strong bond strength</li> <li>Screen printable</li> <li>Syringe dispensable</li> </ul>
<b>Application</b>	Die attach

LOCTITE ABLESTIK 843-1 electrically conductive die attach adhesive has been formulated for use in high throughput, automated die attach equipment. This adhesive is ideal for application by syringe dispensing or screen printing. LOCTITE ABLESTIK 843-1 adhesive provides strong bonds and is designed to withstand thermal compression wire bonding.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity @ 25 °C, mPa·s (cP)	8,500
Storage Life (from date of manufacture):	
@ 25°C, days	91
@ 5°C, days	182
@ -40°C, days	365
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Cure Schedule

30 minutes @ 170°C

### Alternate Cure Schedule

30 minutes @ 150°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 T <sub>g</sub> , ppm/°C	49
Above T <sub>g</sub> , ppm/°C	120
Glass Transition Temperature (T <sub>g</sub> ), °C	76
Thermal Conductivity @ 121°C, W/(m·K)	2.07

Extractable Ionic Content, @ 100°C ppm:

Chloride (Cl <sup>-</sup> )	5
Sodium (Na <sup>+</sup> )	10
Potassium (K <sup>+</sup> )	5
Weight Loss @ 250°C, %	0.22

### Electrical Properties

Volume Resistivity, ohm-cm	0.0002
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## TYPICAL PERFORMANCE OF CURED MATERIAL

### Miscellaneous

Die Shear Strength :

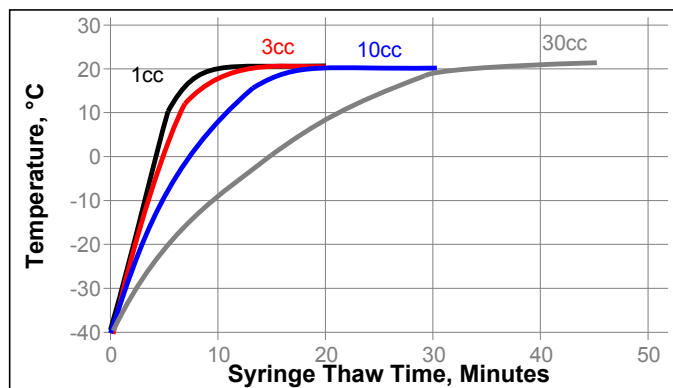
50 mil <sup>2</sup> (1.27 mm <sup>2</sup> ) die:	
@ 25 °C	N/mm <sup>2</sup> 27.6 (psi) (4,000)
@ 350 °C	N/mm <sup>2</sup> 10.3 (psi) (1,500)

## 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. 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. Filler resin separation may occur if the adhesive is left out at 25 °C beyond the recommended work life.
2. Mix component thoroughly before use.
3. Apply adhesive as required.
4. Assemble bonds.
5. Cure at one of the recommended cure schedules.

## 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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