

# LOCTITE ABLESTIK 84-1LMIT

February 2018

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK 84-1LMIT provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Appearance</b>	Silver paste
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>Electrically conductive</li> <li>High thermal conductivity</li> <li>High purity</li> <li>Low outgassing</li> <li>Solvent-free formulation</li> </ul>
<b>Application</b>	Component assembly, Electrically Conductive Adhesive
<b>pH</b>	5.5

LOCTITE ABLESTIK 84-1LMIT adhesive is designed for medium die attach applications. This adhesive is ideal for application by syringe dispensing or screen printing.

## MIL-STD-883

LOCTITE ABLESTIK 84-1LMIT meets the requirements of MIL-STD-883, Method 5011.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Pot Life, days	14
Shelf Life @ -40°C (from date of manufacture), days	365

## TYPICAL CURING PERFORMANCE

### Cure Schedule

1 hour @ 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	52
Above T <sub>g</sub> , ppm/°C	200
Thermal Conductivity, W/(m-K)	4.3
Extractable Ionic Content, :	
Chloride (Cl <sup>-</sup> )	30
Sodium (Na <sup>+</sup> )	10
Potassium (K <sup>+</sup> )	2
Water Extract Conductivity, μmhos/cm	10
Weight Loss @ 300°C, %	0.19

## Electrical Properties

Volume Resistivity, ohms-cm:	
@ 25°C	0.00007
@ 60°C	0.00008
@ 150°C	0.00009
@ 25°C after 1,000 hours @ 150°C	0.00005

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Miscellaneous

Bond Strength, Metal to Metal:

@ 25°C	N/mm <sup>2</sup>	35
	(psi)	(5,000)
@ 150°C	N/mm <sup>2</sup>	25
	(psi)	(3,600)

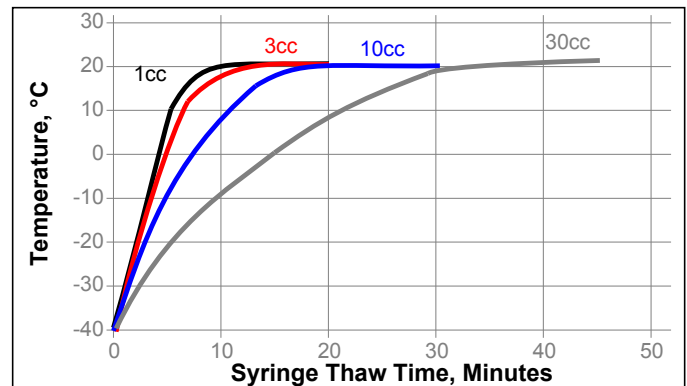
A 2-hour cure at 150°C is necessary to meet the die shear strength requirement as listed on Method 5011.

## GENERAL INFORMATION

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

### THAWING:

- Allow container to reach room temperature before use.
- After removing from the freezer, set the syringes to stand vertically while thawing.
- Refer to the Syringe Thaw time chart for the thaw time recommendation.
- 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.
- DO NOT re-freeze. Once thawed to -40°C, the adhesive should not be re-frozen.



### DIRECTIONS FOR USE

- Thawed material should immediately be placed on dispense equipment for use.
- 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.

- Adhesive must be completely used within the product's recommended work life.
- Silver-resin separation may occur if the adhesive is left out at room temperature, beyond the 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. 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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{psi} \times 145 = \text{N/mm}^2$

$\text{MPa} = \text{N/mm}^2$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

#### 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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