

# LOCTITE ABLESTIK 84-1LMISR3

October 2014

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK 84-1LMISR3 provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Appearance</b>	Silver
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>Electrically conductive</li> <li>Low viscosity</li> <li>High thixotropy</li> </ul>
<b>Application</b>	Die attach
<b>Filler Type</b>	Silver

LOCTITE ABLESTIK 84-1LMISR3 adhesive is designed for die attach applications. LOCTITE ABLESTIK 84-1LMISR3 adhesive is the low viscosity and higher thixotropic index version of ABLEBOND 84-1LMIS adhesive.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity @ 25 °C, mPa·s (cP):	
Speed 5 rpm	7,200
Work Life @ 25°C, days	14
Shelf Life @ -40°C, days	365
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Recommended Curing Conditions

1 hour @ 175°C

### Alternative Curing Conditions

0.5 hour @ 200°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 TMA:	
Below Tg, ppm/°C	57
Above Tg, ppm/°C	180
Glass Transition Temperature, °C	123
Extractable Ionic Content, ppm:	
Chloride (Cl-)	≤10
Sodium (Na+)	≤20
Potassium (K+)	≤10
Weight Loss @ 300°C, %	0.22
Thermal Conductivity @ 121°C, W/(m-K)	2.0

## Electrical Properties

Volume Resistivity, ohms-cm ≤0.0002

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Shear Strength

Die Shear Strength:

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

@ 25°C	N/mm <sup>2</sup>	35.17
	(psi)	(5,100)
@ 250°C	N/mm <sup>2</sup>	2.76
	(psi)	(400)

Lap Shear Strength

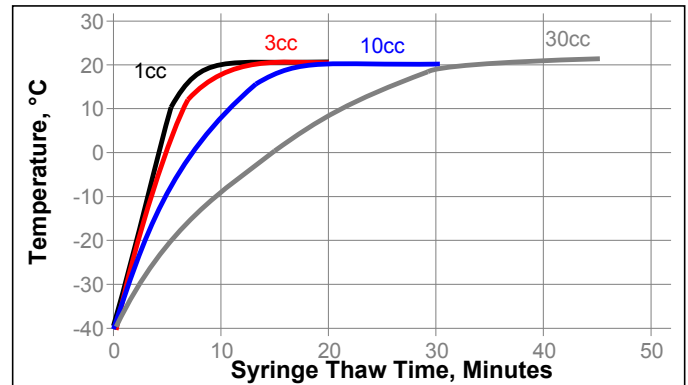
N/mm<sup>2</sup> 6.21  
(psi) (≥900)

## 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. Thaw adhesive to room temperature.
2. Apply adhesive as required.
3. Assemble bonds.
4. Cure at the recommended cure schedule.

## 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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