

LOCTITE ABLESTIK 84-1LMIS1

August 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 84-1LMIS1 provides the following product characteristics:

Technology	Epoxy
Appearance	Silver
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> Electrically conductive
Application	Die attach
Filler Type	Silver
Application Method	High speed stamping

LOCTITE ABLESTIK 84-1LMIS1 is a silver filled electrically conductive epoxy adhesive. This solvent-free, high purity adhesive exhibits very low levels of water extractable ionic impurities.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity @ 25 °C, mPa·s (cP)	11,000
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

30 minutes @ 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	40
Above Tg, ppm/°C	14
Glass Transition Temperature, °C	110
Extractable Ionic Content, ppm:	
Chloride (Cl-)	10
Sodium (Na+)	10
Potassium (K+)	5
Water Extract Conductivity, μmhos/cm	15
Weight Loss @ 300°C, %	0.21
Thermal Conductivity @ 121°C, W/(m-K)	1.7

Electrical Properties

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

Shear Strength

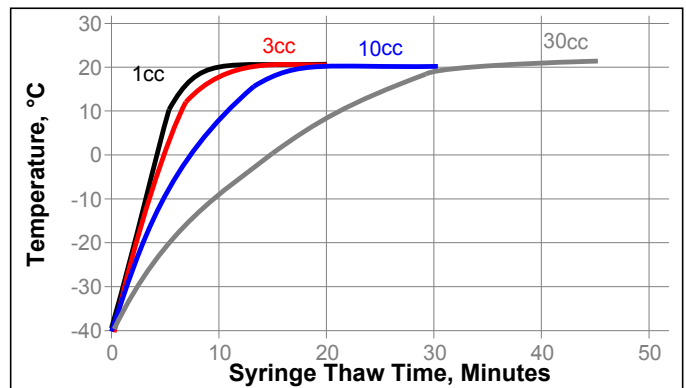
Die Shear Strength 70 mil ² IC @25°C	N/mm ²	20.69
	(psi)	(3,000)

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. Apply adhesive as required.
2. Assemble bonds.
3. 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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Reference 0.1