



ABLESTIK 84 1 LMI

October 2014

PRODUCT DESCRIPTION

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

Technology	Epoxy
Appearance	Silver
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> Electrically conductive Low bleed Low outgassing
Application	Die attach
pH	5.5
Filler Type	Silver

LOCTITE ABLESTIK 84-1LMI die attach adhesive is designed for microelectronic chip bonding applications. This adhesive is ideal for application by automatic dispenser or hand probe.

MIL-STD-883

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

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	4.0
Viscosity, Brookfield CP51, 25 °C, mPa-s (cP):	
Speed 5 rpm	30,000
Work Life @ 25°C, days	14
Shelf Life (from date of manufacture):	
@ 5°C, days	91
@ -10°C, days	183
@ -40°C, days	365

TYPICAL CURING PERFORMANCE

Cure Schedule

1 hour @ 150°C

Alternate Cure Schedule

2 hours @ 125°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 Tg, ppm/°C	55
Above Tg, ppm/°C	150
Glass Transition Temperature (Tg) by TMA, °C	103
Thermal Conductivity, W/(m-K)	2.4

Extractable Ionic Content, ppm:

Chloride (Cl-)	≤20
Sodium (Na+)	≤20
Potassium (K+)	≤10
Water Extract Conductivity, μmhos/cm	10
Weight Loss @ 300°C, %	0.19

Electrical Properties

Volume Resistivity, ohms-cm	0.0005
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TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength :

2 x 2 mm Si die on Ag/Cu LF @ 25 °C, kg-f	19
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Lap Shear Strength @ 25°C:

Al to Al	N/mm ² 12
	(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 25°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 -40°C, the adhesive should not be re-frozen.



