Technical Data Sheet

LOCTITE ABLESTIK 84-1LMIT1

August 2019

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 84-1LMIT1 provides the following product characteristics:

Technology	Epoxy
Appearance	Silver
Cure	Heat cure
pH	4.5
Product Benefits	• Electrically conductive • High thermal conductivity • Solvent-free formulation • Low viscosity
Application	Die attach
Filler Type	Silver

LOCTITE ABLESTIK 84-1LMIT1 adhesive is designed for medium die attach applications. It is designed for screen printing using 325 mesh.

MIL-STD-883C

LOCTITE ABLESTIK 84-1LMIT1 meets the requirements of MIL-STD-883C, Method 5011.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	22,000
Work Life @ 25°C, days	14
Shelf Life @ -40°C (from date of manufacture), 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	50
Above Tg, ppm/°C	200
Glass Transition Temperature (Tg) by TMA, °C	103
Thermal Conductivity, W/(m-K)	3.6

Tensile Modulus, DMTA :

@ -65 °C	N/mm²	8,400
	(psi)	(1,218,317)
@ 25 °C	N/mm²	7,300
	(psi)	(1,058,775)
@ 100 °C	N/mm²	5,400
	(psi)	(783,203)
@ 150 °C	N/mm²	540
	(psi)	(78,320)
@ 200 °C	N/mm²	390
	(psi)	(56,564)
@ 250 °C	N/mm²	460
	(psi)	(66,717)

Extractable Ionic Content, @ 100°C:	
Chloride (Cl-)	≤200
Sodium (Na+)	≤50
Potassium (K+)	≤50
Weight Loss @ 300ºC, %	0.16
Water Extract Conductivity, µmhos/cm	13

Electrical Properties

Volume Resistivity, ohms-cm	0.0005

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Die Shear Strength :	
2 x 2 mm Au die @ 25 °C, kg-f	19

Lap Shear Strength :

Aluminum to Aluminum @ 25°C	N/mm²	13
	(psi)	(1,885)

TYPICAL ENVIRONMENTAL RESISTANCE

Outgassing Properties

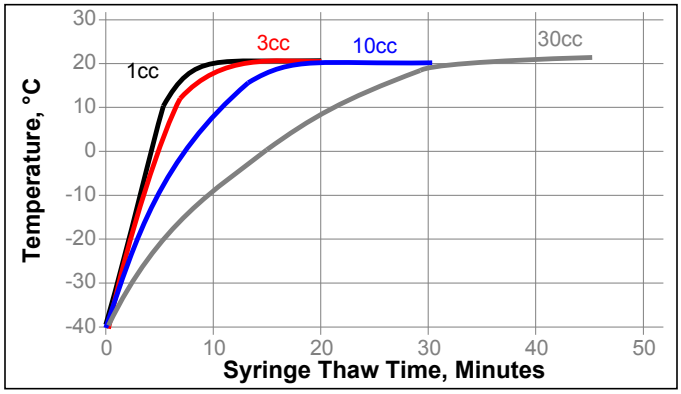
Outgassing , NASA Outgassing:	
TML, %	0.09
CVCM, %	<0.01
WVR, %	0.05

GENERAL INFORMATION

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

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 25°C, the adhesive should not be re-frozen.



DIRECTIONS FOR USE

1. Thawed material should immediately be placed on dispense equipment for use.
2. 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.
3. Adhesive must be completely used within the product's recommended work life.
4. 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
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb/F
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Disclaimer
Note:
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Reference 0.5