

**LOCTITE ABLESTIK 84-1LMINB1**

August 2019

**PRODUCT DESCRIPTION**

LOCTITE ABLESTIK 84-1LMINB1 provides the following product characteristics:

|                             |  |
|-----------------------------|--|
| <b>Technology</b>           | Epoxy  |
| Appearance                  | Silver   |
| <b>Cure</b>                 | Heat cure  |
| Product Benefits            | <ul style="list-style-type: none"><li>Electrically conductive</li><li>Long work life</li><li>Bonds difficult to wet surfaces</li></ul> |
| <b>Application</b>          | Die attach   |
| Filler Type                 | Silver   |
| Typical Package Application | Capacitor terminations   |

LOCTITE ABLESTIK 84-1LMINB1 die attach adhesive is formulated to bond difficult-to-wet surfaces such as palladium-silver capacitors terminations. This adhesive reduces capacitor shorting problems caused by resin bleed.

**MIL-STD-883**

LOCTITE ABLESTIK 84-1LMINB1 meets the requirements of MIL-STD-883, Method 5011.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

|  |        |
|--|--------|
| Viscosity, Brookfield CP51, 25 °C, mPa·s (cP): |        |
| Speed 5 rpm                                    | 50,000 |
| Work Life @ 25°C, hours                        | >24    |
| Shelf Life (from date of manufacture):         |        |
| @ 5°C, months                                  | 3      |
| @ -10°C, months                                | 6      |
| @ -40°C, year                                  | 1      |

**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 Tg, ppm/°C                             | 50  |
| Above Tg, ppm/°C                             | 130 |
| Glass Transition Temperature (Tg) by TMA, °C | 90  |
| Thermal Conductivity, W/(m-K)                | 3.9 |

## Extractable Ionic Content, :

|                                      |     |
|--------------------------------------|-----|
| Chloride (Cl-)                       | ≤20 |
| Sodium (Na+)                         | ≤20 |
| Potassium (K+)                       | ≤10 |
| Water Extract Conductivity, µmhos/cm | 9.7 |
| Weight Loss @ 300°C, %               | 0.2 |

**Electrical Properties**

|                             |        |
|-----------------------------|--------|
| Volume Resistivity, ohms-cm | 0.0003 |
|-----------------------------|--------|

**TYPICAL PERFORMANCE OF CURED MATERIAL**

Die Shear Strength vs Temperature, kg-f:

2 X 2 mm , psi,

| Substrate | @25°C | @250°C |
|-----------|-------|--------|
| IC        | 6200  | 1200   |

**TYPICAL ENVIRONMENTAL RESISTANCE****Outgassing Properties**

Outgassing , NASA Outgassing:

|         |      |
|---------|------|
| TML, %  | 0.14 |
| CVCM, % | 0.02 |
| WVR, %  | 0.07 |

**GENERAL INFORMATION**

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

**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**

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 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/mm<sup>2</sup>  
 MPa = N/mm<sup>2</sup>  
 N·m x 8.851 = lb·in  
 N·m x 0.738 = lb·ft  
 N·mm x 0.142 = oz·in  
 mPa·s = cP

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