

# LOCTITE® ABLESTIK QMI529HT-LV

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## PRODUCT DESCRIPTION

LOCTITE® ABLESTIK QMI529HT-LV provides the following product characteristics:

<b>Technology</b>	BMI Hybrid
<b>Appearance</b>	Gray
<b>Filler type</b>	Silver
<b>Product benefits</b>	<ul style="list-style-type: none"> <li>Electrically conductive</li> <li>Thermally conductive</li> <li>Good dispensing characteristics</li> <li>Hydrophobic</li> <li>Stable at high temperatures</li> <li>Low moisture absorption</li> <li>Excellent adhesion</li> <li>Low stress</li> <li>Thermally stable at 260°C reflow</li> <li>Passes NASA outgassing</li> <li>Passes MIL STD 883, Method 5011</li> </ul>
<b>Cure</b>	Heat cure
<b>Application</b>	Die attach

LOCTITE® ABLESTIK QMI529HT-LV conductive die attach adhesive has been formulated for use in high throughput die attach applications.

LOCTITE® ABLESTIK QMI529HT-LV passes NASA outgassing standards.

LOCTITE® ABLESTIK QMI529HT-LV passes MIL-STD-883 standards, Method 5011.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51, 25°C, mPa-s (cP)	
Speed 5 rpm	16,000
Thixotropic index, (0.5/5 rpm)	4.0
Work life @ 25°C, hours	24
Shelf life @ -40°C, (from date of manufacture), days	365

## TYPICAL CURING PERFORMANCE

### Recommended cure schedule

30 minute ramp to 175°C + 1 hour @ 175°C

### Weight loss on cure

By TGA, % 5.34

The above cure profiles are guideline recommendations. These conditions (time and temperature) may vary based on customers' experience and specific 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, ppm/°C:	
Below Tg	62
Above Tg	162
Thermal conductivity, W/(m-K)	8
Extractable ionic content,	
Chloride (Cl-)	<10
Sodium (Na+)	<10
Potassium (K+)	<10
Fluoride (F-)	<10
Tensile modulus, DMTA	
@ -65°C	N/mm <sup>2</sup> 9,700 (psi) (1,406,866)
@ 25°C	N/mm <sup>2</sup> 4,910 (psi) (712,135)
@ 150°C	N/mm <sup>2</sup> 1,010 (psi) (146,488)
@ 200°C	N/mm <sup>2</sup> 817 (psi) (118,495)
@ 250°C	N/mm <sup>2</sup> 738 (psi) (107,037)

### Electrical properties

Volume resistivity, ohms-cm 0.00005

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Miscellaneous

Die Shear Strength	
3 x 3 mm Die on Ag Leadframe, kg-f	
Post cure	
@ 25°C	20
@ 260°C	3.75
Post cure + PMB	4.79
Post cure + PMB + moisture @ 200°C	2.71

**GENERAL INFORMATION**

Please consult the Safety Data Sheet (SDS) for safe handling information of this product.

**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.

**Direction 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. Apply enough adhesive to achieve a 38 µm wet bondline thickness, dispensed with approximately 25 to 50% filleting on all sides of the die.
5. Alternate dispense amounts may be used depending on the application requirements.
6. Star or crossed shaped dispense patterns will yield fewer bondline voids than the matrix style of dispense pattern.

**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 -40°C or above -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 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 Henkel representative.

**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 the specifications of this product.

**Conversions**

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 $\text{kV/mm} \times 25.4 = \text{V/mil}$   
 $\text{mm} / 25.4 = \text{inches}$   
 $\mu\text{m} / 25.4 = \text{mil}$   
 $\text{N} \times 0.225 = \text{lb}$   
 $\text{N/mm} \times 5.71 = \text{lb/in}$   
 $\text{N/mm}^2 \times 145 = \text{psi}$   
 $\text{MPa} \times 145 = \text{psi}$   
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$   
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$   
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$   
 $\text{mPa}\cdot\text{s} = \text{cP}$

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