

LOCTITE ABLESTIK QMI516IE

November 2016

PRODUCT DESCRIPTION

LOCTITE ABLESTIK QMI516IE provides the following product characteristics:

Technology	BMI Hybrid
Appearance	Silver gray
Cure	Heat cure
Product Benefits	- Electrically conductive - Hydrophobic - Stable at high temperatures - Void-free bondline - Excellent adhesive strength - Low temperature cure - High adhesion to a variety of substrates
Application	Die attach
Filler Type	Silver
Typical Package Application	Heat sensitive devices

LOCTITE ABLESTIK QMI516IE electrically conductive adhesive is designed for die attach applications. LOCTITE ABLESTIK QMI516IE snap cure adhesive is designed for high throughput bonding applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	5.6
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	15,900
Pot Life @ 25°C, hours	6
Shelf Life @ -40°C (from date of manufacture), 1 year	
Specific Gravity, g/cc	3.7

TYPICAL CURING PERFORMANCE

Snap Cure Schedule

60 seconds @ 90°C

Oven Cure

90 minutes @ 60°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	92
Above Tg, ppm/°C	232
Glass Transition Temperature (Tg) by TMA, °C	43
Tensile Modulus, DMTA :	
@ 25 °C	N/mm ² 1,964 (psi) (284,780)
Extractable Ionic Content, ppm:	
Chloride (Cl-)	<10
Sodium (Na+)	<10
Potassium (K+)	<10
Fluoride (F-)	<10
DSC, on-set temperature, °C	68
DSC, Peak Temp., °C	73
Heat of Reaction, Joules/gram	60

Electrical Properties

Volume Resistivity, ohms-cm	0.0015
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TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength Oven Cure 1 minute @ 150°C: (300 mil ²) kg-f @ 25 °C	11
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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

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

Reference 1

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