Technical Data Sheet

LOCTITE ABLESTIK QMI550

April 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK QMI550 provides the following product characteristics:

Technology	BMI Hybrid
Appearance	Off-white to beige liquid
Filler Type	Fluoropolymer
Product Benefits	• Non-conductive • Hydrophobic • Stable at high temperatures • Void-free bondline • Excellent interfacial adhesion strength • Excellent dielectric properties • High cohesive strength
Cure	*Skip*-Cure Process
Application	Die attach
Substrates	PBGA's, CSP's, Array packages and Die Stack
Surface Finishes	Solder Mask, BT, FR, Polyimide, Au and Other organic surfaces

LOCTITE ABLESTIK QMI550 die attach paste was designed to attach integrated circuits and components to advanced substrates.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, 5 rpm @ 25°C, cP	11,500
Thixotropic Index (0.5/5 rpm)	6.4
Pot life @ 25 °C, hours	24
Shelf Life @ -40°C, days	365
Specific Gravity @ 25ºC	1.32
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

***Skip*Cure**

≥10 seconds @ 150°C

The above cure profile is a guideline recommendation. 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 , ppm/°C:		
Below Tg		91
Above Tg		150
Glass Transition Temperature (Tg), °C		-10
Tensile Modulus , @ 25ºC	N/mm² (psi)	1,000 (145,000)
Extractable Ionic Content, ppm:		
Chloride (Cl-)		≤20
Potassium (K+)		≤20
Sodium (Na+)		≤20
Fluoride (F-)		≤20
Water Absorption wt., %:		
168 hours @ 85°C/85 RH		≤0.29

TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength @ 25 °C:	
3.8 x 3.8 mm Ceramic die, 0.254 mm BLT, average kg-f	15

GENERAL INFORMATION

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

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.

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.

Directions for use

Dispensing and Bondline Control:

1. LOCTITE ABLESTIK QMI550 adhesion is tested using 1 mil bondline thickness. Thinner bondlines increase stress and may affect adhesion.
2. Optimization of die bonding parameters is strongly recommended to consistently meet target bondline thicknesses.

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

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
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa = N/mm²
MPa x 145 = psi
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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