

QMI529LS™

May 2008

PRODUCT DESCRIPTION

QMI529LS™ provides the following product characteristics:

Technology	BMI
Appearance	Silver
Cure	Heat cure
Application	Die attach

QMI529LS™ is a silver filled, low bleed conductive die attach adhesive specifically recommended for Ag/Cu lead frame applications. Its unique application is designed to make the material hydrophobic and at the same time provide stability at high operating temperatures without deterioration of its properties. This special formulation helps it produce void free bondlines with excellent interfacial adhesion strength.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Filler Content, %	80
Specific Gravity @ 25°C	3.65
Shelf Life @ -40°C (from date of manufacture), months	12
Pot Life @ 25 °C, hours	24
Viscosity, Brookfield , 25 °C, cps:	
Speed 5 rpm	9,000
Speed 10 rpm	6,800
Thixotropic Index (Speed 0.5/Speed 5)	4.0
Thixotropic Index (Speed 1/Speed 20)	3.8

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:	
Coefficient of Linear Thermal Expansion, ppm/°C	
alpha 1	91
alpha 2	136
Glass Transition Temperature (Tg) by TMA, °C	55
Extractable Ionic Content, ppm:	
Chloride (Cl-)	≤20
Sodium (Na+)	≤20
Potassium (K+)	≤20
Fluoride (F-)	≤20
Thermal Conductivity, W/mK	2.8
Die Shear (150x150 mil die), @ 25°C on Ag/Cu, Kg	45
Electrical Properties:	
Volume Resistivity, ohms-cm	0.005

Dispensing and Bondline Control:

QMI529LS™ adhesion is tested using 150x150mil die with 1 mil bondline thickness. Since thinner bondlines increase stress and may affect adhesion, please call your nearest Technical Service Engineer for consultation in cases where bondlines less than 1 mil are desired. Optimization of die bonding parameters is strongly recommended to consistently meet target bondline thicknesses.

GENERAL INFORMATION

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

Cure Schedule

Recommended Cure

30 minutes @ 175°C

Use suggested cure conditions as general guidelines. Other cure conditions may yield satisfactory results. With all fast cure systems, the minimum required time for cure depends on the rate of heating. Conditions where a hot plate or a heat sink is used are optimum for fastest cure. Cure rates depend on the mass of material to be heated and intimate contact with the heat source.

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

$$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$$

$$\text{kV/mm} \times 25.4 = \text{V/mil}$$

$$\text{mm} / 25.4 = \text{inches}$$

$$\text{N} \times 0.225 = \text{lb}$$

$$\text{N/mm} \times 5.71 = \text{lb/in}$$

$$\text{N/mm}^2 \times 145 = \text{psi}$$

$$\text{MPa} \times 145 = \text{psi}$$

$$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$$

$$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$$

$$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$$

$$\text{mPa}\cdot\text{s} = \text{cP}$$

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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Reference 0.0