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LOCTITE

Technical Data Sheet

LOCTITE ABLESTIK 8380

April 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 8380 provides the following product characteristics:

Technology	Epoxy
Appearance	Silver
Cure	Heat cure
pH	4.25
Product Benefits	• Electrically conductive • Reduced tailing and stringing
Application	Die attach
Typical Package Application	Smart Card

LOCTITE ABLESTIK 8380 electrically conductive adhesive is designed for advanced, high volume, reel-to-reel smart card applications. This adhesive is specially formulated to increase assembly productivity and yield. The rheology of LOCTITE ABLESTIK 8380 adhesive allows minimum adhesive dispense and die put down dwell times, without tailing or stringing problems. The rheology of LOCTITE ABLESTIK 8380 adhesive is ideal for high speed automated die bonders. The adhesive can be dispensed with minimum dwell time, without tailing or stringing, to maximize die bonder UPH.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index	4.3
Viscosity @ 25 °C	10,000
Storage Life @ -40°C (from date of manufacture), days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

1 minute @ 150°C

Alternate Cure Schedule

4 minutes @ 125°C

Weight Loss on Cure

1.3 %

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	56
Above Tg, ppm/°C	170
Extractable Ionic Content, ppm:	
Chloride (Cl-)	100
Sodium (Na+)	10
Potassium (K+)	10
Water Extract Conductivity, µmhos/cm	65
Weight Loss @ 300ºC, TGA, %	0.4

Electrical Properties

Volume Resistivity, ohm-cm	0.0005

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Die Shear Strength :

80 mil² IC:

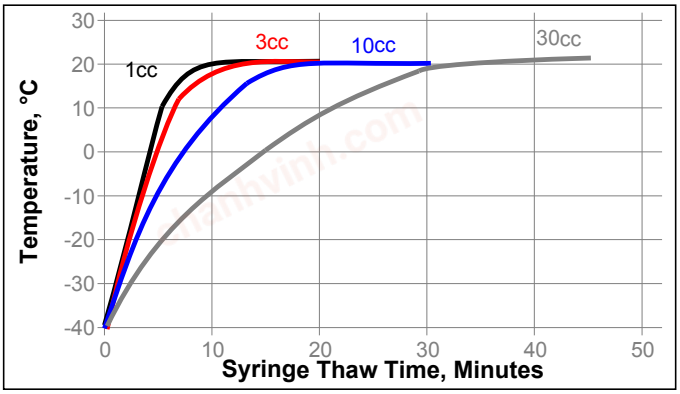
Si die Ag plated Cu L/F @ RT	N/mm²	33.1
	(psi)	(4,800)

GENERAL INFORMATION

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

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. Refer to the Syringe Thaw time chart for the thaw time recommendation.
4. DO NOT open the container before contents reach 22°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.
5. DO NOT re-freeze. Once thawed to 22°C, the adhesive should not be re-frozen.



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DIRECTIONS FOR USE

1. Thawed adhesive 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 products recommended work life.
4. Silver-resin separation may occur if the adhesive is left out at 22 °C beyond the recommended work life.
5. Apply enough adhesive to achieve a 25 to 50 µm wet bondline thickness, dispensed with approximately 25 to 50 % filleting on all sides of the die.
6. Alternate dispense amounts may be used depending on the application requirements.
7. Cure at one of the recommended cure schedules.

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

(°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

Disclaimer

Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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