Technical Data Sheet

LOCTITE ABLESTIK 3290

December 2016

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 3290 provides the following product characteristics:

Technology	Acrylate
Appearance	Gray
Filler Type	Silver
Cure	Heat cure and Snap Cure
Product Benefits	• Snap curable • Low modulus • Low outgassing • Electrically conductive • High reliability
pH	4.6
Application	Die attach
Typical Package Application	QFP and Large die QFN
Key Substrates	PPF, Silver Plated Copper and Bare Copper

LOCTITE ABLESTIK 3290 electrically conductive die attach adhesive is designed for lead-free applications where high reliability is a key requirement.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	4
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	10,000
Work Life @ 25°C, hours	24
Shelf Life @ -40°C (from date of manufacture), days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE Cure Schedule

1 hour @ 175°C

Snap Cure Schedule

4 Zone(s)	
Temp per zone: 140ºC, 180ºC, 220ºC, 240ºC	
Time per zone, seconds	30
Total Time, minutes	2

Weight Loss on Cure

Weight Loss on Cure, %	2.4

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 expansion mode:		
Below Tg, ppm/°C		48
Above Tg, ppm/°C		72
Glass Transition Temperature, Tan Δ Max, °C		32
Extractable Ionic Content, @ 100°C ppm:		
Chloride (Cl-)		<10
Sodium (Na+)		<10
Potassium (K+)		<10
Water Extract Conductivity, µmhos/cm		37
Tensile Modulus, DMTA :		
@ 25 °C	N/mm² (psi)	1,200 (174,050)
@ 150 °C	N/mm² (psi)	390 (56,560)
@ 200 °C	N/mm² (psi)	250 (36,260)
@ 250 °C	N/mm² (psi)	190 (27,560)
Thermal Conductivity, Laser Flash, W/(m-K)		0.8

Electrical Properties:

Volume Resistivity, 4-point probe, ohm-cm	0.0006

TYPICAL PERFORMANCE OF CURED MATERIAL

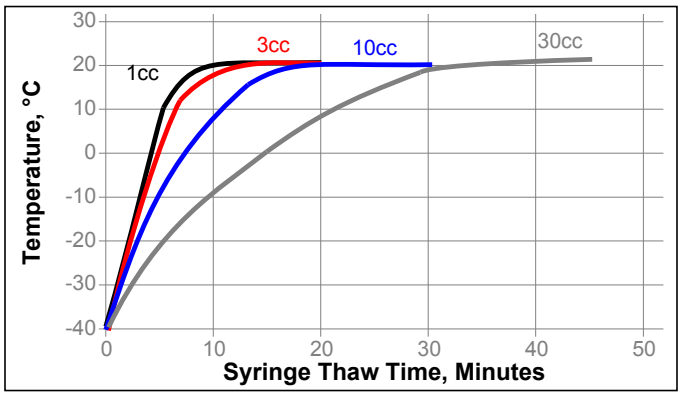
Die Shear Strength :	
Post Cure	
3 X 3 mm (120 x 120 mil) Si die:	
on Bare Cu , kg-f/die:	
@ 25ºC	20.5
@ 260ºC	6.1
on PPF, kg-f/die:	
@ 25ºC	20.8
@ 260ºC	5.9

GENERAL INFORMATION

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

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 25°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 25°C, the adhesive should not be re-frozen.



DIRECTIONS 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.

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
psi x 145 = N/mm²
MPa = N/mm²
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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