

LOCTITE ABLESTIK 2030SC

April 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 2030SC provides the following product characteristics:

Technology	Proprietary Hybrid Chemistry
Appearance	Silver
Cure	Heat cure
pH	4.5
Product Benefits	• Snap curable • Low stress
Application	Die attach
Filler Type	Silver
Key Substrates	Most metals

LOCTITE ABLESTIK 2030SC die attach adhesive has been formulated for use in high throughput die attach applications. This material is designed to minimize stress and resulting warpage between dissimilar surfaces. It can be used in a variety of package sizes.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	4.6
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	11,600
Work Life @ 25°C, hours	24
Shelf Life @ -40°C (from date of manufacture), days	365

TYPICAL CURING PERFORMANCE

Cure Schedule

90 seconds @ 110°C

Alternate Cure Schedule

10 seconds @ 150°C

Weight Loss on Cure

10 x 10 mm Si die on glass slide, % 0.4

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

Thermal Conductivity, W/(m·K)	2.3
Tensile Modulus, DMTA :	
@ -65 °C	N/mm ² 6,200 (psi) (900,000)
@ 25 °C	N/mm ² 3,300 (psi) (480,000)
@ 150 °C	N/mm ² 350 (psi) (50,000)
@ 250 °C	N/mm ² 450 (psi) (65,000)

Extractable Ionic Content, @ 100°C ppm:

Chloride (Cl ⁻)	<20
Sodium (Na ⁺)	<30
Potassium (K ⁺)	<5

Weight Loss After Cure, %:

16 hours Isothermal @ 125°C	0.41
Ramp to 230°C	0.5

Electrical Properties

Volume Resistivity, ohms-cm:	
cured 90 seconds @ 110°C	0.0002
Bond Joint Resistance, ohms:	
cured 90 seconds @ 110°C, Cu/Cu, 25µm Bondline	0.008

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Die Shear Strength vs Substrate:

2 X 2 mm die, kg-f,

Die on Substrate:	@ RT
Si die on Pd	1.90
Au die on SS	2.24
Au die on Au	2.11

Die Shear Strength vs Die Shear Temperature:

3 X 3 mm Si die, kg-f,

cured 90 seconds @ 110°C

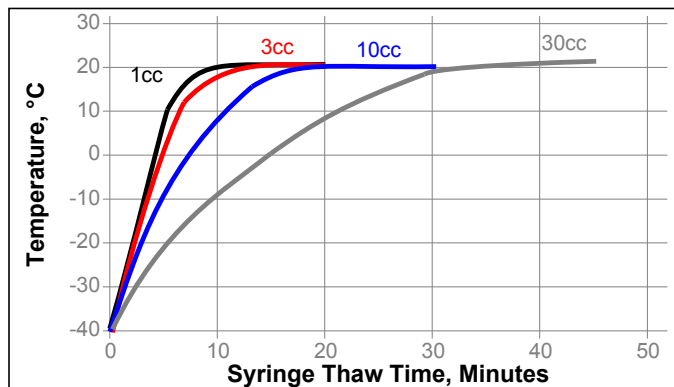
Substrate	@25°C	@150°C	@200°C
PBGA-FR4	1.90	0.96	0.87

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 -40°C, the adhesive should not be re-frozen.



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 room temperature, beyond the 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

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

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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