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LOCTITE

Technical Data Sheet

LOCTITE ABLESTIK 2033SC

April 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 2033SC provides the following product characteristics:

Technology	Proprietary Hybrid Chemistry
Appearance	red
Cure	Heat cure
Product Benefits	• Non-conductive • Single component • Low bleed • Long work life • Low cure temperature • Fast cure • Optimized rheology
Application	Die attach
pH	3.6
Filler Type	Silica

LOCTITE ABLESTIK 2033SC die attach adhesive is designed for high throughput smart card bonding applications. It is compatible with various encapsulant chemistries.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	6.1
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	11,300
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

Alternative Cure Schedule 1

60 seconds @ 120°C

Alternative Cure Schedule 2

10 seconds @ 150°C

Weight Loss on Cure

10 x 10 mm Si die on glass slide, %	0.5

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 :		
Below Tg, ppm/°C		56
Above Tg, ppm/°C		133
Glass Transition Temperature (Tg) by TMA, °C		46
Tensile Modulus, DMTA :		
@ -65 °C	N/mm² (psi)	4,200 (600,000)
@ 25 °C	N/mm² (psi)	2,100 (300,000)
@ 150 °C	N/mm² (psi)	30 (4,200)
@ 200 °C	N/mm² (psi)	60 (8,600)
Extractable Ionic Content, ppm:		
Chloride (Cl-)		<30
Sodium (Na+)		<15
Potassium (K+)		<5
Water Extract Conductivity, µmhos/cm		130

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Die Shear Strength vs Temperature, kg-f:

3 X 3 mm,Si die, MPa (psi)

Substrate	
PBGA-FR4	20 (3,000)

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. 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 -40°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.

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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

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Note:
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Reference 2