Technical Data Sheet

LOCTITE ABLESTIK 2000B

November 2016

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 2000B provides the following product characteristics:

Technology	Proprietary Hybrid Chemistry
Appearance	Silver
Cure	Heat cure
Product Benefits	• Pb-free applications • Proprietary hybrid chemistry • Ultra-low moisture absorption • High hot/wet adhesion • Low stress • Fast cure with no voids • Minimal resin bleed
Application	Die attach
Filler Type	Silver

LOCTITE ABLESTIK 2000B electrically conductive die attach adhesive is designed for Pb-free PBGA and Array BGA packaging. This product is able to withstand the high reflow temperatures necessary for Pb-free solders @ 260°C. It is suitable for die sizes up to 12.7 x 12.7 mm.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	5.5
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	8,700
Work Life @ 25°C, hours	>24
Shelf Life @ -40°C, days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minute ramp to 175°C + 15 minutes @ 175°C

Weight Loss on Cure

10 x 10 mm Si die on glass slide, %	1.9

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, ppm/°C:	
Below Tg, ppm/°C	54
Above Tg, ppm/°C	134
Glass Transition Temperature (Tg) by TMA, °C	9.0
Thermal Conductivity @ 121°C, W/(m-K)	1

Tensile Modulus, DMTA :		
@ 25 °C	N/mm² (psi)	2,759 (400,000)
@ 150 °C	N/mm² (psi)	324 (47,000)
@ 250 °C	N/mm² (psi)	255 (37,000)
Extractable Ionic Content, @ 100°C:		
Chloride (Cl-)		<10
Sodium (Na+)		<10
Potassium (K+)		<10
Moisture Absorption @ Saturation, wt.% @ 85°C/85°RH		0.21
Weight Loss @ 300ºC, %		0.3

Electrical Properties

Volume Resistivity, ohms-cm	0.05

TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength :	
2 X 2 mm,Si die on Ag/Cu leadframe, kg-f @ 25 °C	15

Die Shear Strength vs Temperature, kg-f:

3 X 3 mm, Si die on PBGA solder mask, kg-f

@25°C	@150°C	@250°C
25	12	7.6

Chip Warpage vs Chip Size:

0.38 mm thick Si die on 0.2 mm Ag/Cu leadframe @25°C

Chip Size:	Warpage:
12.7 x 12.7mm	36 µm

GENERAL INFORMATION

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

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/F
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

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