

LOCTITE ABLESTIK ABP 8064T

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PRODUCT DESCRIPTION

LOCTITE ABLESTIK ABP 8064T provides the following product characteristics:

Technology	Hybrid chemistry
Appearance	Silver
Product Benefits	• High thermal conductivity • High electrical conductivity • Medium modulus • Low outgassing • Stable at high temperatures • Good reliability performance • Soft solder replacement • Use for wide range of package sizes
Cure	Heat cure
Application	Die attach
Typical Package Application(s)	QFP, High power devices

LOCTITE ABLESTIK ABP 8064T highly filled, conductive die attach adhesive is designed to provide high thermal and electrical conductivity in the attachment of integrated circuits and components onto metal leadframes.

LOCTITE ABLESTIK ABP 8064T passes NASA outgassing standards.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Filler Content %	85
Thixotropic Index (0.5/5 rpm)	5.8
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	12,000
Work Life @ 25°C, hours	24
Shelf Life @ -40°C (from date of manufacture), days	365

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

60 min ramp from 25°C to 180°C, hold 60 mins @ 180°C in N2 oven

Alternative Cure Schedule

60 min ramp from 25°C to 140°C, hold 60 mins @ 140°C in N2 oven

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:	
Alpha 1, ppm/°C	47
Alpha 2, ppm/°C	136
Glass Transition Temperature (Tg) by TMA, °C	44.5
Tensile Modulus, DMTA :	
@ 25 °C	N/mm ² 5,260 (psi) (762,900)
@ 250 °C	N/mm ² 1,280 (psi) (185,505)
Extractable Ionic Content @ 100°C, :	
Chloride (Cl ⁻)	<10
Sodium (Na ⁺)	<10
Potassium (K ⁺)	<10
Thermal Conductivity, W/m·°C	22

Electrical Properties

Volume Resistivity, , ohm-cm	2.0×10 ⁻⁵
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TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength:	
3 X 3 mm (120 x 120 mil) Si die on PPF LF, Kg:	
@ 25°C	12.18
@ 260°C	5.6
5 X 5 mm (200 x 200 mil) Si die on PPF LF, Kg:	
@ 260°C	12.19
8 X 8 mm (300 x 300 mil) Si die on PPF LF, Kg:	
@ 260°C	18.54

TYPICAL ENVIRONMENTAL RESISTANCE

Outgassing Properties

Outgassing :	
TML, %	0.25
CVCM, %	0.05
WVR, %	0.02

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

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

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

Disclaimer

Note:

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Reference 0.3