Ablestik

ABLEBOND 2039H

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PRODUCT DESCRIPTION

ABLEBOND 2039H provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat cure
Product Benefits	• Single component • Black pigmentation for blocking stray light • Low temperature cure
Application	Optoelectronic
Substrates	LCP, PBT, PA and Other plastics
Typical Package Application	CMOS/CCM

ABLEBOND 2039H single component adhesive is designed for high throughput bonding applications. This adhesive is not recommended for polycarbonate.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	5.4
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	22,000
Work Life @ 25°C, hours	48
Shelf Life @ -40°C (from date of manufacture), months	6
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

10 minute ramp from 25°C to 80°C +
60 minutes @ 80°C

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:		
Below Tg, ppm/°C		53
Above Tg, ppm/°C		148
Glass Transition Temperature, Tan Δ Max, °C		150
Tensile Modulus, DMTA :		
@ -65 °C	N/mm² (psi)	4,790 (694,730)
@ 25 °C	N/mm² (psi)	3,540 (513,433)
@ 100 °C	N/mm² (psi)	1,600 (232,060)
@ 150 °C	N/mm² (psi)	350 (50,763)
@ 200 °C	N/mm² (psi)	40 (5,801)
@ 250 °C	N/mm² (psi)	90 (13,053)
Extractable Ionic Content, @ 100°C ppm:		
Chloride (Cl-)		<30
Sodium (Na+)		<30
Potassium (K+)		<30
Moisture Absorption @ Saturation, wt.% @ 85°C/85°RH		2.8

TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength:

2 x 2 mmCeramic die
cured 60 minutes @ 80ºC, kg-f/die

Die on Substrate:	@25°C
LCP	10.82
Solder Mask on BT Substrate (AUS5)	13.54

GENERAL INFORMATION

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

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 adhesive should be immediately 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 of 24 hours.
4. Silver-resin separation may occur if the adhesive is left out at 25°C beyond the recommended work life.
5. Apply enough adhesive to achieve a 25 to 50 µm wet bondline thickness, dispensed with approximately 25 to 50 % filleting on all sides of the die.

6. Alternate dispense amounts may be used depending on the application requirements.
7. Star or crossed shaped dispense patterns will yield fewer bondline voids that the matrix style of dispense pattern.

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.

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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
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Note
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Reference 0.0