Technical Data Sheet

LOCTITE ABLESTIK WBC 8901UV

October 2012

PRODUCT DESCRIPTION

LOCTITE ABLESTIK WBC 8901UV provides the following product characteristics:

Technology	Proprietary Hybrid Chemistry
Appearance	Off-white paste
Product Benefits	• Low cost alternative solution to DAF • Wide process windows • MSL 2/260ºC capable • 5 to 60 µm bondline control
Cure	Ultraviolet (UV) B-Stage followed by heat cure
Application	Die Attach Wafer Backside Coating (WBC)
Typical Applications	Stacked memory and logic CSP

LOCTITE ABLESTIK WBC 8901UV UV B-stageable Wafer Backside Coating (WBC) is formulated for thin die stacking applications. This material provides excellent performance at a lower cost.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity , Cone and Plate, mPa·s (cP):	
Spindle 51, speed 50 rpm	1,200
Density, g/cc	1.22
Work Life, hours	48
Shelf Life @ -40°C, days	183
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended UV B-Stage Condition

UV Wavelength	Pulsed UVA
Light Dose, mJ/cm²	900 to 1,100

Recommended Cure

15 minute ramp to 90°C plus 30 minutes @ 90 °C
4 minute ramp to 120°C plus 45 minutes @ 120 °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 of B-Staged Material

Green Strength:	
After UV B-Stage	
150 X 150 x 15 mil Si die:	
@ 25°C, kg/die	7.79

Physical Properties

Coefficient of Thermal Expansion , TMA:		
Below Tg, ppm/°C		45
Above Tg, ppm/°C		142
Glass Transition Temperature (Tg) by TMA, °C		26
Extractable Ionic Content, 20 hours boil, ppm:		
Sodium (Na+)		<1
Potassium (K+)		11
Chloride (Cl-)		4
Modulus @ 25°C, DMTA	N/mm² (psi)	3,585 (519,960)

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous:

Die Shear Strength , Post Mold Cure:	
150 X 150 x 15 mil Si die, @ 260°C, kg/die	3.08

GENERAL INFORMATION

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

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 product's recommended work life.

THAWING:

1. 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.
2. DO NOT re-freeze. Once thawed, the adhesive should not be re-frozen.
3. DO NOT attempt to thaw by applying additional heat.
4. Typical thaw times are listed as follows:
   For a 6 oz. cartridge
   3 hours @ 25°C
   1 hour @ 25 °C (convection/fan air flow)

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Storage
Store in original, tightly covered containers in clean, dry areas. Storage information may be indicated on the product container labeling.

Optimal Storage: <-35 °C. Storage greater than -35 °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
N/mm² x 145 = psi
MPa = N/mm²
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

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