Technical Data Sheet

LOCTITE® ABLESTIK ABP 3311

November 2024

PRODUCT DESCRIPTION

LOCTITE® ABLESTIK ABP 3311 provides the following product characteristics:

Technology	Epoxy
Appearance	Silver
Product benefits	• One component • Excellent workability • Good reliability • Good electrical performance • Good adhesion on Ag
Cure	Heat cure
Application	Die attach, LED application
Typical package application	LED packages

LOCTITE® ABLESTIK ABP 3311 conductive die attach paste is designed for LED and other small die attach applications. This product is designed to exhibit good adhesion at room temperature and high temperatures. This product has excellent reliability performance.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51, 25°C, mPa.s (cP)	
Speed 5 rpm	10,500
Thixotropic index, (0.5/5 rpm)	6.2
Work life @ 25ºC, hours	24
Shelf life @ -40°C, days	365

TYPICAL CURING PERFORMANCE

Recommended cure schedule

30 minutes ramp to 160°C + 90 minutes @160°C in Air oven

Weight loss on cure

Weight Loss on Cure, %	9.5

The above cure profile(s) are guideline recommendations. These cure conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical properties

Sample cured 15 minutes @ 175°C

Coefficient of thermal expansion, TMA expansion (ppm/°C):	
Below Tg	48
Above Tg	115
Glass transition temperature, TMA penetration, °C	68
Storage modulus, DMTA, Mpa	
@25ºC	5,162
@150ºC	3,695
@250ºC	994
Extractable ionic content, ppm	
Sodium (Na+)	<20
Potassium (K+)	<10
Chloride (Cl-)	<50
Bulk thermal conductivity, W/(m-k)	3.0

Electrical properties

Volume resistivity, ohm-cm	2×10^{-4}

Adhesion properties

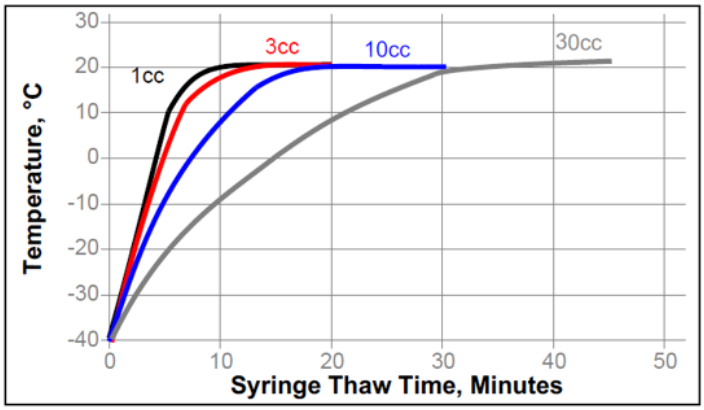
Die shear strength	
0.5 x 0.5mm Ag-BSM die on Ag LF, kg/f	
@RT	1.52
@160°C	0.76
@260°C	0.45

GENERAL INFORMATION

Please consult the Safety Data Sheet (SDS) for safe handling information of this product.

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. Thaw times depend on the syringe size.
4. Consult handling guide for more information.
5. 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.
6. DO NOT re-freeze. Once thawed to 25°C, the adhesive should not be re-frozen.



Direction 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.
4. Alternate dispense amounts may be used depending on the application requirements.
5. Star or crossed shaped dispense patterns will yield fewer bondline voids than the matrix style of dispense pattern.

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 -35°C or greater than -45°C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 Henkel representative.

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 the specifications of this product.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
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

Disclaimer

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