Technical Data Sheet

LOCTITE® ABLESTIK ABP 6395T

July 2022

PRODUCT DESCRIPTION

LOCTITE® ABLESTIK ABP 6395T provides the following product characteristics:

Technology	Epoxy
Appearance	Silver
Cure	Heat cure
Product Benefits	• One component • Good workability • High reliability • High thermal conductivity • Good electrical conductivity • Good adhesion to Ag, Cu, PPF, Non-BSM and BSM die
Application	Die attach, Electronic adhesive
Typical Package Application(s)	SOIC, SOP, QFP and QFN

LOCTITE® ABLESTIK ABP 6395T electrically conductive die attach adhesive is designed for package applications where high reliability and high thermal conductivity is a key requirement. This material is suitable for bonding small to large size BSM (backside metallization) and non-BSM die. It is suitable for use on a wide variety of metal surfaces, including Cu, Ag and PPF leadframes.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	6.2
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	8,500
Work Life @ 25°C, hours	24
Shelf Life @ -40°C, days	365

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minute ramp to 200°C + 30 minutes @ 200 °C , in N2 or air

Alternate Cure Schedule

30 minute ramp to 175°C + 60 minutes @ 175 °C , in N2 or air

Weight Loss on Cure

Weight Loss on Cure, %	4.1

The above cure profile(s) are guideline recommendation(s). These 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

Coefficient of Thermal Expansion, :		
Below Tg, ppm/°C		54
Above Tg, ppm/°C		112
Glass Transition Temperature (Tg) by TMA, °C		7
Dynamic Tensile Modulus:		
@ 25 °C	N/mm² (psi)	8,146 (1,181,477)
@ 150 °C	N/mm² (psi)	1,436 (208,274)
@ 250 °C	N/mm² (psi)	1,144 (165,923)
Extractable Ionic Content, ppm:		
Chloride (Cl-)		<20
Sodium (Na+)		<10
Potassium (K+)		<10

Thermal Properties

Thermal Conductivity , W/(m-K):	
Cured @ 200ºC (Standard Cure)	30
Cured @ 175ºC (Alternate Cure)	20

Electrical Properties

Volume Resistivity, ohm-cm	4×10^{-5}

Adhesion Properties

Die Shear Strength, kg-f:	
2 x 2 mm Ag BSM die:	
On Ag LF:	
@ RT	10
@ 260ºC	2.8
On Cu LF:	
@ RT	9
@ 260ºC	2.4

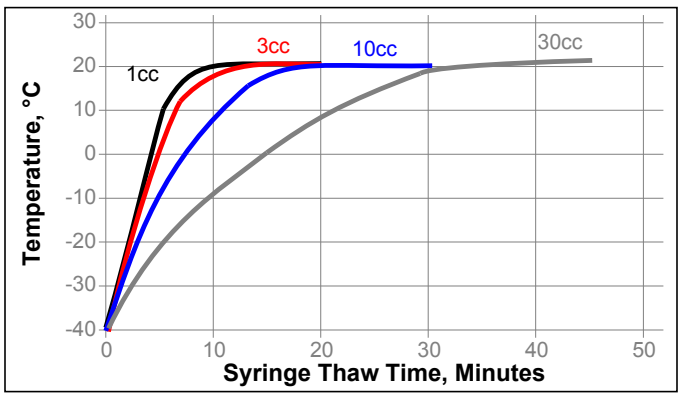
On PPF LF:	
@ RT	9.4
@ 260ºC	2.6

GENERAL INFORMATION

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

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. Refer to the Syringe Thaw time chart for the thaw time recommendation.
4. 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.
5. DO NOT re-freeze. Once thawed to -40°C, the adhesive should not be re-frozen.



Directions 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. Silver-resin separation may occur if the adhesive is left out at room temperature, 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 than the matrix style of dispense pattern.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of 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 Henkel 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
N/mm² x 145 = psi
N/mm² = MPa
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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