Technical Data Sheet

LOCTITE® ABLESTIK ABP 6395TC

September 2024

PRODUCT DESCRIPTION

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

Technology	Proprietary epoxy chemistry
Appearance	Silver
Cure	Heat cure
Product benefits	• Good adhesion on non-BSM and BSM die • Good workability and open time • One component • High reliability • High thermal & electrical conductivity • Good RBO control • Good adhesion on Ag, Cu and PPF
Application	Die attach, Electronic adhesive
Typical package application	TO, DFN, SOP, QFP and QFN, etc.

LOCTITE® ABLESTIK ABP 6395TC conductive die attach paste is designed for high reliability and high thermal conductivity requirement package applications. Due to its good adhesion, this product is suitable for bonding non-BSM (backside metallization) and BSM die from small to large die size. The product is suitable for bonding a wide variety of metal surfaces, including Ag, Cu and PPF leadframe. Comparing with LOCTITE® ABLESTIK ABP 6395T, it shows better dispense workability and resin bleeding out control on multiple metal finishes and LGA substrates.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51, 25°C, mPa.s (cP)	
Speed 5 rpm	11,500
Thixotropic index, (0.5/5 rpm)	6.0
Work life @ 25ºC, (condition), hours	24
Shelf life @ -40°C, (condition), days	365

TYPICAL CURING PERFORMANCE

Recommended cure schedule

30 minutes ramp to 200ºC + 30 minutes @ 200ºC in N2 or Air oven

Alternate cure schedule

30 minutes ramp to 175°C + 60 minutes @ 175°C in N2 or Air oven

Weight loss on cure

Weight loss on cure, %	4.9

The above cure profiles are guideline recommendations. 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, TMA, ppm/°C:	
Below Tg	48
Above Tg	115
Glass transition temperature, TMA, °C	55
Storage modulus, DMTA, MPa	
@25ºC	7,664
@150ºC	1,485
@250ºC	1,210
Extractable ionic content, ppm	
Sodium (Na+)	<10
Potassium (K+)	<10
Chloride (Cl-)	<10
Thermal conductivity, W/(m-k)	30
Moisture absorption, @ Saturation, wt. %, @ 85ºC/85% RH	0.15

Electrical properties

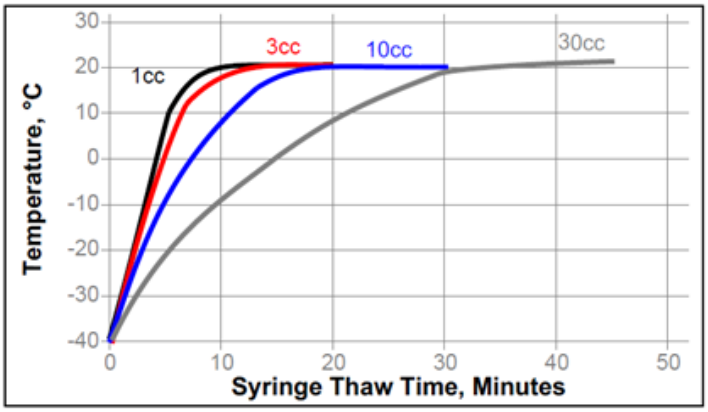
Volume resistivity, ohm-cm	2.4×10^{-5}

Adhesion properties

Die shear strength	
2x2mm Bare Si die on Ag LF, kg/f	
@RT	12.0
@260ºC	2.4
Die shear strength	
2x2mm Ag BSM die on Cu LF, kg/f	
@RT	9.0
@260ºC	2.6
Die shear strength	
2x2mm Ag BSM die on PPF LF, kg/f	
@RT	10.2
@260°C	2.5

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: -40ºC. Storage below -40°C or above -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 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

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