Technical Data Sheet

LOCTITE ABLESTIK 2025DSI

April 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 2025DSI provides the following product characteristics:

Technology	Proprietary Hybrid Chemistry
Appearance	red
Cure	Heat cure
Product Benefits	• Non-conductive • High reliability • Improved work life
Application	Die attach
Filler Type	Silica
Substrates	Flex and Laminate

LOCTITE ABLESTIK 2025DSI die attach adhesive is designed for use in array packaging.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (0.5/5 rpm)	5.0
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):	
Speed 5 rpm	11,500
Work Life @ 25ºC, hours:	
10 cc syringes	24
30 cc syringes	20
Shelf Life @ -40°C (from date of manufacture), days	365

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minute ramp to 175°C + 15 minutes @ 175°C

Weight Loss on Cure

10 x 10 mm Si die on glass slide, %	3.0

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 ppm/°C:	
Below Tg, ppm/°C	55
Above Tg, ppm/°C	145
Glass Transition Temperature (Tg) by TMA, °C	-34
Thermal Conductivity, W/(m-K)	0.4
Weight Loss, %	
@ 200 °C	1.7
@ 300 °C	3.4

Tensile Modulus, DMTA :		
@ -65 °C	N/mm²	4,760
	(psi)	(690,000)
@ 25 °C	N/mm²	260
	(psi)	(38,000)
@ 100 °C	N/mm²	35
	(psi)	(5,100)
@ 150 °C	N/mm²	25
	(psi)	(3,600)
@ 200 °C	N/mm²	45
	(psi)	(6,500)
@ 250 °C	N/mm²	105
	(psi)	(15,230)

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Die Shear Strength :	
2 x 2 mm Si die on Ag/Cu leadframe, kg-f @ 25°C	10.0

Die Shear Strength vs Temperature, kg-f:

3 X 3 mm,Si die, kg-f,

Substrate	@25°C	@200°C	@250°C
Ag/Cu	19	7	4

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. 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 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. 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.
5. Alternate dispense amounts may be used depending on the application requirements.
6. 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 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.

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
psi x 145 = N/mm²
MPa = N/mm²
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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Note:
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