Technical Data Sheet

LOCTITE ABLESTIK ATB 125

January 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK ATB 125 provides the following product characteristics:

Technology	Rubberized Epoxy
Appearance	Transparent
Cure	Heat cure
Product Benefits	• Excellent wettability • Easy die pick up • Excellent package reliability
Application	Die attach
Filler Type	Silica
Typical Package Application	Die to die stack
Carrier Type	Polyolefin
Adhesive Thicknessµm	25µm
Carrier Film Thicknessµm	85µm

LOCTITE ABLESTIK ATB 125 adhesive film is formulated for use in wafer lamination processess. It combines process ease with the proven reliability of a hybrid chemistry-based die attach material.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, days	60
Shelf Life @ 0 to 5°C (from date of manufacture), days	270

TYPICAL PROCESS DATA

Wafer Backside Lamination

Temperature, °C	70
Pressure, psi	30
Taping Duration, ft/ minute	1

Chip Attach

Temperature, °C	100 to 120
Pressure, kg-f	0.5 to 2
Attach Duration, second	1

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minute ramp to 130°C + 1 hour @ 130°C

Alternate Cure Schedule

30 minute ramp to 100°C; 30 minutes @ 100°C + 30 minute ramp from 100°C to 125°C; 30 minutes @ 125°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

Coefficient of Thermal Expansion, :		
Below Tg, ppm/°C		46
Above Tg, ppm/°C		139
Glass Transition Temperature (Tg) by TMA, °C		90
Tensile Modulus, DMTA :		
@ -65 °C	N/mm² (psi)	3,170 (459,480)
@ 25 °C	N/mm² (psi)	1,170 (169,110)
@ 150 °C	N/mm² (psi)	12.5 (1,810)
@ 200 °C	N/mm² (psi)	7.3 (1,060)
@ 250 °C	N/mm² (psi)	8.6 (1,250)
Extractable Ionic Content, :		
Chloride (Cl-)		10
Sodium (Na+)		8
Potassium (K+)		2
*Alpha Particle Count		<0.02
*Testing performed at third party lab in May 2009.		
Weight Loss @ 300ºC, %		1
Moisture Absorption @ Saturation, after 85ºC/85% RH exposure, wt %		1.5

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Die Shear Strength :	
2.5 X 2.5 mm Si die frontside, kg-f :	
@ 25°C	15
@ 260°C	2

GENERAL INFORMATION

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

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.

DIRECTIONS FOR USE

1. Ensure all surfaces to be bonded are free from surface contamination.
2. Adhesive must be completely used within the product's recommended work life.
3. Remove the tape reel from the moisture-resistant package and load into the tape application machine.
4. Store unused adhesive film in the original sealed moisture-resistant package until needed.

STORAGE:
These adhesive film should be stored at 0 to 5ºC, in its original moisture resistant packaging. Partially used reels should be stored under dry conditions at 0 to 5ºC.

To minimize moisture absorption, we recommend storing the adhesive film in the sealed moisture-resistant package until needed.

Optimal Storage: 0°C to 5°C. Storage below 0°C or greater than 5 °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/F
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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Reference 0.3