Technical Data Sheet

LOCTITE ABLESTIK ATB 110U

May 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK ATB 110U provides the following product characteristics:

Technology	Rubberized Epoxy
Appearance	Transparent
Cure	Heat cure
Product Benefits	• Non-conductive • Fast cure • Thin bondline • Excellent gap filling ability • Excellent MSL 260ºC performance
Application	Die attach
Filler Type	Silica
Typical Package Application	Die to die stack
Carrier Type	Polyolefin
Adhesive Thicknessµm	10µm
Carrier Film Thicknessµm	85µm
Wafer Size in	8 and 12 in
pH	3.5

LOCTITE ABLESTIK ATB 110U adhesive film is formulated for use in wafer lamination processess. It combines process ease with the proven reliability.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, month	1
Shelf Life @ 5°C (from date of manufacture), days	274

TYPICAL PROCESS DATA

Wafer Backside Lamination

Temperature, °C	65 to 70
Pressure, psi	40
Taping Duration, ft/ minute	1

Chip Attach

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

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minute ramp to 120°C + 30 minutes @ 120°C

Alternate Cure Schedule

30 minute ramp to 90°C + 30 minutes @ 90°C +
30 minute ramp to 120°C + 30 minutes @ 120°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		62
Above Tg, ppm/°C		238
Glass Transition Temperature (Tg) by TMA, °C		75
Thermal Conductivity , W/(m-K)		0.21
Tensile Modulus, DMTA :		
@ -65 °C	N/mm² (psi)	2,330 (337,940)
@ 25 °C	N/mm² (psi)	875 (126,880)
@ 100 °C	N/mm² (psi)	40 (5,360)
@ 150 °C	N/mm² (psi)	3.0 (385)
@ 200 °C	N/mm² (psi)	1.0 (175)
@ 250 °C	N/mm² (psi)	2.0 (230)
Extractable Ionic Content, ppm:		
Chloride (Cl-)		<10
Fluoride (F-)		<10
Sodium (Na+)		<10
Potassium (K+)		<10
Weight Loss @ 300ºC, %		<1
Moisture Absorption @ Saturation, wt.% 85°C/85°RH		@ 1.5

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

Die Shear Strength, 2.5 X 2.5 mm Si die frontside, kg-f :	
@ 25ºC	40
@ 260ºC	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 5ºC, in its original moisture resistant packaging. Partially used reels should be stored under dry conditions at 5ºC.

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

Optimal Storage: 5°C. Storage below 5°C or greater than minus 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
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