

LOCTITE ABLESTIK ATB F125E

March 2017

PRODUCT DESCRIPTION

LOCTITE ABLESTIK ATB F125E provides the following product characteristics:

Technology	Epoxy Film
Appearance	White
Cure	Ultraviolet (UV) light or Heat cure
Product Benefits	<ul style="list-style-type: none"> • Excellent workability • High reliability • Ideal modulus for wide range of package sizes • Meets thin wafer requirements • Recommended for small die size packages • Consistent dicing and die pickup for small die applications • Long work life, up to 4 months
Adhesive Thickness	25
Application	Die attach
Typical Package Application	Discrete, IC and Chip stack packages

LOCTITE ABLESTIK ATB F125E adhesive film is formulated for use in wafer lamination processes or as a preform decal.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, days:	
Before lamination, days	30
After lamination to die attach, days	90
Shelf Life @ 5°C (from date of manufacture), days	365
Flash Point - See SDS	

TYPICAL UV IRRADIATION

UV Light	
UV Wavelength, nm (UVA)	365
UVA Dosage, mJ/cm ²	50 to 100

TYPICAL CURING PERFORMANCE

Cure Schedule	
1 hour @ 130°C	

The above cure profile is a guideline recommendation. 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, , TMA:	
Below Tg, ppm/°C	37
Above Tg, ppm/°C	83
Glass Transition Temperature (Tg) by DMTA, °C 215	
Tensile Modulus, DMTA :	
@ -65 °C	N/mm ² 9,755 (psi) (1,414,843)
@ 25 °C	N/mm ² 5,256 (psi) (762,318)
@ 150 °C	N/mm ² 1,092 (psi) (158,381)
@ 200 °C	N/mm ² 368 (psi) (53,373)
@ 250 °C	N/mm ² 185 (psi) (26,831)
Extractable Ionic Content, :	
Chloride (Cl-)	19
Sodium (Na+)	2
Potassium (K+)	1
Weight Loss @ 200°C, TGA, wt %	0.27
Moisture Absorption, wt%	0.78

TYPICAL PERFORMANCE OF CURED MATERIAL

Die Shear Strength:	
2.5 X 2.5 mm (100 x 100 mil), Si die on BT substrate:	
@ 260°C, kg-f/die	3.1

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. The reels should remain in the moisture-resistant package until they are fully thawed to room temperature, to avoid moisture absorption.
3. Adhesive must be completely used within the product's recommended work life.
4. Remove the tape reel from the moisture-resistant package and load into the tape application machine.
5. Store unused adhesive film in the original sealed moisture-resistant package until needed.

STORAGE:

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb/F}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{psi} \times 145 = \text{N/mm}^2$

$\text{MPa} = \text{N/mm}^2$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

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Reference 0.3