

LOCTITE® ABLESTIK ATB 125GR2

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PRODUCT DESCRIPTION

LOCTITE® ABLESTIK ATB 125GR2 provides the following product characteristics:

Technology	Epoxy film
Appearance	White yellow
Cure	Heat cure
Product benefits	<ul style="list-style-type: none"> • Excellent workability • Excellent adhesion on both metal lead frames and BGAs • High reliability • High modulus • Meets thin wafer requirements • Recommended for small to medium die size packages • Consistent dicing and die pickup for small to medium die applications
Application	Semiconductor film; Non-conductive die attach film
Carrier type	6140 D/T
Carrier thickness, µm	110
Adhesive thickness, µm	25
Wafer size, in	8 and 12
Typical package application	IC, Discrete, Chip stack packages

LOCTITE® ABLESTIK ATB 125GR2 adhesive film is formulated for use in wafer lamination processes or as a preform decal. This adhesive is suitable for use on small to medium size die sizes.

LOCTITE® ABLESTIK ATB 125GR2 has an integrated dicing tape designed for consistent die pickup.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Weight loss @ 150°C, TGA, %	0.53
Work life @ 25°C, days	
Before lamination	30
After lamination	30
TOTAL WORK LIFE	60
Shelf life @ 5°C, (from date of manufacture), days	365

TYPICAL CURING PERFORMANCE

Cure schedule

1 hour @ 175°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, TMA, ppm/°C:

Below Tg	36
Above Tg	140

Glass transition temperature, (Tg), °C

Tg 1	82
Tg 2	306

Tensile Modulus, DMTA, N/mm²

@-65°C	5,385
@25°C	3,205
@150°C	281
@200°C	177
@250°C	127

Extractable ionic content, ppm

Chloride (Cl ⁻)	0.6
Sodium (Na ⁺)	0.2
Potassium (K ⁺)	0
Moisture absorption, wt.%	1.53

Adhesion properties

Die shear strength

3 x 3 mm Si die @ 260°C, kg-f/die:

On Cu LF	13.2
On Ag LF	8.6
On PPF	8.5
On BT substrate	4.9

GENERAL INFORMATION

Please consult the Safety Data Sheet (SDS) for safe handling information of 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

This adhesive film should be stored at 5°C, in its original moisture resistant packaging. Partially used reels should be stored under dry conditions at 5°C.

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

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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

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