

# LOCTITE<sup>®</sup> ABLESTIK ATB 125GR

March 2022

## PRODUCT DESCRIPTION

LOCTITE<sup>®</sup> ABLESTIK ATB 125GR provides the following product characteristics:

|                                       |                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Technology</b>                     | Epoxy Hybrid Film                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Appearance</b>                     | White yellow                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Cure</b>                           | Heat cure                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Product Benefits</b>               | <ul style="list-style-type: none"> <li>• Excellent workability</li> <li>• Excellent adhesion on both metal lead frames and BGAs</li> <li>• High reliability</li> <li>• High modulus</li> <li>• Meets thin wafer requirements</li> <li>• Recommended for small to medium die size packages</li> <li>• Consistent dicing and die pickup for small to medium die applications</li> </ul> |
| <b>Application</b>                    | Semiconductor Films, Non Conductive Film Die Attach                                                                                                                                                                                                                                                                                                                                   |
| <b>Typical Package Application(s)</b> | IC, Discrete, Chip stack packages                                                                                                                                                                                                                                                                                                                                                     |
| <b>Carrier Type</b>                   | Non-UV PSA dicing tape                                                                                                                                                                                                                                                                                                                                                                |
| <b>Adhesive Thickness</b>             | 25 µm                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Wafer Size</b>                     | 8 and 12 inches                                                                                                                                                                                                                                                                                                                                                                       |

LOCTITE<sup>®</sup> ABLESTIK ATB 125GR 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<sup>®</sup> ABLESTIK ATB 125GR 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   |

## TYPICAL CURING PERFORMANCE

### Cure Schedule

1 hour @ 175°C

The above cure profile(s) are guideline recommendation(s). These conditions (time and temperature) may vary based on customers' experience and specific 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                          | 36    |
| Above Tg, ppm/°C                          | 140   |
| Glass Transition Temperature(Tg), °C:     |       |
| Tg 1                                      | 82    |
| Tg 2                                      | 306   |
| Tensile Modulus, DMA, N/mm <sup>2</sup> : |       |
| @ -65°C                                   | 5,385 |
| @ 25°C                                    | 3,205 |
| @ 150°C                                   | 281   |
| @ 200°C                                   | 177   |
| @ 250°C                                   | 127   |
| Extractable Ionic Content, :              |       |
| Chloride (Cl-)                            | 0.6   |
| Sodium (Na+)                              | 0.2   |
| Potassium (K+)                            | 0     |
| Moisture Absorption, wt. %                | 1.53  |

### Adhesion Properties

|                                    |      |
|------------------------------------|------|
| Die Shear Strength, after PMC:     |      |
| 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

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

**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 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.

**Optimal Storage : 5 °C**

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**

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

**Not for product specifications**

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

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**Reference 2**