

# LOCTITE ABLESTIK 561

April 2014

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK 561 provides the following product characteristics:

|                          |                                                                                                              |
|--------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Technology</b>        | Epoxy Film                                                                                                   |
| <b>Appearance</b>        | Amber                                                                                                        |
| <b>Cure</b>              | Heat cure                                                                                                    |
| <b>Product Benefits</b>  | <ul style="list-style-type: none"> <li>Thermally conductive</li> <li>Flexible</li> <li>Reworkable</li> </ul> |
| <b>Application</b>       | Assembly                                                                                                     |
| <b>Carrier Type</b>      | Glass fabric                                                                                                 |
| <b>Carrier Thickness</b> | 1 mil                                                                                                        |

LOCTITE ABLESTIK 561 is designed for bonding materials with mismatched coefficients of thermal expansion. In many bonding applications, components may be repaired. Component joined with LOCTITE ABLESTIK 561 adhesive can be debonded by heating the assembly to 150°C and sliding a thin blade, such as a razor blade, between the bonded surfaces. This adhesive is also available in a low temperature cure version.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

|                                                           |     |
|-----------------------------------------------------------|-----|
| Work Life @ 25°C, (25% increase in viscosity), days       | 90  |
| Shelf Life (from date of qualification in original seal): |     |
| @ 25°C, days                                              | 91  |
| @ -40°C, days                                             | 365 |
| Flash Point - See SDS                                     |     |

## TYPICAL CURING PERFORMANCE

### Cure Schedule

30 minutes @ 150°C

### Alternate Cure Schedule

2 hours @ 125°C

### Percent Volatiles

10 x 10cm sample @ 120°C for 30 minutes, % 0.16

Curing film adhesives under pressure to ensure proper wetting of the adherend surfaces is recommended. Pressure requirements will vary from (2 to 200 psi) depending on the severity of the adherends warpage and the stiffness of the adherends. Temperatures are recommended are at the bondline.

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties

|                                                               |      |
|---------------------------------------------------------------|------|
| Weight Loss @ 300°C, %                                        | 0.71 |
| Coefficient of Thermal Expansion, TMA expansion mode, ppm/°C: |      |
| Below Tg                                                      | 85   |
| Above Tg                                                      | 300  |
| Glass Transition Temperature, TMA penetration mode, °C        | 50   |
| Thermal Conductivity @ 121°C, W/(m-K)                         | 0.3  |

## Electrical Properties

|                                                      |                    |
|------------------------------------------------------|--------------------|
| Volume Resistivity, ohms-cm                          | 5×10 <sup>12</sup> |
| Dielectric Strength, volts/mil                       | 1,000              |
| Dielectric Constant / Dissipation Factor:<br>@ 1 KHz | 7.0/0.17           |

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Lap Shear Strength :

|                 |                   |         |
|-----------------|-------------------|---------|
| Al to Al @ 25°C | N/mm <sup>2</sup> | 11.03   |
|                 | (psi)             | (1,600) |
| Au to Au @ 25°C | N/mm <sup>2</sup> | 11.03   |
|                 | (psi)             | (1,600) |

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

- Place precut adhesive film between clean surfaces to be bonded.
- Assemble components.
- Apply spring loaded clamp or dead weight to provide continuous pressure of at least 2 to 10 psi during cure cycle.
- Place assembly in a preheated oven and cure at the recommended cure schedule.

## AVAILABILITY

- LOCTITE ABLESTIK 561 adhesive film is available in sheet stock or die cut preforms dimensioned to customer drawings.
- LOCTITE ABLESTIK 561 adhesive can be die cut to customer specifications.
- Tolerances are as close as 0.005 inch in length or width and 0.001 inch in thickness.

## 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.

## STORAGE:

LOCTITE ABLESTIK film products can be stored at -40°C for up to one year. The shelf life of the film is only valid when the material has been stored at the specified storage conditions. Incorrect storage conditions will degrade the performance of the material in final cured properties. Avoid flexing film when frozen.

## Conversions

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

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

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

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

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

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

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

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

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

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

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

## Disclaimer

### Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Reference 0.1