

# LOCTITE ABLESTIK 564AK

April 2014

**PRODUCT DESCRIPTION**

LOCTITE ABLESTIK 564AK provides the following product characteristics:

<b>Technology</b>	Epoxy Film
<b>Appearance</b>	Opaque white
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>Thermally conductive</li> <li>Electrically Insulating</li> <li>High purity</li> <li>Low outgassing</li> </ul>
<b>Application</b>	Assembly
<b>Adhesive Film Thickness</b>	4 mil
<b>Carrier Type</b>	Glass fabric
<b>pH</b>	5.0
<b>Typical Package Application</b>	Substrate attach in hybrid packages

LOCTITE ABLESTIK 564AK adhesive film is designed for bonding hybrid substrates into packages.

**MIL-STD-883C**

LOCTITE ABLESTIK 564AK meets the requirements of MIL-STD-883C, Method 5011.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

Work Life @ 25°C, days	3
Shelf Life @ -40°C (from date of manufacture), days	365

**TYPICAL CURING PERFORMANCE**
**Cure Schedule**

2 hours @ 150°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:	
Below Tg, ppm/°C	29
Glass Transition Temperature (Tg) by TMA, °C	137
Thermal Conductivity @ 121°C, BTU ft <sup>-1</sup> hr <sup>-1</sup> °F <sup>-1</sup>	0.8
Extractable Ionic Content, ppm:	
Chloride (Cl <sup>-</sup> )	30
Sodium (Na <sup>+</sup> )	15
Potassium (K <sup>+</sup> )	5

Water Extract Conductivity, μmhos/cm	30
Weight Loss @ 300°C, %	0.16

**Electrical Properties:**

Volume Resistivity, ohms-cm	2.8×10 <sup>14</sup>
Dielectric Strength, volts/mil	740
Dielectric Constant @ 1KHz	4.6
Dissipation Factor @ 1KHz	0.0057

**TYPICAL PERFORMANCE OF CURED MATERIAL**

Lap Shear Strength, psi:

Substrate	@25°C
Al to Al	2100
Au to Au	1750

**GENERAL INFORMATION**

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

**THAWING:**

1. Allow container to reach room temperature before use.
2. DO NOT open the container before contents reach 25°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.
3. DO NOT re-freeze. Once thawed, the adhesive should not be re-frozen.

**DIRECTIONS FOR USE**

1. Clean all surfaces to be bonded.
2. Precut adhesive to the same size as, or slightly smaller than, the substrate.
3. Place in position in the package (header).
4. Place in a preheated oven for 5 minutes to allow removal of absorbed moisture and traces of retained solvent.
5. If no clamping pressure is used during the curing, mount the substrate either while hot or after cooling to ambient.
6. Place on a heating block at 150°C.
7. Press or scrub the substrate until an acceptable fillet is obtained.
8. Place in pre-heated oven and cure at the recommended cure schedule.

**AVAILABILITY**

1. LOCTITE ABLESTIK 564AK adhesive is available in sheet stock or die cut preforms.
2. This material may be purchased with Method 5011 certification at an additional charge.

**Storage**

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

**Optimal Storage: -40 °C. Storage below minus (-)40 °C or greater than minus (-)40 °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.

**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.

**Conversions**

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

**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