

LOCTITE ABLESTIK 566K

April 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 566K provides the following product characteristics:

Technology	Epoxy Film
Appearance	White
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none">• Extremely flexible• Low temperature cure• Thermally conductive• Electrically Insulating
Application	Assembly
Adhesive Film Thickness	4 mil and 5 mil
Carrier Type	Glass fabric
Carrier Thickness	1 mil
Typical Package Application	Heat Sinks

LOCTITE ABLESTIK 566K is designed for bonding dissimilar materials with mismatched coefficients of thermal expansion. This material is a low temperature cure version of LOCTITE ABLESTIK 561K adhesive.

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 @ 100°C

Alternate Cure Schedule

3 hours @ 90°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	85
Above Tg, ppm/°C	300
Glass Transition Temperature (Tg) by TMA, °C	93
Thermal Conductivity @ 121°C, W/(m-K)	0.8
Weight Loss @ 250°C, %	0.26

Electrical Properties

Volume Resistivity, ohms-cm	1.4×10 ¹³
Dielectric Strength volts/mil	1,050
Dielectric Constant @ 1KHz	6.1
Dissipation Factor @ 1KHz	0.022

TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength, psi:

Substrate	@25°C
Al to Al	2200

GENERAL INFORMATION

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

THAWING:

1. 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.
2. DO NOT re-freeze. Once thawed, the adhesive should not be re-frozen.

DIRECTIONS FOR USE

1. Place precut adhesive film between clean surfaces to be bonded.
2. Assemble components.
3. Apply spring loaded clamp or dead weight to provide continuous pressure of at least 2 to 10 psi during cure cycle.
4. Place assembly in a preheated oven and cure at the recommended cure schedule.
5. Adhesive must be completely used within the product's recommended work life.

AVAILABILITY

LOCTITE ABLESTIK 566K adhesive is available in sheet stock or die cut preforms. LOCTITE ABLESTIK 566K adhesive can be die cut to customer specifications. Tolerances are as close as ±0.005inch in length or width and ±0.001inch in thickness.

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

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

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Reference 0.1