

# LOCTITE ABLESTIK 563K

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## PRODUCT DESCRIPTION

LOCTITE ABLESTIK 563K provides the following product characteristics:

<b>Technology</b>	Epoxy Film
<b>Appearance</b>	beige
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Thermally conductive</li> <li>• Thin bondline</li> <li>• Uniform bondline control</li> <li>• Good heat transfer</li> </ul>
<b>Application</b>	Assembly
<b>Carrier Type</b>	None
<b>Film Thickness</b>	50microns and 75microns

LOCTITE ABLESTIK 563K adhesive film is suitable for bonding "hot" devices onto heat sinks where electrical insulation and good heat transfer are required. It exhibits low squeeze out during bonding. This product provides high strength over a wider temperature range than is normally associated with flexible films.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, months	3
Shelf Life @ 5°C, months	6
Shelf Life @ -40°C, year	1
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Cure Schedule

30 minutes @ 150°C

### Alternate Cure Schedule

2 hours @ 125°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, ppm/°C:	
Below Tg	45
Above Tg	500
Glass Transition Temperature, °C	97
Thermal Conductivity @ 121°C, W/(m-K)	1.1

## TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength :

Al to Al @ 25°C, psi 3,000

## TYPICAL ENVIRONMENTAL RESISTANCE

### Outgassing Properties

Outgassing , NASA Outgassing:

TML, %	0.44
CVCM, %	0.04
WVR, %	0.2

## GENERAL INFORMATION

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

### THAWING:

1. Allow material to reach room temperature before use.
2. DO NOT open the package before contents reach ambient temperature.
3. Any moisture that collects on the thawed package should be removed prior to opening the package.

### DIRECTIONS FOR USE

1. LOCTITE ABLESTIK 563K adhesive film is unsupported.
2. Handle carefully to avoid any stretching or flexing when frozen.
3. It may be helpful during handling to keep at least one sheet of release paper attached.
4. Preheat surface to be bonded to approximately 45°C.
5. Remove release paper from one side of the adhesive film.
6. Apply film to one of the bonding surfaces.
7. Smooth out any trapped air by gently pressing on the surface.
8. Allow device to cool to room temperature.
9. Remove the release paper from the other side of the adhesive film. Attach the remaining adherend.
10. Apply clamp to provide a continuous pressure of at least 1 psi during cure cycle.
11. Place assembly in a preheated oven and cure at the recommended cure schedule.

### 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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