

# LOCTITE ABLESTIK 3145

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## PRODUCT DESCRIPTION

LOCTITE ABLESTIK 3145 provides the following product characteristics:

<b>Technology</b>	Epoxy
Color	Black
Components	Two-component
<b>Cure</b>	Room temperature cure or Heat cure
Operating Temperature	-70 to 140 °C
Product Benefits	<ul style="list-style-type: none"> <li>Thermally conductive</li> <li>Electrically Insulating</li> <li>Medium viscosity</li> <li>High impact</li> </ul>
Mix Ratio, by weight - Resin : Hardener	100 : 5.2
<b>Application</b>	Staking compound
Typical Assembly Applications	Transistors, Diodes, Resistors, Integrated circuits, Heat sensitive components or Printed circuitry
Substrates	Metals, Silica, Steatite, Alumina sapphire, Ceramic, Glass and Plastics

LOCTITE ABLESTIK 3145 develops strong, durable, high-impact bonds at room temperature, improving heat transfer and maintaining electrical isolation.

LOCTITE ABLESTIK 3145 passes NASA outgassing standards.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Mixed Viscosity, Brookfield - RV #6, 25 °C, mPa-s (cP):

Speed 10 rpm 11,000

Specific Gravity, mixed 1.31

Pot Life, minutes:

25 grams mass 20

100 grams mass 25

Work Life, minutes:

25 grams mass 60

100 grams mass 60

## TYPICAL CURING PERFORMANCE

### Cure Schedule

24 hours @ 25°C or

4 hours @ 25°C plus 2 hours @ 65°C or

30 to 60 minutes @ 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 :

Hardness, Shore D	90
Thermal Conductivity , W/(m-K)	5.57×10 <sup>-1</sup>
Glass Transition Temperature (Tg), °C, ultimate	119
Water Absorption (24 hr immersion), %	0.001
VOC, grams/liter	2.29
Coefficient of Expansion, ppm/°C	28
Reactive solids contents, %	100

### Electrical Properties:

Volume Resistivity, ohm-cm:	
@ 25 °C	3.00×10 <sup>15</sup>
@ 75 °C	2.00×10 <sup>13</sup>

### Outgassing Properties:

Outgassing , NASA:	
2 hours @ 65°C:	
CVCM, %	0.0
TWL, %	0.64

## TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength :

Al to Al :

Cured 24 hours @ 25°C:

N/mm<sup>2</sup> 11.7

(psi) (1,700)

Cured 4 hours @ 25°C plus 2 hours @ 65°C:

N/mm<sup>2</sup> 13.1

(psi) (1,900)

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

- Apply mold release to mold walls if casting is to be removed after cure
- Carefully clean and dry all surfaces to be bonded
- Remove clamp and thoroughly mix the LOCTITE ABLESTIK 3145 epoxy adhesive system components in the handy BIPAX mixing-dispenser package until color is uniform throughout
- Pour the completely mixed epoxy system into the mold and then cure. A vacuum deairing step for 10 minutes immediately after pouring (but prior to curing) may be used to remove entrapped air for void-free castings

5. Some ingredients in this formulation provided in BIPAX, TRA-PAX and bulk packaging may crystallize when subjected to low temperature storage. A gentle warming cycle of 50°C for 30 minutes prior to mixing components may be necessary. Crystallized epoxy components do not react as well as liquid components and should be redissolved prior to use for best results

#### 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

The expiration date for pre-mixed and frozen materials is based upon dry storage conditions at or below the temperature indicated on each package.

#### Optimal Storage : 27 °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

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

#### 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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