

# LOCTITE ABLESTIK E 8502-1

April 2019

**PRODUCT DESCRIPTION**

LOCTITE ABLESTIK E 8502-1 provides the following product characteristics:

<b>Technology</b>	Modified epoxy
<b>Appearance</b>	Off-white
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"><li>• One component</li><li>• Low stress</li><li>• Thermally conductive</li><li>• Flexible for Bonding Mismatched Adherends</li></ul>
<b>Application</b>	Assembly
<b>Operating Temperature</b>	-45 to 200 °C
<b>Typical Package Application</b>	Heat sink attach and Substrate attach

LOCTITE ABLESTIK E 8502-1 is a solventless modified epoxy adhesive that combines low stress with good adhesion on nearly all surfaces and is flexible for mismatched CTE applications.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

Viscosity, Brookfield, 25 °C, mPa·s (cP):

Speed 10 rpm, # 6 40,000 to 50,000

Specific Gravity 1.15 to 1.2

Shelf Life @ -25 to -18°C, days 183

Flash Point - See SDS

**TYPICAL CURING PERFORMANCE Cure Schedule**

90 minutes @ 120°C or

60 minutes @ 150°C or

15 minutes @ 175°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 :**

Glass Transition Temperature(Tg), °C	60 to 70
Thermal Conductivity, W/(m·K)	0.6
Young's Modulus, psi, maximum:	
@ 25 °C	87,000 to 130,500
@ 50°C	29,000 to 87,000
@ 100°C	725 to 2,900
Extractable Ionic Content, :	
Chloride (Cl-)	≤200
Sodium (Na+)	≤10
Potassium (K+)	≤10
Ammonia (NH3+)	≤75
Hardness, Shore A	40 to 50
Weight Loss, %:	
Cured 2 hours at 140°C (TML)	0.93

**Electrical Properties:**

Volume Resistivity, ohm-cm @ 25°C	$4.07 \times 10^{13}$
Surface Resistivity, ohms	$1.7 \times 10^{14}$

**TYPICAL PERFORMANCE OF CURED MATERIAL****Physical Properties :**

Tensile Strength, MPa	≥3
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**GENERAL INFORMATION**

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

**THAWING:**

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.

**DIRECTIONS FOR USE**

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part

**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:**

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

**Optimal Storage : -25 to -18 °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**

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

**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 1

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