

# LOCTITE ABLESTIK 546S04

August 2018

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK 546S04 provides the following product characteristics:

<b>Technology</b>	Acrylate
<b>Color</b>	Off white liquid
<b>Color (Mixed)</b>	Cream
<b>Color (Cured)</b>	Light gray
<b>Cure</b>	Ultraviolet (UV) light followed by heat cure
<b>Product Benefits</b>	• Thixotropic
<b>Application</b>	Component assembly, NCA

LOCTITE ABLESTIK 546S04 is ideal for general optics bonding, mounting of lenses and glob top applications. This adhesive exhibits bond strength retention after 85°C/85% relative humidity exposure.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, CP52, mPa·s (cP):

@ Speed 10 rpm	11,400
Specific Gravity, cured	1.7
Pot life, days	5
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Recommended UV Cure Condition

Light Source and Condition:

Ultraviolet (UV) light:

Exposure Time, minutes	1.25
Light Intensity, mW/cm	30

### Secondary Thermal Cure

15 minutes @ 120°C

The above cure profile is a guideline recommendation. Actual cure time will vary depending on equipment used, focal distance and light intensity.

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties :

Hardness, Shore D	88
Coefficient of Thermal Expansion, ppm/°C:	
Below Tg (-30 to 0°C)	2.30×10 <sup>+01</sup>
Above Tg (100 to 150°C)	1.23×10 <sup>+02</sup>
Glass Transition Temperature (Tg) by DSC, ultimate, °C	48

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Shear Strength :

Lap Shear Strength, alum to alum, sample cured 15 minutes @ 120°C	N/mm <sup>2</sup> 9.65 (psi) (1,400)
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## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

1. Carefully clean and dry all surfaces to be bonded.
2. If packaged in BIPAX, remove clamp and thoroughly mix the LOCTITE ABLESTIK 546S04 epoxy adhesive system components in the handy BIPAX mixing-dispenser package until color is uniform throughout.
3. If pre-mixed and frozen, thaw adhesive to room temperature. A 25°C water bath is recommended.
4. Apply this completely mixed adhesive to the prepared surfaces, and gently press these surfaces together. Contact pressure is adequate for strong, reliable bonds; however, maintain contact until adhesive is completely cured.
5. Cure at recommended cure schedules.

## STORAGE:

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

### 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.

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

Contents may separate during storage. Resin or hardener in bulk containers (e.g., quarts, gallons) should be thoroughly mixed prior to combining them to obtain all the benefits of the properties designed into the formulation.

Some ingredients in this formulation provided in BIPAX, TRA-PAX and bulk packaging may crystallize when subjected

to low temperature storage. Merely returning the product back to room temperature will not always redissolve the crystals and a gentle warming cycle of 51.7°C for 30 minutes prior to mixing the resin and hardener components may be necessary to return the product to its best condition. Crystallized epoxy components do not react as well as liquid components and should be redissolved prior to use for best results

### 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