

# LOCTITE ABLESTIK ICP 8311

June 2018

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK ICP 8311 provides the following product characteristics:

|                             |                                                                                                                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Technology</b>           | Acrylate                                                                                                                                                                                                                         |
| Appearance                  | Silver                                                                                                                                                                                                                           |
| <b>Cure</b>                 | Heat cure                                                                                                                                                                                                                        |
| Product Benefits            | <ul style="list-style-type: none"> <li>● One component</li> <li>● Snap curable</li> <li>● Excellent flexibility</li> <li>● Electrically conductive</li> <li>● Sn compatible</li> <li>● High dispense and print speeds</li> </ul> |
| <b>Application</b>          | Component assembly<br>Electrically Conductive Adhesive                                                                                                                                                                           |
| Typical Package Application | Flexible interconnects in photovoltaic shingle applications                                                                                                                                                                      |

LOCTITE ABLESTIK ICP 8311 is an electrically conductive adhesive designed for applications where fast cure is required. It is ideally suited for high throughput photovoltaic dispense and print processes and applications where high adhesion strength is required. Low and stable contact resistance is achieved on substrates containing Sn during reliability testing.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

|                                                          |        |
|----------------------------------------------------------|--------|
| Viscosity@ Shear rate of 15 s <sup>-1</sup> , mPa·s (cP) | 14,600 |
| Thixotropic Index                                        | 4.2    |
| Specific Gravity, g/cc                                   | 4.4    |
| Shelf Life @ -25 to -18°C, days                          | 180    |
| Flash Point - See SDS                                    |        |

## TYPICAL CURING PERFORMANCE

## Cure Schedule

10 to 15 seconds @ 150°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

|                        |                            |                    |
|------------------------|----------------------------|--------------------|
| Storage Modulus, DMA : |                            |                    |
| @ 0°C                  | N/mm <sup>2</sup><br>(psi) | 4,500<br>(653,000) |
| @ 25°C                 | N/mm <sup>2</sup><br>(psi) | 2,600<br>(377,000) |

## Electrical Properties

Volume Resistivity, ohm-cm:  
Sample cured 15 minutes @ 150°C  $3.9 \times 10^{-04}$

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Shear Strength

|                                             |                        |
|---------------------------------------------|------------------------|
| Die Shear Strength, 2 x 2 mm die, Kg        | 11                     |
| Sample cured 35 seconds @ 150°C (Hot plate) |                        |
| Tensile Lap Shear Strength                  | N/mm <sup>2</sup> 11.4 |
| Sample cured 15 minutes @ 150°C             | (psi) (1,650)          |

## GENERAL INFORMATION

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

**THAWING:**

1. Thaw times depend on syringe size.
2. Consult handling guide for more information.

### DIRECTIONS FOR USE

**DIRECTIONS FOR USE**  
The rheology of this material makes it suitable for use in high speed needle dispense, jet and print applications.

**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. Storage below -25°C or greater than -18°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.

**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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