

LOCTITE ABLESTIK ICP 8311

June 2018

PRODUCT DESCRIPTION

LOCTITE ABLESTIK ICP 8311 provides the following product characteristics:

Technology	Acrylate
Appearance	Silver
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> • One component • Snap curable • Excellent flexibility • Electrically conductive • Sn compatible • High dispense and print speeds
Application	Component assembly 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 ⁻¹ , 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/mm² 4,500
(psi) (653,000)

@ 25°C N/mm² 2,600
(psi) (377,000)

Electrical Properties

Volume Resistivity, ohm-cm:

Sample cured 15 minutes @ 150°C 3.9×10⁻⁰⁴

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/mm² 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

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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada, Inc. the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1