



LOCTITE® ECI 1006

January 2025

PRODUCT DESCRIPTION

LOCTITE® ECI 1006 provides the following product characteristics:

Technology	Thermoplastic
Appearance	Creamy, silver paste
Product benefits	• Fine-line screen printable • Halogen free • Excellent adhesion • High conductivity
Cure	Heat cure
Application	Conductive ink
Typical assembly applications	ITO film, membrane switches, digitizers, flexible circuits and electroluminescent lamps
Key substrates	PET, PI, PEN, paper, copper, ITO, glass

LOCTITE® ECI 1006 is a halogen-free, low particle size conductive silver ink with a high viscosity. It is suitable for fine line screen printing, even below 50 µm line/spacing is possible, when using appropriate processing parameter. It also shows low contact resistance and good adhesion onto ITO films. Thanks to good thermal and chemical stability, LOCTITE® ECI 1006 is compatible with high operating temperature, has good adhesion to many substrates, and is compatible with a large range of electrically conductive adhesives or solderable with low melting Sn42Bi58 solder for component attach.

TYPICAL PROPERTIES OF UNDRIED MATERIAL

Solid content, wt %	74
Density, g/mL	2.6
Viscosity, Brookfield, CP 52, 25°C, mPa.s (cP)	
Speed 5 rpm	83,000
Thixotropic index (5/0.5 rpm)	6.5
Theoretical coverage, @ 10µm dry coating thickness, m²/kg	14
Shelf life @ 25°C, days	365
Flash point - see SDS	

TYPICAL PROPERTIES OF THE DRIED MATERIAL

Recommended drying cycle

15 minutes @ 120°C

The above drying profile is a guideline recommendation. Conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer drying equipment, oven loading and actual oven temperatures.

Physical properties

Adhesion, Cross Hatch, grade	5B
Pencil hardness, PET substrate	2H

Electrical properties

Sheet resistance, 10 minutes at 130°C, Ohm/sq/25µm	0.021
--	-------

GENERAL INFORMATION

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

Directions for use

1 Surface preparation

- No surface treatment is needed for ITO or etched ITO substrates.

2 Mixing/Dilution

- Mix thoroughly before use to ensure the entire ink volume is homogenous. A slow speed propeller may be utilized to mix until product is uniform.
- Avoid rapid stirring, as this causes air entrapment.
- Should dilution be necessary, use dibasic ester, DBE (CAS: 95481-62-2). Henkel recommends a maximum of 10 wt %. This should be accomplished by adding solvent at 0.5 wt % intervals until desired viscosity and printability is achieved.

3 Application

- LOCTITE® ECI 1006 is designed for fine line screen printing application.
- Recommended screen and printing parameters are:

Stainless steel screen, mesh/inch	400
Emulsion thickness, µm	10 to 12
Polyurethane squeegee, durometer	D90
Print speed, in/sec	7 to 10
Snap-off distance, mils	50 to 80



Clean up

The screen and equipment can be cleaned with dilution solvent, or esters (butylacetate, propylacetate, or ethylacetate), or ketones (MEK, Acetone), or similar solvents.

Storage

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

Optimal storage: 18 to 25°C

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 Henkel representative.

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 the specifications of this product.

Conversions

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

Disclaimer

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, or Henkel Canada Corporation, 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 3