

# LOCTITE<sup>®</sup> ECI 1016 E&C

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## PRODUCT DESCRIPTION

LOCTITE<sup>®</sup> ECI 1016 E&C provides the following product characteristics:

<b>Technology</b>	Thermoplastic
Appearance	Gray paste
Filler Type	Silver
Product Benefits	<ul style="list-style-type: none"> <li>• High conductivity</li> <li>• Good flexibility</li> <li>• Good adhesion</li> </ul>
Operating Temperature-Maximum	105°C
<b>Cure</b>	Hot air drying
<b>Application</b>	Inks and coatings, Electrically conductive ink
Typical Assembly Applications	RFID, printed antennas and other conductive circuits
Key Substrates	PET, paper

LOCTITE<sup>®</sup> ECI 1016 E&C is a rotary screen printable, conductive ink formulated for high throughput assembly operations. This material is also designed to provide protection against humidity and high external temperatures.

## TYPICAL PROPERTIES OF UNDRIED MATERIAL

Solids Content (box oven), %	67.6
Density, g/ml	2.6
Viscosity @ 15 s <sup>-1</sup> , Rheometer, mPa·s (cP)	1,400
Thixotropic Index (15/1.5 s <sup>-1</sup> )	2.1
Theoretical coverage, :	
@ 10 µm dry coating thickness, m <sup>2</sup> /kg	8
Shelf Life @ 2 to 8°C, days	365

## TYPICAL DRYING PERFORMANCE

### Recommended Drying Cycle

2 minutes @ 150°C in industrial hot air oven

LOCTITE<sup>®</sup> ECI 1016 E&C can be dried using forced air or infrared systems. Higher temperatures for longer time exposure will improve the performance. Care should be taken with infrared. Too much energy can destroy the coating. Design drying rates for the maximum the substrate and production speeds can tolerate.

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.

## TYPICAL PROPERTIES OF DRIED MATERIAL

### Physical Properties

Adhesion on untreated PET, Cross cut test, 5B grade

### Electrical Properties

Sheet Resistance, Ohm/sq/25 µm 0.006

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

### 1. Surface Preparation

- Clean surface thoroughly prior to application.

### 2. Mixing/Dilution

- Mix thoroughly before use to ensure ink is homogenous.
- This can be done with a propeller mixer.
- If needed, the ink can be diluted with DBE-9.

### 3. Application

- LOCTITE<sup>®</sup> ECI 1016 E&C may be applied by rotary screen printing method.
- Recommended screen and printing parameters are:  
Screen Type, Roto mesh 305-80-17%  
Others can be used. The required thickness will dictate the screen type.

## CLEAN-UP

1. The equipment can be cleaned with Ketones or DBE (dibasic ester).

## STORAGE

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

**Optimal Storage: 2 to 8°C. Storage below 2°C or above 8°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 Henkel Representative.

#### Conversions

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

#### Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

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