

LOCTITE ECI 1001 E&C

October 2014

PRODUCT DESCRIPTION

LOCTITE ECI 1001 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Silver
Operating Temperature-Maximum	100°C
Product Benefits	• Highly conductive
Filler Type	Silver
Cure	Hot air drying or infrared
Application	Conductive Ink
Application Method	Screen printing
Typical Assembly Applications	PTF circuits, membrane touch switches and Flexible circuits
Key Substrates	Heat treated PET, PEN and PI

LOCTITE ECI 1001 E&C screen printable, conductive ink is designed for use on membrane touch switch and other flex circuit applications. It offers excellent balance of flexibility, hardness and adhesion.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield , 25 °C, mPa·s (cP):	
Speed 20 rpm	14,000
Solids Content, after 1 hour @ 150°C, %	±50
Shelf Life @ 5°C, months	12
Flash Point - See SDS	

TYPICAL SCREEN PRINTING PROCESS

Recommended Dry Film Thickness	
Dry Film Thickness, µm	6 to 10
Emulsion Thickness	
Emulsion Thickness, µm	10 to 35
Recommended Screen Mesh	
Polyethylene terephthalate (PET), threads/cm	60 to 90
Recommended Squeegee	
Polyurethane, durometer	70A to 80A

TYPICAL CURING PERFORMANCE

Recommended Drying Cycle
10 minutes @ 120°C Minimum, in Convection oven

LOCTITE ECI 1001 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.

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 CURED MATERIAL

Physical Properties :

Pencil hardness, ASTM 3363	≥2H
Adhesion, ASTM D3359 Method B, grade	5B

Electrical Properties:

Sheet Resistivity, m ohms/sq/mil	<30
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GENERAL INFORMATION

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

DIRECTIONS FOR USE

Surface Preparation

1. Substrate must be clean, dry and free of dust.

Mixing/Dilution

1. Mix thoroughly before use to ensure it is homogenous.
2. Gently stir prior to each use, mixing well from the bottom of the container, avoiding excessive heat or air entrapment.
3. Ensure ink is in room temperature.
4. If needed, the ink can be diluted with up to 3 to 5% by weight maximum with Electrodag DBE (dibasic ester). The solvent should be mixed in thoroughly, including scraping the sides of the container, for over a minute until it is homogenous and streak free.

Application

1. This product is applied by standard screen printing techniques.

Cleanup

1. The equipment can be cleaned with esters (butylacetate, ethylacetate) and ketones (MIBK, MEK)..

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 : 4 to 8 °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.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{N/mm}^2 \times 145 = \text{psi}$

$\text{MPa} = \text{N/mm}^2$

$\text{MPa} \times 145 = \text{psi}$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

Disclaimer**Note:**

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Reference 0.1