

LOCTITE ECI 1010 E&C

April 2023

PRODUCT DESCRIPTION

LOCTITE ECI 1010 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Gray paste
Filler Type	Silver
Product Benefits	<ul style="list-style-type: none">• Flexible• Good adhesion• High conductivity
Operating Temperature-Maximum	100°C
Cure	Heat drying
Application	Conductive Ink
Typical Assembly Applications	Flexible printed circuits, RFID and other conductive circuits
Key Substrates	PET substrates

LOCTITE ECI 1010 E&C is a screen printable highly conductive silver ink with optimum mechanical performance.

TYPICAL PROPERTIES OF UNDRIED MATERIAL

Solids Content (TGA), %	62
Density, g/mL	2.1
Viscosity @ 1.5 s ⁻¹ , Rheometer, mPa·s (cP)	9,000
Thixotropic Index (15/1.5 s ⁻¹)	1.9
Theoretical coverage @ 10 µm dry film thickness, 10.6 m ² /kg	
Shelf Life @ 2 to 8°C (from date of manufacture), 365 days	
Flash Point - See SDS	

TYPICAL DRYING PERFORMANCE

Recommended Drying Cycle

15minutes @ 120°C

LOCTITE ECI 1010 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 PET, Cross Hatch, ASTM D3359, grade 5B

Electrical Properties

Sheet Resistance, Ohm/sq/25µm 0.007

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 it is homogenous. A slow speed propeller may be utilized to mix until product is uniform.
- Should dilution be necessary use Butyl glycol acetate (CAS: 112-07-2). Henkel recommends a maximum of 10 wt%. This should be accomplished by adding solvent at 0.5 wt% intervals by weight until desired viscosity and printability is achieved.

3. Application

- LOCTITE ECI 1010 E&C may be applied by screen printing method.
- Recommended screen and printing parameters are:

Screen Type	Polyester screen
Screen mesh, mesh/cm	68 to 90
Emulsion Thickness, µm	10 to 40
Squeegee Hardness	70 to 80

CLEAN-UP

1. 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: 2 to 8°C. Storage below 0°C or above 30°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.

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.

Conversions

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

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

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

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

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

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

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

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

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

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

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

Disclaimer

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