

LOCTITE ECI 7007 E&C

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PRODUCT DESCRIPTION

LOCTITE ECI 7007 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Black liquid
Filler Type	Carbon
Cure	Hot air drying
Application	Electronic Adhesives & Solder, Inks and coatings
Product Benefits	<ul style="list-style-type: none"> • Excellent conductivity • High speed printable • Fast drying
Application Method	flexographic, rotogravure
Typical Assembly Applications	Conductive circuits
Operating Temperature-Maximum	100°C
Key Substrates	PET, Paper substrates, Polyethylene and Polypropylene (corona or plasma treatment needed for the latter two)

LOCTITE ECI 7007 E&C conductive, printable carbon ink is designed for use in high speed printing techniques.

LOCTITE ECI 7007 E&C passes cytotoxicity testing according to ISO 10993-5:2009.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, 1.5 hours box oven @ 120°C, wt %	30.8
Viscosity, Brookfield, mPa·s (cP):	
Spindle 2, speed 20 rpm	1,300
Density, kg/m ³	1,070
Theoretical coverage, m ² /kg:	
@ 10µm dry coating thickness	16
Shelf Life, from date of qualification in original seal, days	365

TYPICAL DRYING CYCLE

Recommended Drying Cycle

LOCTITE ECI 7007 E&C dries at room temperature. Drying time, temperature and speed can be adapted to the process. Maximum drying temperature is 100°C.

LOCTITE ECI 7007 E&C can be dried with forced air or infrared systems. Higher temperatures for longer time will

improve the performance. However, 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 CURED MATERIAL

Physical Properties

Adhesion on PET, Melinex O 5B

Electrical Properties

Sheet Resistance after 15 minutes in air, ohm/sq/ 25µm 10

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Surface Preparation

- Thoroughly clean the surface prior to application of ink.

2. Mixing/Dilution

- Mix thoroughly before use to ensure ink is homogenous.
- This can be done with a propeller mixer.
- For high speed printing the ink should be diluted with 30 to 40 wt% n-propyl acetate to a viscosity in the range of 20 to 30 seconds (DIN CUP 4).

3. Application

- LOCTITE ECI 7007 E&C can be applied by flexography and rotogravure.
- The anilox volume line count will dictate the obtained resistance.
- Good results have been obtained with a 15 ml/m² GTT anilox with 160 Lines/cm.

CLEAN-UP

The equipment can be cleaned with acetates (butylacetate, ethylacetate) or ketones (MIBK, MEK).

Storage

Store product in the unopened container in a cool dry well ventilated area. Storage information may be indicated on the product container labeling.

Optimal Storage: 20°C. Storage below 5°C or greater than 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 quality department for assistance and recommendations on specifications for this product.

Conversions

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

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