



# LOCTITE® ECI 7007

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**PRODUCT DESCRIPTION**

LOCTITE® ECI 7007 provides the following product characteristics:

|                               |                                                                                                                               |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Technology                    | Thermoplastic                                                                                                                 |
| Appearance                    | Black liquid                                                                                                                  |
| Filler type                   | Carbon                                                                                                                        |
| Product benefits              | <ul style="list-style-type: none"><li>• Excellent conductivity</li><li>• High speed printable</li><li>• Fast drying</li></ul> |
| Operating temperature, °C     | max 100                                                                                                                       |
| Cure                          | Hot air drying                                                                                                                |
| Application                   | Electronic adhesives & solder, Inks and coatings                                                                              |
| Application method            | flexographic, rotogravure                                                                                                     |
| Typical assembly applications | Conductive circuits                                                                                                           |
| Key substrates                | PET, Paper substrates, Polyethylene and Polypropylene (corona or plasma treatment needed for the latter two)                  |

LOCTITE® ECI 7007 is a highly conductive carbon ink with low viscosity and fast drying solvent suitable for high speed rotogravure and flexographic printing. LOCTITE® ECI 7007 passes cytotoxicity testing according to ISO 10993-5:2009.

**TYPICAL PROPERTIES OF UNDRIED MATERIAL**

|                                                                             |       |
|-----------------------------------------------------------------------------|-------|
| Density, g/cm <sup>3</sup>                                                  | 1.07  |
| Viscosity, Brookfield RVT, @ 20°C, after 15 min, mPa.s (cP)<br>Speed 20 rpm | 1,000 |
| Solid content, (wt%)                                                        | 30    |
| Theoretical coverage, m <sup>2</sup> /kg<br>@ 10 µm dry coating thickness   | 16    |
| Shelf life from date of qualification in original seal, days                | 365   |

**TYPICAL DRYING PERFORMANCE**

**Recommended drying cycle**  
2 minutes, 60°C

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

LOCTITE® ECI 7007 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 THE DRIED MATERIAL**

**Physical properties**

Adhesion on PET, Melinex O 5B

**Electrical properties**

Sheet resistance, 4-point probe, Ohm/sq/25µm  
15 minutes @ room temperature 10

**GENERAL INFORMATION**

Please consult the Safety Data Sheet (SDS) for safe handling information of this product.

**DIRECTIONS FOR USE**

**1. Surface preparation**

- Clean surface thoroughly prior to application.

**2. Mixing/Dilution**

- Mix thoroughly before use to ensure the entire ink volume 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 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/m<sup>2</sup> GTT anilox with 160 Lines/cm.



## Clean up

The equipment can be cleaned with esters (propylacetate, or ethylacetate), or ketones (MEK, Acetone), or similar solvents.

## 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 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 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

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

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