LOCTITE

Technical Data Sheet

LOCTITE ECI 7001 E&C

September 2012

PRODUCT DESCRIPTION

LOCTITE ECI 7001 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Black
Product Benefits	• Good conductivity • Good screen residence time • Non-critical, flexible low temperature drying cycles • Compatible for use with polyimide and polyester film • Applicable with manual, semi-automatic or high speed reel-to-reel screen printing equipment
Cure	Heat cure
Application	Conductive Ink
Typical Assembly Applications	Current collectors in printed batteries

LOCTITE ECI 7001 E&C conductive, screen printable ink consists of very finely divided graphite particles dispersed in a thermoplastic resin. It is specifically designed for use in the production of printable batteries applied on flexible substrates.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content (+/- 5%), %	38.5
Density, g/cc	1.14
Viscosity, Brookfield , 25 °C, mPa·s (cP):	
Speed 20 rpm	20,000
Shelf Life @ 5°C (from date of manufacture), year	1
Flash Point - See MSDS	

TYPICAL SCREEN PRINTING PROCESS

Printing Equipment Type

Manual
Semi-automatic
High speed reel-to-reel

Applied Dry Coating Thickness

Applied Dry Coating Thickness, µm	30 to 35

Emulsion Thickness

Emulsion Thickness , µm	20 to 40

Recommended Screen Type

Monofilament polyester, threads/cm	12 to 21

Recommended Squeegee

Polyurethane , durometer	60 to 75

TYPICAL CURING PERFORMANCE

Recommended Drying Cycle

10 minutes @ 120°C

LOCTITE ECI 7001 E&C can be dried immediately after printing at 10 minutes @ 120°C. Alternative cycles are also possible.

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

Coverage @ 10 µm thickness, m² /kg	22

Electrical Properties

Sheet Resistivity @ 25 µm polyester film, ohms/sq	<10

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Adhesion Strength, ASTM-3559B:	
On polyester film,	>4B

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. LOCTITE ECI 7001 E&C is supplied ready for use and does not require dilution.
2. Stir LOCTITE ECI 7001 E&C prior to each use.
3. Avoid rapid stirring as this causes air entrapment.
4. Should thinning become necessary, dilute 1 to 3% by weight with Butylglycolacetate.

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.

Clean-up

1. The equipment can be cleaned with MEK, MIBK, Acetone or similar solvents.

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

Optimal Storage : 5 °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
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Note
The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation and its affiliates ("Henkel") specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel products. Henkel specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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Reference 0.0