Technical Data Sheet

LOCTITE ECI 5004 E&C

June 2020

PRODUCT DESCRIPTION

LOCTITE ECI 5004 E&C provides the following product characteristics:

Technology	Vinylic
Appearance	Gray paste
Filler Type	Silver
Product Benefits	• Conductive • Good adhesion • Small particle size
Cure	Hot air drying
Application	Conductive Ink
Typical Assembly Applications	Printed circuitry, RFID and other conductive circuitry
Key Substrates	PET substrates

LOCTITE ECI 5004 E&C is a screen printable, conductive ink .

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, TGA, %	76
Density, g/ml	3
Particle Size, Malvern Mastersizer 3000, µm	<3
Thixotropic Index	1.6
Viscosity, Brookfield - Cone & Plate, mPa·s (cP): Speed 30 rpm	2,000
Theoretical coverage @ 10µm, m² /kg	8.3
Shelf Life @ 20°C (from date of shipment) (estimated), days	365
Flash Point - See SDS	

TYPICAL DRYING CYCLE

Recommended Drying Cycle

10 minutes @ 150°C

LOCTITE ECI 5004 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 CURED MATERIAL

Physical Properties

Adhesion, grade	5B

Electrical Properties

Electrical Resistance per 25 µm, Ohm/sq	<0.005

GENERAL INFORMATION

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

DIRECTIONS FOR USE

Surface Preparation

1. Clean surface thoroughly prior to application.

Mixing/Dilution

1. Mix thoroughly before use to ensure it is homogenous. A slow speed propeller may be utilized to mix until product is uniform.
2. If needed, the ink can be diluted with EDAG DIL 5 E&C. 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 Details

Emulsion Thickness	Solvent resistant emulsion , 10 to 40 µm
Squeegee	Shore Hardness 70 to 90.
Screen Type	Polyester, 200 to 300 mesh

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

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

STORAGE:

Store product in the unopened container in a dry location. 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 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/F
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Disclaimer

Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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Reference 0.1