Technical Data Sheet

LOCTITE ECI 1216 E&C

August 2023

PRODUCT DESCRIPTION

LOCTITE ECI 1216 E&C provides the following product characteristics:

Technology	Solvent based ink
Appearance	Silver liquid
Filler Type	Silver
Product Benefits	• High conductivity • Excellent adhesion • Suitable for pad printing • Low temperature drying
Cure	Heat dry
Application	Inks and coatings, Electrically conductive ink
Typical Application(s)	Pad printable circuit
Key Substrates	PA+Fiber, PC, PBT, PPS, Ceramic, Anodized Aluminum

LOCTITE ECI 1216 E&C electrically conductive ink is specially designed for use in pad printable conductive pathways applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield, mPa·s (cP):	
@ 20 s^{-1}	3,000
Solids Content @ 200ºC, %	80±2

TYPICAL DRYING CYCLE

Recommended Drying Cycle

120minutes @ 90 to 95°C

LOCTITE ECI 1216 E&C is a low temperature processing material which builds up conductivity in time at 80 to 120ºC. Higher drying temperature will give better conductivity and abrasion resistance on the substrate.

LOCTITE ECI 1216 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 cure profile is a guideline recommendation. These cure conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Adhesion on PA substrates, Cross Hatch, grade 5B

Electrical Properties

Electrical Conductivity, after 120 mins @ 90ºC, ohm-cm <2×10^{-5}

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. **Surface Preparation**
   - Keep surface clean before use to avoid possible contamination.
2. **Mixing/Dilution**
   - Stir to ensure homogeneity before use.
   - Avoid rapid stirring, as this causes air entrapment.
3. **Cleanup**
   - The equipment can be cleaned with ethanol.

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 above -20°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

(°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
N/mm² x 145 = psi
N/mm² = MPa
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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