

CP-007

General Purpose High Performance Copper Paste

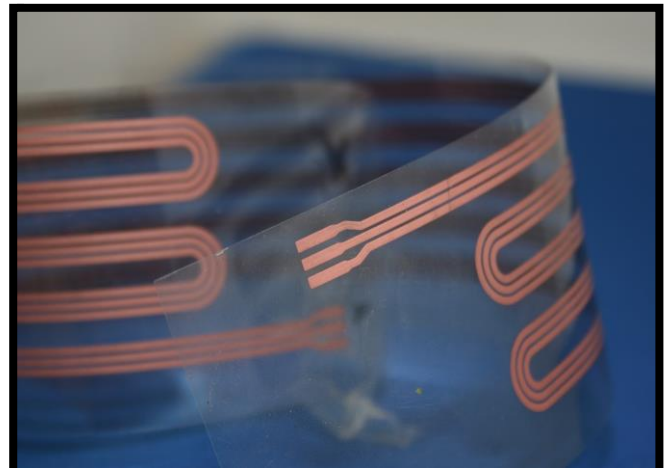
A nanocopper-based paste for printed electronics

Product Overview

CP-007 is a screen printable copper paste suitable for fine line, high resolution printing

CP-007 is formulated to provide excellent conductivity, flexibility and adhesion at processing temperatures compatible with PET

Can be used on a variety of other substrates including ceramic, FR4, fabrics and TCO-coated glass



CP-007 printed on PET, after a reducing formic acid/argon atmosphere processed @180°C / 1 Hour

Processing

Screen Printing Equipment	Flatbed (both sheet and reel to reel)
Screen Type	Stainless steel mesh and polyester mesh
Line Thickness/Height	5µm – 50µm (depending on screen)
Line Width	75µm minimum
Ink on Screen (Printing Life)	>5 hours – (depending on printing process)
Substrates	PET, ceramic, FR4, TCO-coated glass and fabrics
Clean up solvent	Acetone, isopropanol
Diluent/Thinner	DT-002
Typical Drying Conditions	Can be dried in standard convection ovens and Vacuum ovens @ 60°C, 30 – 60 minutes, or Under IR Dryer @ 80°C, 30 minutes, or Forced air convection @ 80°C, 4 – 15 minutes
Typical Sintering Conditions	Reducing atmosphere of argon or nitrogen, with 3% formic acid vapor @ 170°C–210°C for 1 hour (convection oven), or As above @ 190°C for 30 mins (Heller belt oven)

Applications

CP-007 paste formulation is designed to be compatible with PET. The paste can also be used with a variety of other substrates common in industries such as automotive, aerospace and consumer products. Applications include:

- LED Lighting
- Microelectronics
- Membrane switches
- Sensors & Antennas

General Use, Storage and Shelf Life

The product should be kept sealed in its container and stored at room temperature (<25°C). The shelf life of unopened containers is six months from date of shipment.

Prior to use, please ensure that the paste is mixed thoroughly for a few minutes taking care to avoid introducing air into the paste.

Safety and Handling

For safety and handling information relating to the use of this product, please refer to the Safety Data Sheet (SDS).

Technical Support

Intrinsiq works closely with its customers to ensure this product is optimized for their process. For more product information or technical support, please contact us.

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Typical Compositional properties

Solids content (Weight %)	~77%
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Viscosity [Pa.S] (Bohlin CVO 100 at 50 s ⁻¹ @ 25°C)	20 – 35
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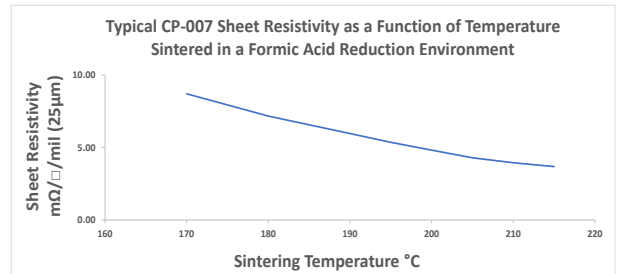
Density [g/ml]	~2.6
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Typical Electrical & Physical Properties (Sintered)

Sheet Resistance [mΩ/sq/25μm]	~7
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Adhesion (ASTM D3359)	5B
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Sintered Thickness [μm]	>5 – <50
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Results are averages of prints 10μm high on PET ST505 where adhesion is consistently 5B. (ASTM D3359)

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