

CP-008

High Copper Low Temperature Paste

A nanocopper-based paste for printed electronics

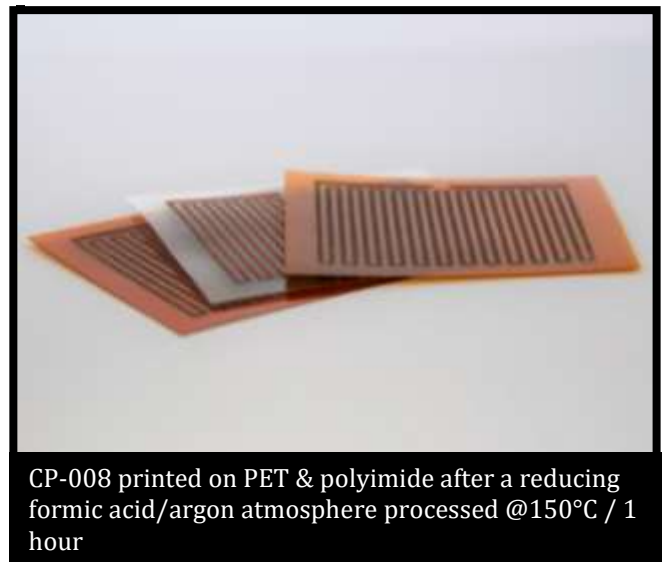
Product Overview

CP-008 is a screen printable copper paste suitable for fine line, high resolution printing

CP-008 is formulated to provide excellent conductivity and adhesion at processing temperatures as low as 140 °C

Can be used on a wide variety of substrates including PET (Melinex ST506), glass, surface treated LCP, Ultem, polyimide and silicon nitride

Processing



Printing Equipment	Screen Printing Flatbed (both sheet and reel to reel) Micro Dispense (nozzle deposition)
Screen Type	Stainless steel mesh and polyester mesh
Nozzle Type	High pressure deposition tool (e.g. nScript)
Line Thickness/Height (sintered)	15 µm – 30 µm (depending on deposition process)
Line Width	50 µm minimum (depending on deposition process)
Printing Life	>5 hours
Substrates	PET, glass, surface treated LCP, FR4 and low temperature epoxies, Ultem, polyimide, silicon nitride and ITO coated substrates
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 IR dryer @ 80°C, 30 minutes Forced air convection @ 80°C, 15–30 minutes
Typical Sintering Conditions	Formic acid reducing atmosphere @ 140°C – 260°C for 1 hour down to 15 minutes

Applications

CP-008 paste formulation is designed to allow sintering at temperatures as low as 140 deg C. The extended sintering latitude makes it compatible with a wide range of substrates from glass to low temperature epoxies and ITO coated substrates. Applications include:

- LED lighting
- Microelectronics
- Displays & Sensors

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 your local representative.

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Typical Compositional properties

Solids content
(Weight %) ~88%

Viscosity [Pa.s]
(Bohlin CVO 100 at 20 s⁻¹ @ 25°C) 20 – 40

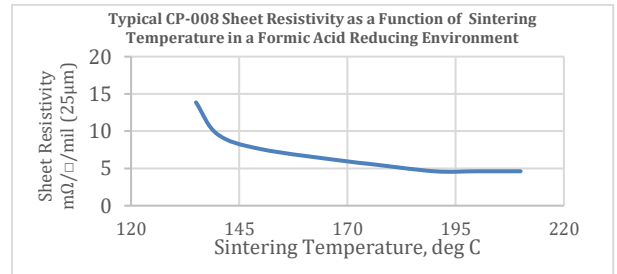
Density [g/ml] ~3.9

Typical Electrical & Physical Properties (Sintered)

Sheet Resistance
[mΩ/sq/25μm] ~6

Adhesion
(ASTM D3359) 5B

Sintered Thickness [μm] >15 – <50



Results are averages of prints 21μm high where adhesion is consistently 5B. (ASTM D3359)

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