



Copper Inks for Printed Electronics

PrintCB CI-004 Technical Data Sheet (TDS)

Two-part Copper Ink for Micro Dispensing Applications

Product Description

PrintCB CopPair is a two-part copper ink comprising a metallic mixture (*MetalX*) and active paste (*ActiveX*) ready for mixing, used for printing of circuitry and traces by means of micro-dispensing.

Product Benefits

- Excellent dispensing properties
- Sinters in air using standard curing equipment (forced-air, IR etc.)
- Fit for printing on various plastic substrates (PET, PA, PEN, Epoxy, glass etc.)
- Solder-able

- **Preparation:** for every 3.5 gr. of metal mixture add 1 gr. active paste. Mix till a uniform paste is obtained. Fill syringe and start using.
- **Pot life:** once mixed, the ink is best consumed within 1-2 days.
- **Dispensing:** use nuzzles with an inner diameter of 150 microns or larger to avoid clogging.
- **Curing process in forced-air conveyor/box oven:**
 - 5 minutes at 150°C

*curing profile is system configuration dependent and should be optimized locally

- **Average particle size:** 7 microns
- **Minimum layer thickness:** 20 microns
- **Clean-up:**
 - Cleaning of ink: mixture of 1:1 mixture of IPA and Water
 - cleaning of nuzzle: rinse in IPA



Copper Inks for Printed Electronics

Typical physical properties**

Test	Properties
Sheet resistivity	30 ± 15% mΩ/sq./mil
Resistivity after flex (360°, 5mm radius, 1 cycle)	outward/inward flex: -20%
Adhesion: Cross Hatch Tape Test (tested using 3M Scotch Tape 250)	4B
Solder-ability	Use Bismuth-Tin low temperature solder pastes

**tested on Dupont Melinex ST 504 PET film.

Composition properties:

- **Viscosity:** ~100,000cP
- **Storage:** keep sealed, in dry cool environment (refrigeration not required).