

## Product Description

Dycotec DM-CUI-5010 nanocopper ink is designed for aerosol printing with Optomec pneumatic atomiser systems. The ink is designed to be rapidly cured using Xenon flash and laser systems.

## Product Benefits

- Excellent conductivity with light based sintering
- Excellent adhesion on glass or ITO based substrates
- Compatibility with a broad range of light based sintering techniques

## Ink Preparation

Sedimentation may occur naturally over the lifetime of the product. Stir (not shake) the ink thoroughly before use to ensure the product is well mixed whilst care should be taken to avoid introducing air bubbles. Do not replace used ink in the container.

## Properties of the Uncured Ink

Test	Properties
Solids	61-66 %
Particle Size	<200 nm
Viscosity	<80 cPs at 25°C
Surface tension (mN/m)	25-27
Density	~1.83 g/cm <sup>3</sup>
Substrate compatibility	Polyimide, ITO-glass, glass

## Ink Processing Conditions

Test	Typical Properties
Sintering technique compatibility	Xenon flash lamp, laser

Following printing, inks should be dried at 60-80°C before laser/flash sintering.

## Properties of the Cured Ink

Test	Properties
Adhesion	5B
Sheet Resistivity (830 nm, Optomec)	7.0 mΩ/□/25 μm (glass) at 1 μm cured thickness

## Storage and Shelf-life

Containers should be stored as specified with lids tightly sealed. We cannot assume responsibility for an ink that has not been stored in appropriate conditions or where the ink has been contaminated following use. Extended shelf-life (>6 months) can be achieved by storing inks in a fridge at ~4°C. Allow ink to warm up to >15°C before opening.

## Cleaning

Inkjet heads can be cleaned using solvents such as iso-propanol, ethylene glycol and diethylene glycol ethyl ether

## Safety and Handling

For safe use of this product, please review relevant material safety and datasheet (MSDS).

For more information, please contact:

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All information reported in the datasheet is for experimental work undertaken in our laboratories and illustrates typical values only. Processing conditions may vary depending on customers' experience and their application requirements and manufacturing process equipment set-up.

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