

## Metalon® Conductive Inks for Printed Electronics

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### Metalon® CP-007

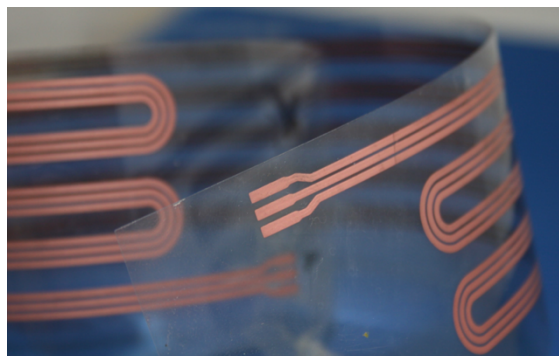
#### General Purpose High Performance Copper Paste

##### 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 around 200° C. CP-007 can be used on a variety of substrates including ceramic, FR4, fabrics and TCO-coated glass.

##### Applications

CP-007 paste formulation is designed to be compatible with FR-4. 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, and sensors & antennas.



CP-008 printed on PET & polyimide after a reducing formic acid/argon atmosphere processed @150°C / 1 hour

##### 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 to the paste.

##### Safety and Handling

For safety and handling information, please refer to the Material Safety Data Sheet (MSDS).

|  |   |
|--|---|
| <b>Typical Compositional Properties</b>                        | <b>Solids Content</b><br>(Weight %) ..... ~ 77%<br><br><b>Viscosity [Pa.S]</b><br>(Anton Paar MCR-301 at 50s <sup>-1</sup> @ 25°C) ..... 20 – 35<br><br><b>Density [g/ml]</b> ..... ~ 2.6 |
| <b>Typical Electrical &amp; Physical Properties (Sintered)</b> | <b>Sheet Resistance</b><br>[mΩ/sq/25µm] ..... ~ 7<br><br><b>Adhesion</b><br>(ASTM D3359)..... 5B<br><br><b>Sintered Thickness [µm]</b> ..... >5 – <50                                     |

**Contact us today to learn more.**

For detailed application information or additional assistance: [inktechnicalsupport@novacentrix.com](mailto:inktechnicalsupport@novacentrix.com)  
 Ink can be ordered at [store.novacentrix.com](http://store.novacentrix.com)

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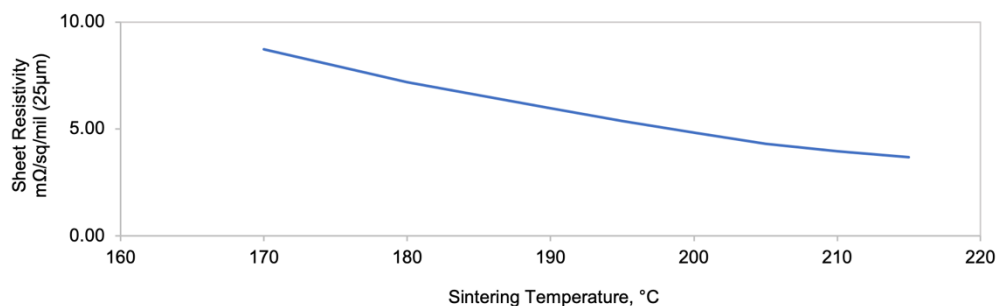
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General Purpose High Performance Copper Paste

|                               |   |   |
|-------------------------------|---|---|
| <b>Processing</b>             | <b>Printing Equipment</b>   | Flatbed Screen Printing<br><i>(both sheet and reel-to-reel)</i>   |
|                               | <b>Screen Type</b>  | Stainless steel mesh and polyester mesh   |
|                               | <b>Line Thickness/Height</b> <i>(sintered)</i>  | 5 µm – 50 µm<br><i>(depending on screen)</i>  |
|                               | <b>Line Width</b>   | 75 µm minimum   |
|                               | <b>Ink on Screen (Printing Life)</b>  | > 5 hours<br><i>(depending on printing process)</i>   |
|                               | <b>Substrates</b>   | Ceramic, FR4, TCO-coated glass and fabrics  |
|                               | <b>Clean up solvent</b>   | Acetone, isopropanol  |
|                               | <b>Diluent/Thinner</b>  | Terpineol   |
|                               | <b>Typical Drying Conditions</b>  | Can be dried in standard convection ovens and Vacuum ovens @ 60°C, 30 – 60 minutes, <b>or</b><br><br>Under IR Dryer @ 80°C, 30 minutes, <b>or</b><br><br>Forced air convection @ 80°C, 4 – 15 minutes |
|                               | <b>Typical Sintering Conditions</b>   | Reducing atmosphere of argon or nitrogen, with 3% formic acid vapor @ 170°C – 210°C for 1 hour (convection oven), <b>or</b><br><br>As above @ 190°C for 30 mins (Heller belt oven)                    |
| <b>Shipping and Packaging</b> | Standard sample order is 100g or multiples of 100g. Bulk packaging is also available. |   |

**Typical CP-007 Sheet Resistivity as a Function of Temperature Sintered in a Formic Acid Reduction Environment**



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