Metalon® CP-008
High Copper Low Temperature Paste

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. CP-008 can be used on a wide variety of substrates including PET (Melinex ST506), glass, surface treated LCP, Ultem, polyimide and silicon nitride.

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

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

<table>
<thead>
<tr>
<th>Typical Compositional Properties</th>
<th>Solids Content (Weight %) .................................................................................. ~ 88%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity [Pa.S]</td>
<td>(Anton Paar MCR-301 at 50 s⁻¹ @ 25°C) ......................................................... 20 – 40</td>
</tr>
<tr>
<td>Density [g/ml]</td>
<td>.............................................................................................................. ~ 3.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Typical Electrical &amp; Physical Properties (Sintered)</th>
<th>Sheet Resistance [mΩ/sq/25µm] ............................................................................. ~ 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesion</td>
<td>(ASTM D3359) .................................................................................................. 5B</td>
</tr>
<tr>
<td>Sintered Thickness [µm]</td>
<td>............................................................................................................... 10 – 15</td>
</tr>
</tbody>
</table>

Contact us today to learn more.
For detailed application information or additional assistance: inkstechnicalsupport@novacentrix.com
Ink can be ordered at store.novacentrix.com
# Metalon® CP-008

**High Copper Low Temperature Paste**

| Processing                  | Printing Equipment                      | Flatbed Screen Printing (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. nScrypt)        |
| Line Thickness/Height (sintered) | 15 μm – 30 μm (depending on deposition process) |
| Line Width                  | 50 μm minimum (depending on deposition process) |
| Ink on Screen (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             | Terpineol                                 |
| 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 |

## Shipping and Packaging

Standard sample order is 100g or multiples of 100g. Bulk packaging is also available.

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**Typical CP-008 Sheet Resistivity as a Function of Sintering Temperature in a Formic Acid Reducing Environment**

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