



## Metalon<sup>®</sup> Conductive Inks for Printed Electronics

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### Metalon<sup>®</sup> SPI-508 Conductive Silver Spray Ink

#### Product Description

SPI-508 is a water-based, silver nanoparticle spray ink which is specifically developed to tolerate the harsh chemical environment of a copper bath plating environment. This sprayable ink generates low film thicknesses with high electrical conductivity, excellent scratch and abrasion resistance, and good adhesion to most plastic substrates. SPI-508 can be used to build silver film thicknesses as large as 100  $\mu\text{m}$ .

#### Key Benefits

- Excellent flow properties and spray coverage
- Cured films with high electrical conductivity
- Used as a seed layer for copper plating
- Excellent water and alcohol resistance
- Good adhesion to PET, polycarbonate, and polyimide
- Easy cleanup with soap and water

#### Physical Properties

Silver Content (wt. %)	50 ( $\pm 2$ )
Density (wet ink)	1.8 - 2.0 g / mL (15 - 17 lb / gal)
Viscosity @1 s <sup>-1</sup>	40 - 70 cP
Viscosity @1000 s <sup>-1</sup>	40 - 70 cP
pH	5.70 to 5.90
Volume Resistivity <sup>†</sup>	7 - 9 $\mu\Omega\text{cm}$
Sheet Resistance	70 to 90 m $\Omega$ / sq at 1 $\mu\text{m}$ (typical DFT)
Shelf Life	> 8 months with refrigeration and pH adjustment

<sup>†</sup> A cure temperature of 140°C was used

#### Typical Results

- 2  $\mu\text{m}$  cured film thickness can be deposited with a single spraying step, 0.2 - 0.8 mm<sup>2</sup> nozzle delivery area, 20 - 30 psi
- 30 minutes at 70°C (convection heating)
- 10 minutes at 100°C (convection heating)
- 5 minute at 120°C (convection heating)

Please contact us at [inktechnicalsupport@novacentrix.com](mailto:inktechnicalsupport@novacentrix.com) to learn more, for detailed application information, or for assistance. Ink can be ordered at [store.novacentrix.com](http://store.novacentrix.com)