



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

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### Metalon<sup>®</sup> PSPI-1000 Conductive Silver Spray Ink

#### Product Description

PSPI-1000 is a water-based, silver nanoparticle spray ink which is specifically designed for EMI / RFI shielding and for thermal curing at low temperatures. This ultralow VOC sprayable ink generates low film thicknesses (1 - 3  $\mu\text{m}$ ) with both excellent shielding properties and excellent scratch and abrasion resistance. PSPI-1000 is particularly useful in applications where VOCs must be limited or when lower curing temperatures are required.

#### Key Benefits

- Excellent flow properties and spray coverage
- Excellent adhesion to polycarbonate, polyester, ABS, and other plastic enclosures
- Spray coverage 3 - 4 times greater than alternative spray shielding products
- Minimal VOCs
- Easy cleanup with soap and water

#### Physical Properties

Silver Content (wt. %)	40 ( $\pm 2$ )
Density (wet ink)	1.5 - 1.7 g / mL (13 - 14 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>	12 - 14 $\mu\Omega\text{cm}$
Sheet Resistance	120 to 140 m $\Omega$ / sq at 1 $\mu\text{m}$ (typical DFT)
Shelf Life	> 8 months with refrigeration and pH adjustment
Salt Spray Resistance	> 48 hours (ASTM B117)

<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
- 5 - 30 s cure times (IR heating)
- 15 minutes at 70°C (convection heating)
- 3 minutes at 100°C (convection heating)
- 1 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)**