PChem® Conductive Inks for Printed Electronics

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PSPI-1000® Conductive Spray Ink

Product Description

PSPI-1000 is a water-based silver nanoparticle conductive coating especially produced for EMI / RFI shielding and is designed to thermally cure at low temperatures. This ultra-low VOC sprayable coating is designed for plastic substrates. It provides a very thin film thickness (1 - 3 µm) with excellent shielding properties while being resistant to scratching and abrasion. It is especially useful where VOCs must be limited or when lower curing temperatures are desired.

Key Benefits

- Excellent flow properties and spray coverage
- Excellent adhesion to polycarbonate, 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 (± 5)
Density (wet)	1.4 - 1.8 g / mL (11.7 - 15.0 lb / gal)
Viscosity @1s^{-1}	70 - 100 cP
Viscosity @10s^{-1}	50 - 80 cP
pH	5.70 to 5.90
Volume Resistivity	8.5 µΩcm
Sheet Resistance	300 mΩ / sq at 1 µm (typical DFT)
Shelf Life	> 8 months with refrigeration and pH adjustment
Salt Spray Resistance	> 48 hours (ASTM B117)

Typical Results

- 2 µm cured film thickness can be deposited with a single spraying step, 0.2 - 0.8 mm^2 nozzle delivery area, 20 - 30 psi
- 5 - 30 s cure times (IR heating)
- 15 minutes at 75°C (convection heating)
- 3 minutes at 100°C (convection heating)
- 1 minute at 120°C (convection heating)

Please contact inkstechnicalsupport@novacentrix.com to learn more, for detailed application information, or for assistance. Ink can be ordered at store.novacentrix.com