



## PChem® Conductive Inks for Printed Electronics

www.novacentrix.com

### PSI-211® Conductive Screen Ink

#### Product Description

PSI-211 is an aqueous screen printable conductive ink containing PChem's proprietary silver nanoparticles. PSI-211 has been specifically formulated for high conductivity and minimal cured film thicknesses. This allows equivalent sheet resistances with less material usage compared to conventional polymer thick film conductive inks.

#### Key Benefits

- Fast curing at low temperatures suitable for reel to reel processing
- Excellent conductivity and thin cured film thicknesses for material cost savings
- Good printability (< 100 µm features) with low surface roughness
- Good adhesion, flexibility, and crease resistance to select treated PET films
- Minimal VOCs

#### Typical Formulation Properties

Solids content (wt %)	42 % (± 2 %)
Density (wet)	1.6 g / mL (13.4 lb / gal)
Viscosity at 10s <sup>-1</sup> / 100s <sup>-1</sup>	3500 - 6000 cP / 1500 - 3000 cP
pH	5.80 ± 0.05
Shelf life with refrigeration	> 6 months (may need pH adjustment)

Data represents typical properties based on controlled tests and results may vary

#### Typical Properties of Printed Films on PET\*\*

Weight resistivity	0.50 gΩ / m <sup>2</sup> (≤ 3X Bulk)
Volume resistivity	9 µΩcm (3.6 mΩ / sq / mil)
Dry film thickness	1.5 - 4 µm (mesh dependent)
Printed sheet resistance	< 30 mΩ / sq (at 3 µm DFT)
Coverage	250 - 400 cm <sup>2</sup> / g at 2 - 3 µm (typical DFT)

Data represents typical properties based on controlled tests and results may vary

#### Typical Processing Guidelines

- Printing Equipment: reel to reel, manual, rotary\*
- Local Humidity: > 45 %\*
- Substrates: Treated PET, PC, coated papers and card stock
- Screen Types: Stainless Steel & Polyester with water-compatible emulsion\*
- Curing Conditions:
  - Infrared: < 5 s\*
  - Convection: 15 - 90 s at 140°C, > 2 min at 100°C
- Clean-up solution: 1:10 dish detergent : water

Please contact [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)