



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 ⁻¹ / 100s ⁻¹	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 ² (≤ 3x Bulk)
Volume resistivity	9 µΩcm (3.6 mΩ / sq at 1 mil)
Dry film thickness	1.5 - 4 µm (mesh dependent)
Printed sheet resistance	< 30 mΩ / sq (at 3 µm DFT)
Coverage	250 - 400 cm ² / 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 to learn more, for detailed application information, or for assistance. Ink can be ordered at store.novacentrix.com