



PChem® Conductive Inks for Printed Electronics

www.novacentrix.com

PSI-219® Conductive Screen Ink

Product Description

PSI-219 is an aqueous screen printable conductive ink containing PChem's proprietary silver nanoparticles. PSI-219 has been specifically formulated for excellent adhesion to a variety of substrates while maintaining high conductivity and minimal cured film thickness. This allows equivalent sheet resistances with less material usage compared to competitive 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
- Excellent adhesion, flexibility, and crease resistance to treated PET films
- Minimal VOCs

Typical Formulation Properties

Solids content (wt. %)	40 (± 2)
Density (wet)	1.6 g / mL (13.4 lb / gal)
Viscosity at 10s ⁻¹ / 100s ⁻¹	3500 - 6000 cP / 1500 - 3000 cP
pH	5.75 ± 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	0.60 gΩ / m ² (≤ 3.5x Bulk)
Volume resistivity	11 µΩcm (4.4 mΩ / sq at 1 mil)
Dry film thickness	1.5 - 4 µm (mesh dependent)
Printed sheet resistance	< 40 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 80°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