



## Product Description

PXI-4180 is an aqueous flexo-printable conductor containing PChem's proprietary silver nanoparticles. PXI-4180 has been specifically formulated for high conductivity, fast curing, fine feature printing, and smooth lay-downs with moderate print speed.

## Key Benefits

- Fast curing at low temperatures suitable for reel to reel processing on PET film
- Formulated for moderate print speeds of 60 - 100FPM with in-line IR ovens
- Excellent conductivity and thin cured film thicknesses for material cost savings
- Good printability, with features less than 25µm possible
- Good flexibility and crease resistance
- Good adhesion to print treated polyester films
- Minimal VOC's
- Easy cleanup with soap and water

## Physical Properties

Silver Content (wt%)	54% (±2%)
Density (wet)	1.90 g/ml (15.8 lb/gallon)
Viscosity @10s-1	350 cP
Viscosity @1000s-1	170 cP
pH	5.85
Volume Resistivity	5-7 µΩ-cm (2.0-2.8 mΩ/sq/mil)
Printed Sheet Resistance	50-350 mΩ/sq (anilox dependant)
Coverage	100-600 m <sup>2</sup> /kg (anilox dependant)
Shelf Life	> 12 months refrigerated

## Typical Results

- 25 µm wide printed lines (contact PChem for details)
- 200nm thick cured films with 1.5 BCM anilox, 1µm with 8 BCM
- <2s cure times with IR heating
- <5s cure times with conductive heating
- 10-60s cure times with 140°C convection (velocity dependent)
- 80°C cures are possible with cure times >3 minutes.

Please contact PChem Associates for detailed application information or assistance.