Product Data Sheet

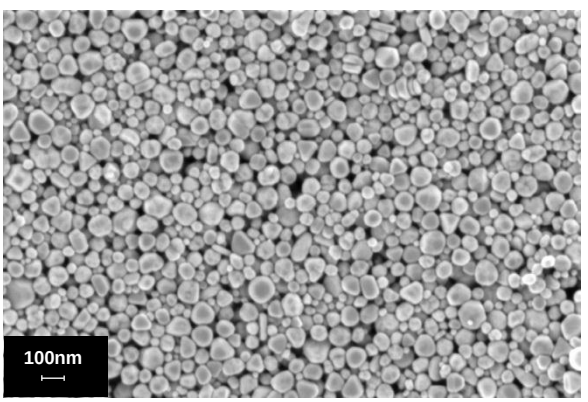
Product Catalog Number: **Sicrys™ I30EG-1**

General Information

Sicrys™ I30EG-1, a conductive ink based on single-crystal silver nanoparticles in ethylene glycol (EG), is suitable for various digital printing technologies such as Inkjet and Aerosol systems. With long shelf life and storage at ambient conditions, the ink offers reliable jetting and good printability. Printed and sintered patterns provide good adhesion to a wide range of substrates. Applications include, but are not limited to, FPD, RFID and PCB.

Ink Properties

Properties	Typical Values
Metal Loading, Ag (w/w)	30 %
Particle Size Distribution (Lumisizer®)	d50 = 70 nm d90 = 110 nm
Specific Gravity (Calculated)	1.52 g/ml
Viscosity (Brookfield, Cone Spindle 40, 25°C)	28 cP
Surface Tension (Pendant Drop Method)	46 dyne/cm
Particle Size and Morphology (HRSEM)	See HRSEM Image



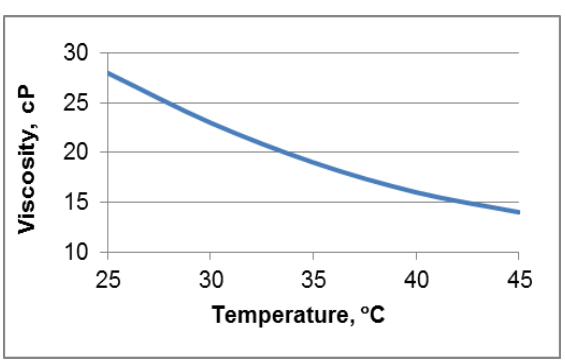
Nano Ag, HRSEM Image, x100,000

Electrical and Adhesion Properties

Sintering Conditions (on PEN)	**Resistivity** (4PP)
180°C/30 min	≤10 μΩ·cm (≤6 bulk)
150°C/30 min	≤14 μΩ·cm (≤9 bulk)
Sheet Resistance (180°C/30 min)	**Layer Thickness**
100 mΩ/□	1 μm
25 mΩ/□	4 μm

Adhesion to (tested): Kapton, PC, PEN, LCP, glass

(ASTM 3359-09 or ISO-2409)



Viscosity Profile

Compatible printheads

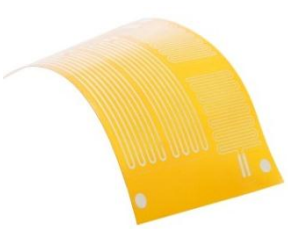
Ink works well, among others, with printheads

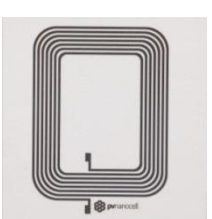
KM1024, KM1024i, Ricoh E3, DMC-11610, Air Brush

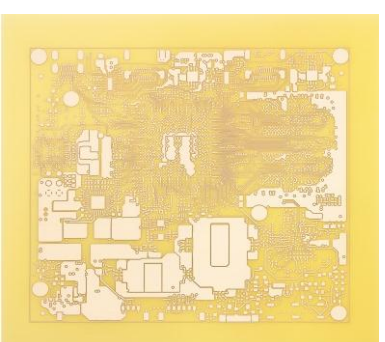
Product Applications

Digital Printing (Inkjet)

Printed Electronics: FPD, RFID, PCB







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