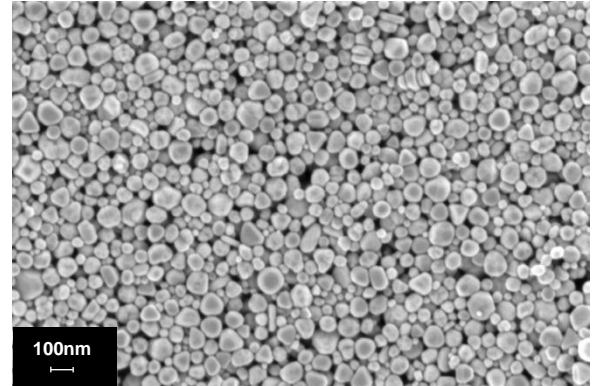


## General Information

Sicryst™ 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 42, 25°C)	28 cP
Surface Tension (Du Nouy Ring Method)	47 dyne/cm
Particle Size and Morphology (HRSEM)	See HRSEM image



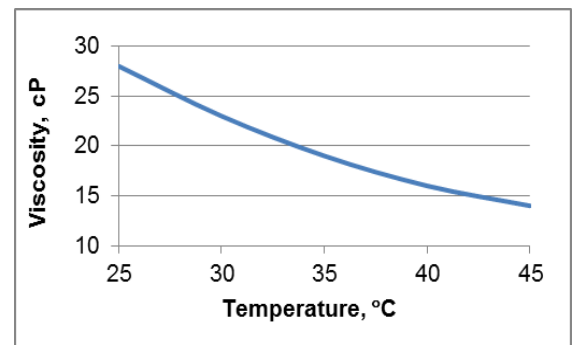
Nano Ag, HRSEM Image, x100,000

## Electrical and Adhesion Properties

Sintering Conditions (on PEN)	Resistivity (4PP)
130°C/30min	≤32 μΩ·cm (≤20 bulk)
150°C/30min	≤27 μΩ·cm (≤17 bulk)
180°C/30min	≤10 μΩ·cm (≤6 bulk)

Sheet Resistance	Layer Thickness
Sintering@150°C/30min (on PEN)	
0.1 Ω/□	4 μm
0.5 Ω/□	1 μm

Adhesion (ASTM 3359-09)	Rating
PC, PI, PEN, LCP	5B



Viscosity Profile

## Product Applications

Digital Printing (Inkjet)  
Printed Electronics: FPD, RFID, PCB

