Product Data Sheet

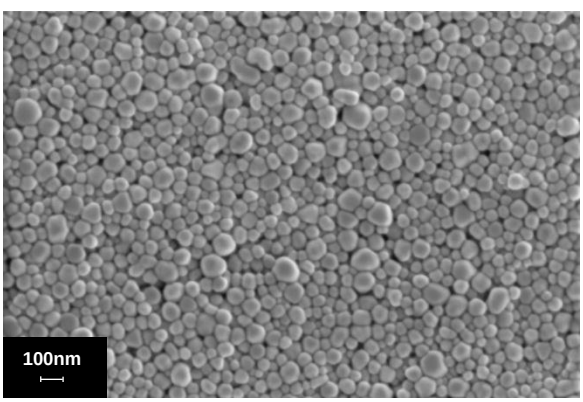
Product Catalog Number: **Sicrys™ I50T-13**

General Information

Sicrys™ I50T-13, a conductive ink based on single-crystal silver nanoparticles in tripropylene glycol monomethyl ether (TPM), is suitable for various digital printing technologies such as Inkjet and Aerosol systems. The ink offers high silver loading, low viscosity, long shelf life, storage at ambient conditions, reliable jetting and good printability. Printed and sintered patterns provide good adhesion to a wide range of substrates.

Ink Properties

Properties	Typical Values
Metal Loading, Ag (w/w)	50 %
Particle Size (Lumisizer®)	d50 = 70 nm d90 = 115 nm
Specific Gravity (Calculated)	1.76 g/ml
Viscosity (Brookfield, Cone Spindle 40, 25°C)	26 cP
Surface Tension (Pendant Drop Method)	28 dyne/cm
Particle Size and Morphology (HRSEM)	See HRSEM Image



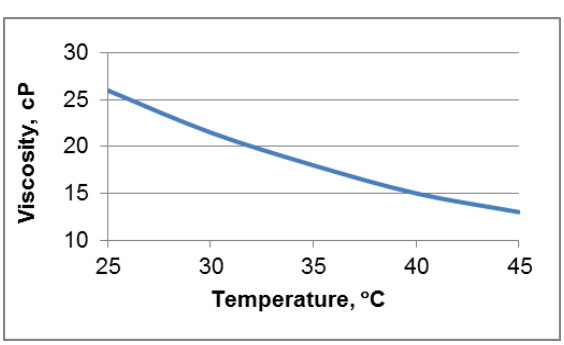
Nano Ag, HRSEM Image, x100,000

Electrical and Adhesion Properties

Sintering Conditions (on PET)	**Resistivity** (4PP)
200°C/30 min	≤10 μΩ·cm (≤6 bulk)
180°C/30 min	≤24 μΩ·cm (≤15 bulk)
Sheet Resistance (180°C/30min)	**Layer Thickness**
100 mΩ/□	1 μm
25m Ω/□	4 μm

Adhesion to (tested): PC, PEN, PET

(ASTM 3359-09 or ISO-2409)



Viscosity profile

Compatible printheads

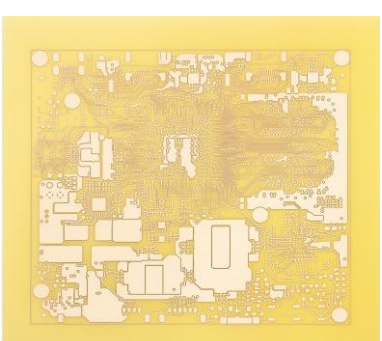
Ink works well, among others, with printheads:

KM1024, KM1024i, Ricoh E3, DMC-11610, Sapphire QS-10pl

Product Applications

Digital Printing (Inkjet)

Printed Electronics: FPD, RFID, PCB



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