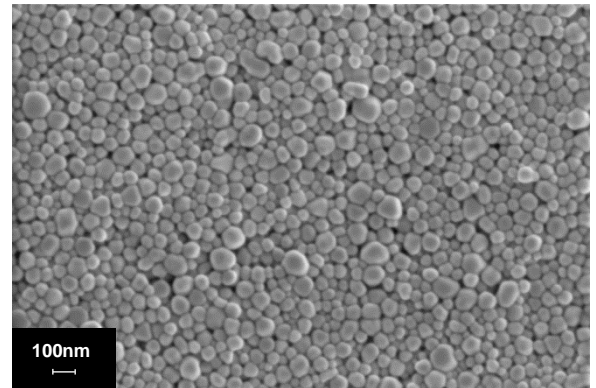


General Information

Sicry's™ I40DM-106, a conductive ink based on single-crystal silver nanoparticles in diethylene glycol monomethyl ether (DGME), is designed for digital Inkjet printing including SAMBA™ FUJIFILM Dimatix printhead. The ink offers low viscosity, long shelf life, storage at ambient conditions, robust jetting and good printability. Printed patterns, sinterable at low temperatures, provide low electrical resistivity and good adhesion to a wide range of substrates.

Ink Properties

Properties	Typical Values
Metal Loading, Ag (w/w)	40 %
Particle Size (Lumisizer®)	d50 = 80 nm d90 = 115 nm
Specific Gravity (Calculated)	1.62 g/ml
Viscosity (Brookfield, Cone Spindle 40, 25°C)	11 cP
Surface Tension (Pendant Drop Method)	33 dyne/cm
Particle Size and Morphology (HRSEM)	See HRSEM Image



Nano Ag, HRSEM Image, x100,000

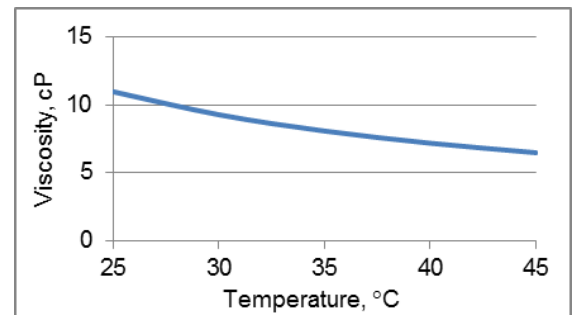
Electrical and Adhesion Properties

Substrates: ITO, glass

Sintering Profile	Resistivity (4PP)	Sheet Resistance
150°C/30 min	≤10 μΩ·cm (≤6.3 bulk)	10 mΩ/□ (10 μm)
130°C/30 min	≤12 μΩ·cm (≤7.5 bulk)	12 mΩ/□ (10 μm)

Adhesion to (tested): ITO, glass

(ASTM 3359-09 or ISO-2409)



Viscosity Profile

Compatible printheads

Ink works well, among others, with printheads:

KM1024, KM1024i, Ricoh E3, DMC-11610, Samba

Product Applications

Digital Printing (Inkjet)

Printed Electronics: FPD, RFID, PCB

