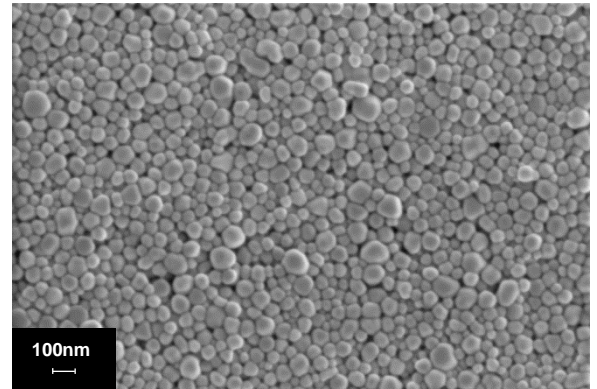


General Information

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 = 70 nm d90 = 125 nm
Specific Gravity	1.62 g/ml
Viscosity (Brookfield, Cone Spindle 40, 25°C)	11 cP
Surface Tension (Pendant Drop Method)	34 dyn/cm
Open Time (Ricoh E3 printhead, 30°C)	10 min
Particle Size and Morphology (HRSEM)	See HRSEM Image



Nano Ag, HRSEM Image, x100,000

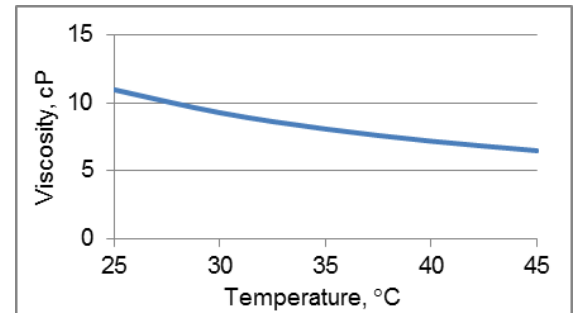
Electrical and Adhesion Properties

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 (not limited) to: ITO, Glass

(ISO-2409, no cuts)



Viscosity Profile

Compatible printheads[#]

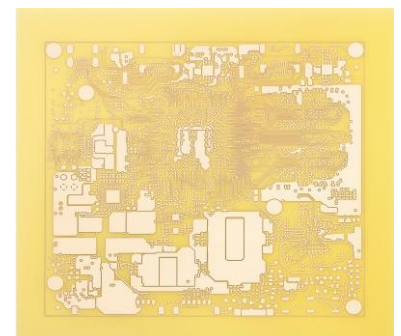
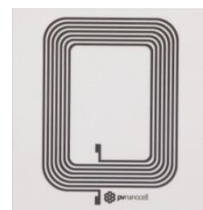
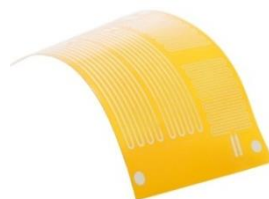
Ink works well, among others, with printheads:

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

Product Applications

Digital Printing (Inkjet)

Printed Electronics



[#] - Printheads listed here were tested and perform well. Other compatible printheads may also be applicable.