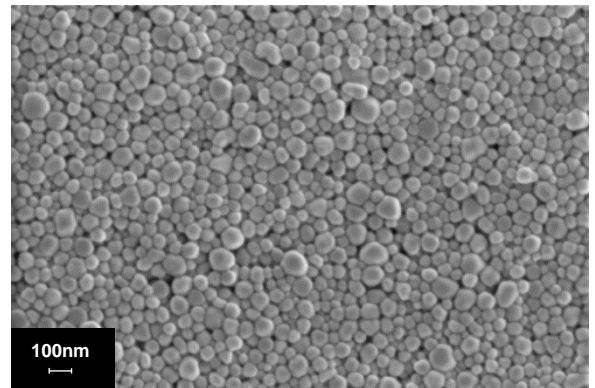


General Information

Sicrys™ I50DM-106, a conductive ink based on single-crystal silver nanoparticles in diethylene glycol monomethyl ether (DGME), has been designed for inkjet printing and low temperature sintering applications. The ink offers a unique combination of properties, including high silver loading, low viscosity, storage at ambient conditions, long shelf life, reliable 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)	50 %
Particle Size (Lumisizer®)	d50 = 80 nm d90 = 115 nm
Specific Gravity (Calculated)	1.87 g/ml
Viscosity (Brookfield, Cone Spindle 42, 25°C)	20 cP
Surface Tension (Du Noüy Ring Method)	31 dyne/cm
Particle Size and Morphology (HRSEM)	See HRSEM image



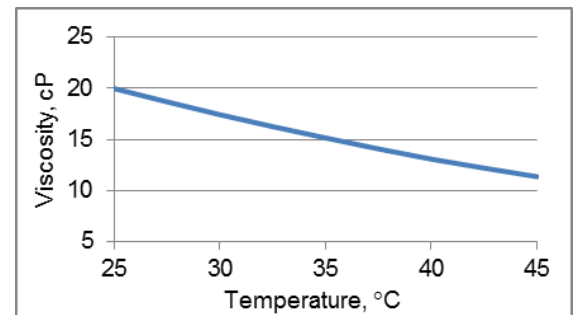
Nano Ag, HRSEM Image, x100,000

Electrical and Adhesion Properties

Substrates: glass, ITO

Sintering Profile	Resistivity (4PP)	Sheet Resistance
150°C/30min	≤10 μΩ·cm (≤6.3 bulk)	9 mΩ/□ (10 μm)
130°C/30min	≤12 μΩ·cm (≤7.5 bulk)	11 mΩ/□ (10 μm)

Adhesion (ASTM 3359-09)	Rating
ITO, glass, PET and PC	5B



Viscosity Profile

Product Applications

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

