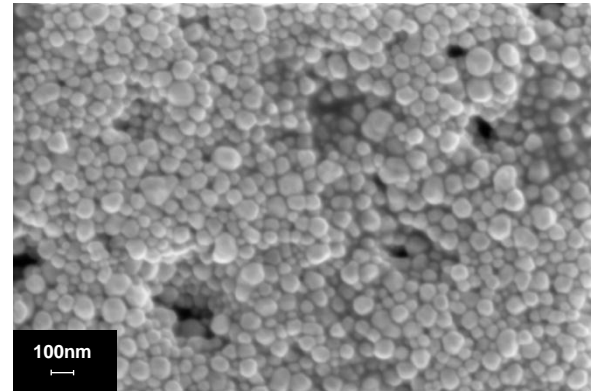


General Information

Sicrys™ I60PM-116, a conductive ink based on single-crystal silver nanoparticles in a mixture of propylene glycol monomethyl ether - diethylene glycol monomethyl ether solvents (PM-DGME), has been designed for Aerosol digital printing systems 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, good adhesion to a wide range of substrates and durability to humid and aqueous environments.

Ink Properties

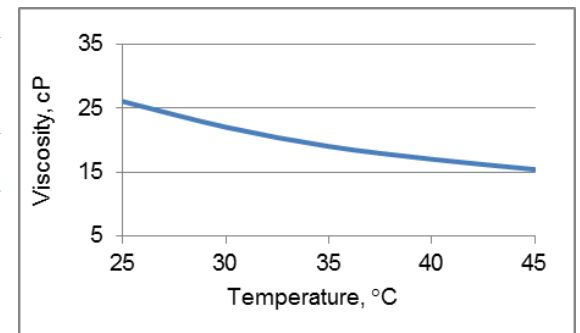
Properties	Typical Values
Metal Loading, Ag (w/w)	60 %
Particle Size (Lumisizer®)	d50 = 75 nm d90 = 100 nm
Specific Gravity (Calculated)	2.14 g/ml
Viscosity (Brookfield, Cone Spindle 42, 25°C)	26 cP
Surface Tension (Du Nouy Ring Method)	26 dyne/cm
Particle Size and Morphology (HRSEM)	See HRSEM image



Nano Ag, HRSEM Image, x100,000

Electrical and Adhesion Properties

Sintering conditions (on glass): UV followed by thermal	Resistivity (4PP)
UV: 9 W/cm ² , 2min (+) Thermal: 130°C/60min	≤10 μΩ·cm (≤6 bulk)
Adhesion (ASTM 3359-09)	Rating
PC, PC/ABS, PA, Kapton, glass	5B



Viscosity Profile

Environmental Reliability

Testing (on glass)	Adhesion
After soaking in NaCl 1M, 2h	5B
After soaking in NaCl 1M, 2h (+) in DIW, 20h	5B

Product Applications

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

