Product Data Sheet

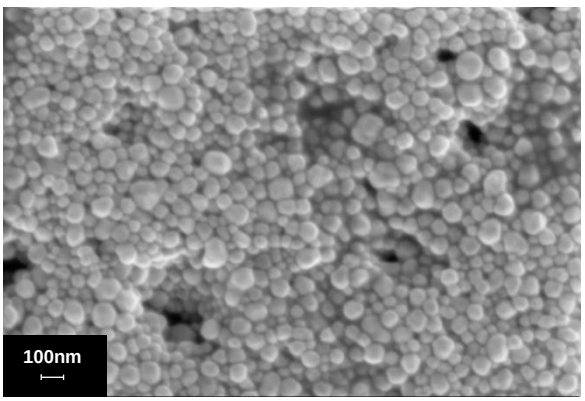
Product Catalog Number: **Sicrys™ I60PM-116**

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

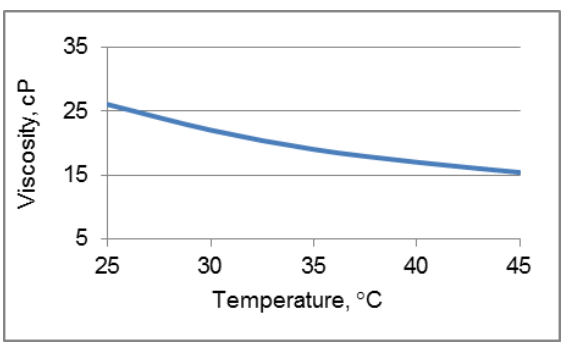
Properties	Typical Values
Metal Loading, Ag (w/w)	60 %
Particle Size (Lumisizer®)	d50 = 75 nm d90 = 100 nm
Specific Gravity (Calculated)	2.14 g/ml
Viscosity (Brookfield, Cone Spindle 40, 25°C)	26 cP
Surface Tension (Pendant Drop Method)	23 dyne/cm
Particle Size and Morphology (HRSEM)	See HRSEM Image



Nano Ag, HRSEM Image, x100,000

Electrical and Adhesion Properties

Sintering conditions (on glass): **UV followed by thermal**	**Resistivity** (4PP)
UV: 9 W/cm2, 2 min (+) Thermal: 130°C/60 min	≤10 μΩ·cm (≤6 bulk)
Adhesion to (tested): Kapton, PC, PC/ABS, PA, glass	
(ASTM 3359-09 or ISO-2409)	



Viscosity Profile

Environmental Reliability

Testing conditions (on glass)	**Adhesion**
After soaking in NaCl 1M, 2 h	Kept
After soaking in NaCl 1M, 2 h (+) in DIW, 20 h	Kept

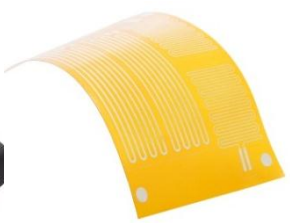
Compatible printheads

Ink works well with printheads: **Air Brush**

Product Applications

Digital Printing (Aerosol)

Printed Electronics: FPD, RFID, PCB



pvnanocell

Address: 8 Hamasger St., P.O. Box 236, Migdal Ha'Emek, 2310102 Israel

Phone: + 972 4 654 6881 Fax: + 972 4 654 6880 Email: info@pvnanocell.com

www.pvnanocell.com

v4-2017-10-15 © PV Nano Cell