

General Information

Sicryst™ I Au20W-1 is a gold nanoparticle water-based conductive ink for digital inkjet and aerosol printing. The ink offers low viscosity, reliable jetting and good printability. Storage at ambient conditions.

Ink Properties

Properties	Typical Values
Metal Loading, Au (w/w)	20 %
Particle Size (Lumisizer®)	d50 = 75 nm, d90 = 130 nm
Viscosity (Brookfield, Cone Spindle 40, 25°C)	9 cP
Surface Tension (Pendant Drop Method)	38 dyn/cm

Electrical and Adhesion Properties

Sintering Conditions (Substrate)	Resistivity (4PP)	Sheet Resistance (Layer Thickness)
Thermal Sintering: 200°C/60min (Glass)	≤40 μΩ·cm (≤16 bulk)	0.5 Ω/□ (1μm)
Photonic Sintering: Xenon Lamp (PET)	≤35 μΩ·cm (≤14 bulk)	1 Ω/□ (0.5 μm)
Adhesion to (tested): (ASTM 3359-09 or ISO-2409)	Glass, PET	

Compatible Printheads

Ink works well, among others, with printheads: **DMC-11610, Epson**

Product Applications

Digital Printing (Inkjet, Aerosol), Printed Electronics