

## Product Shortlist - Silver Digital Conductive Inks

	Sicrys™ product name	I30EG-1	I50T-11	I50T-13	I40DM-106	I50DM-106	I50DB-114	I50TM-115	I60PM-116	I50TM-119
Solvents	Solvent	EG	TPM	TPM	DGME	DGME	DGBE	TGME	PM/DGME	TGME
	Viscosity@25°C (cP)	17.1	5.5	5.5	3.5	3.5	4.9	6.2	1.7/3.5	6.2
	Surface tension (dyne/cm)	48	30	30	34.6	34.6	30	36.4	27.7/34.6	36.4
	Evap. rate@25°C (nBuAc=1)	0.01	0.0026	0.0026	0.019	0.019	0.004	<0.01	0.62/0.019	<0.01
Inks	Solids (metal content, %)	30%	50%	50%	40%	50%	50%	50%	60%	50%
	Viscosity@25°C (cP)	28	24	26	11	21	28	37	26	34
	Surface tension (dyne/cm)*	47	28	28	31	31	28	33	26	30**
	Evap. rate@50°C (mg/min) (per area, mg/min/mm <sup>2</sup> )		0.3 (0.009)			2.4 (0.07)		0.2 (0.006)		
	Sedimentation rate (T=10%; Lumisizer®)	0.25	0.32	0.27	0.66	0.37	0.26	0.2		0.24
	Open time (min) (jetting temperature, °C)		>60min (35°C)	>60min (35°C)	10min (30°C)	1.5min (40°C) 10min (30°C)		>60min (40°C)		10min (35°C)
	Resistivity (μΩcm) (thermal sintering, °C, min)	≤ 27 (150,30) ≤ 10 (180,30)	≤14 (200,60) ≤ 9 (230,60) ≤9 (100ms) <sup>#</sup>	≤ 11 (180,30)	≤ 10 (150,30) ≤ 12 (130,30)	≤ 10 (150,30) ≤ 12 (130,30)	≤ 10 (150,30)	≤ 10 (150,30) ≤ 12 (130,30)	≤ 10 (130,60)	≤ 10 (150,30) ≤ 12 (130,30)
	Sheet resistance (mΩ/□) (thickness, μm)	500 (1μm) 100 (4μm)	100 (1μm) 22 (5 μm)	100 (1μm) 25 (4μm)	9 (10μm)	9 (10μm) 102 (1.5μm) <sup>###</sup>		100 (1μm) 20 (4μm)		30 (3.5μm) 15 (8μm)
	Adhesion (tape test - 5B)	PC, PI, PEN, LCP	PC, PA	PC, PEN, PET	Glass, ITO, PET	Glass, ITO, PET	Glass	Glass, ITO, PET, PC	glass, PC/ABS, Kapton, PC	ITO, Kapton, PET
Printheads tested	KM, DMC-11610-10pl, RICOH	KM, DMC-11610-10pl, RICOH	KM, RICOH, DMC-11610-10pl, Dimatix Sapphire QS-10pl	Samba, RICOH	KM, Dimatix Sapphire QS-10pl, RICOH	RICOH	KM, RICOH	Air Brush	KM, RICOH	
<p><b>Notes:</b> *- ST measured with Du Noüy Ring method; ** - ST measured with Pendant Drop method; # - Photonic sintering; ### - Laser sintering.  <b>Solvents:</b> EG - ethylene glycol, TPM - tripropylene glycol monomethyl ether, DGME - diethylene glycol monomethyl ether,  DGBE- diethylene glycol monobutyl ether, TGME - triethylene glycol monomethyl ether, PM - propylene glycol monomethyl ether.</p>										

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