

Smart Gravure (S-CS51301)

Smart Gravure (S-CS51301) conductive ink was developed for the printed electronics market and is particularly well suited for applications requiring **high conductivity** and **high resolution**.

This ink has been developed to address applications which require very low curing temperature and use sensitive substrate.

Processing: Heliogravure

Ready-to-Use Ink

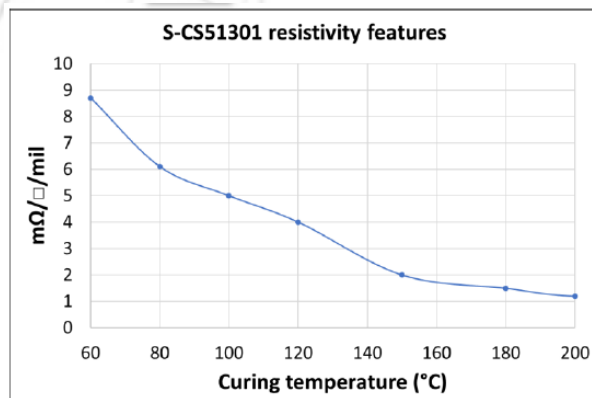
Material	Silver nano-particles
Particles content	55 ± 5 wt%
Solvent type	Glycol / Alcohol mix
Viscosity (20°C)	1900 - 3000 mPa.s @ 40 s ⁻¹ 1500 - 2500 mPa.s @ 100 s ⁻¹
Density	2 g/cm ³
Storage stability	6 months (2 – 5°C)

Key advantages & benefits

- Improved conductivity
- Very low curing temperature for printing on flexible substrates
- No conductivity change on bending
- Curing process compatibility: photonic, NIR, low vacuum oven, thermal curing
- Good adhesion on various flexible substrates (PC, PET, Kapton®, ...)
- Cleaning solution : C-FS21511
- Non-Toxic (No CMR ink)

Sintering Conditions

Curing process	Curing conditions	Resistivity	Nb Silver bulk
Tunnel furnace	80°C/5mn	15 μΩ.cm	9.4
Tunnel furnace	120°C/5mn	13 μΩ.cm	8.1
Tunnel furnace	150°C/5mn	9 μΩ.cm	5.6
Tunnel furnace	200°C/5mn	3.5 μΩ.cm	2.2
NIR	Few seconds	4 – 10 μΩ.cm	2.5 to 6.3
Photonic curing	< 100ms	3 – 10 μΩ.cm	1.9 to 6.3



Typical printing performances

Specific resistance	9 $\mu\Omega$.cm
Sheet resistance	450 m Ω /□
Resolution	60 μ m
Thickness	0.2 μ m
Sintering Conditions	5 min at 150°C
Adhesion on PET	5B (ASTM D3359)
Bending radius	2 mm

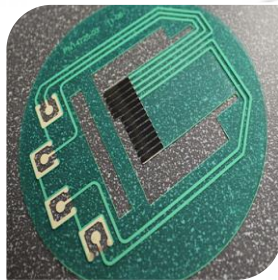
* Printing conditions : Labratester 180 (NSM)

Applications

RFID & NFC tags



Flexible PCBs IoT



Flexible printer cables



OLED & OPV grids



Qualified Substrates (5B - ASTM D3359)

- PET : Arcophane AA STS, Melinex ST504, Melinex 406, Policrom A.00 – A.00
- PC : Makrodol DE G-2
- KAPTON[®]
- Ceramic

Recommended surface treatment:

- Temperature stabilization
- Argon plasma

Printing guidelines

- Smart Gravure conductive ink needs to be agitated before use
- Ready to use, no need to use a thinner
- Clean-up solution: CleanInk C-FS21511

Qualified equipment

- NSM gravure machines Labratester 180.
- compatible with industrial equipment.

Shipping & Packaging

- Standard sample order is 100 mL
- Standard bulk order is 1 L
- Standard delivery time is 10 days

For more information on our conductive inks, please contact:



39, Avenue Gaston Imbert - 13790 Rousset
FRANCE

Tel : +33 (0)4 42 37 05 80

Fax : +33 (0)4 42 20 07 03

contact@genesink.com

<http://www.genesink.com>

Limited Warranty

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