Product Data Sheet

SMARTINK

GENESINK
SMALLER, FURTHER, FASTER

Smart Aerosol (S-CS61308)

Smart Aerosol (S-CS61308) Conductive Ink was developed for the printed electronics market and is particularly well suited for applications requiring high conductivity and high resolution at very low curing temperatures. This ink, based on silver, is perfectly adapted to design conductive tracks on flexible substrates and is suitable to produce antennas for IoT applications (HF, UHF).

Curing conditions are compatible with different curing processes (thermal, photonic, laser) and with various flexible substrates (polyimide, polycarbonate, PET, PEN…) and **low sheet resistances are obtained with fast drying.**

This ink has been developed to address applications require very low curing temperatures.

Process: Aerosol jet Optomec Printer

Ready-to-Use Ink

Material	Silver nano-particles
Particles content	50 ± 5 wt%
Solvent type	Alcohol/Glycol mix
Viscosity (20°C)	500 – 700 mPa.s @ 100 s^{-1}
Density	2 g/cm^3
Storage stability	3 months (0 – 5 °C)

Key advantages & benefits

- Superior adhesion (5B)
- Good bending resistance, smooth surface
- Superior conductivity
- Curing process compatibility: photonic, NIR, low vacuum oven, thermal curing
- High nano-particles content
- Non-Toxic (No CMR ink)
- Unchanged conductivity on bending

Typical printing performances

Specific resitance	4,5 µΩ.cm
Sheet resistance	64 mΩ/□
Resolution	170 µm
Thickness	0,7 µm
Sintering Conditions	1h at 150°C
Adhesion on PET	5B (ASTM D3359)
Bending radius	2 mm

Sintering Conditions

Curing process	Curing conditions	Resistivity	Nb Silver bulk
Static Oven	100°C/1h	7,5 µΩ.cm	4,7
Static Oven	120°C/1h	5,75 µΩ.cm	3,6
Static Oven	150°C/1h	4,5 µΩ.cm	2,8
Tunnel furnace	200°C/1h	3 µΩ.cm	1.9
NIR	Few seconds	4 – 10 µΩ.cm[1]	2.5 to 6.25
Photonic curing	<100ms	3 – 10 µΩ.cm[1]	1.9 to 6.25

[1] Depends on equipment set-up

Qualified Substrates *(5B - ASTM D3359)*

- PET: Melinex 406, Melinex 520, Arcophane TCA, Arcophane STS, Folex BG-71
- PEN : Teonex
- KAPTON ®
- PC / PC-ABS
- Ceramic

Recommended surface treatment:

- *Temperature stabilization*
- *Argon plasma*

Shipping & Packaging

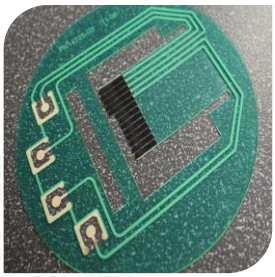
- Standard sample order is 100 g
- Standard bulk order is 1 kg
- Standard delivery time is 10 days

Applications

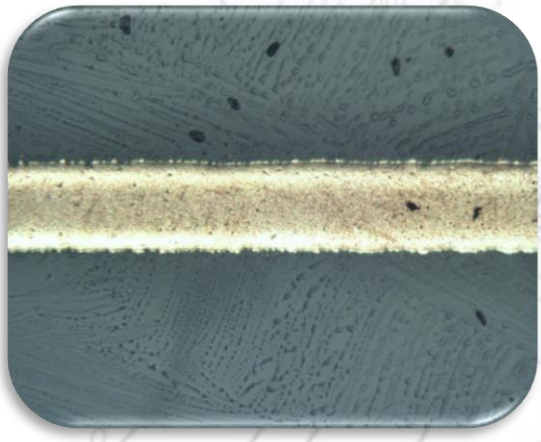
RFID & NFC tags

Flexible printed cables

Flexible PCBs



OLED & OPV grids



S-CS91308 printed on glass (170 µm wide)

For more information on our conductive inks, please contact:

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