

Smart Flexo (S-CS31506) Conductive Ink was developed for the printed electronics market and is particularly well suited for applications requiring **high conductivity** and **high resolution**. This ink, based on silver, is perfectly adapted to design conductive traces on flexible substrates. Also, it is shaped for IoT application requiring antennas (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**.

Processing: Flexography

Ready-to-Use Ink

Material	Silver nano-particles
Particles content	55 ± 5 wt%
Solvent type	Alcohol/Glycol mix
Viscosity (20°C)	150 – 400 mPa.s @ 40s ⁻¹
Density	2 g/cm ³
Storage stability	12 months (0 – 5 °C)

Typical printing performances

Specific resistance	6,25 μΩ.cm
Sheet resistance	125 mΩ/□
Resolution	40 μm
Thickness	0,5 μm
Sintering Conditions	5 min at 150°C
Adhesion on PET	5B (ASTM D3359)
Bending radius	2 mm

Key advantages & benefits

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

Sintering Conditions

Curing process	Curing conditions	Resistivity	Nb Silver bulk
Tunnel furnace	150°C/5 mn	6,25 μΩ.cm	3.9
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®
- Ceramic

Recommended surface treatment:

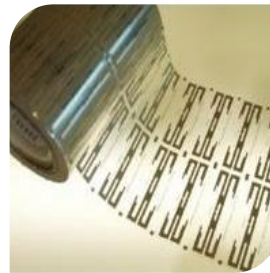
- Temperature stabilization
- Argon plasma

Shipping & Packaging

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

Applications

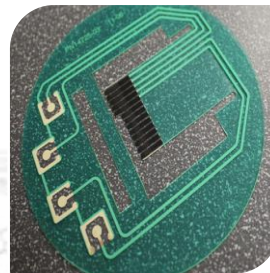
RFID & NFC tags



Flexible printed cables



Flexible PCBs



OLED & OPV grids



Smart Flexo sample

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