

Product Data Sheet



Smart Spray I (S-CS11520)

Smart Spray I (S-CS11520) Conductive Ink was developed for the printed electronics market and is particularly well suited for applications requiring high conductivity.

Smart Spray I (S-CS11520) Conductive Ink shows great performance on spray printer.

Processing: Spray Coating

Ready-to-Use Ink

Material	Silver nano-particles
Particles content	20 ± 1 wt%
Solvent type	Alcane/Alcohol mix
Viscosity (20°C)	12 ± 3 mPa.s
Surface tension	24 ± 3 mN/m
Density	1,1 g/cm ³
Storage stability	3 months (0-5°C)

Key advantages & benefits

- Improved conductivity
- Superior resolution (increased with substrate surface treatment)
- Good bending resistance, smooth surface
- Shiny coating, Mirror effect
- Optimized nano-particles content
- Curing process compatibility: photonic, NIR, low vacuum oven, thermal curing.
- Cleaning solution : C-FS21511
- Non-Toxic (No CMR ink)

Printing guidelines

- Smart Spray I S-CS11520 Conductive Ink is warmed at room temperature (about 10mn) and left for 5 minutes in an ultrasonic bath in order to get rid of any aggregates
- Clean-up solution: Clean Ink (C-FS21511)
- Filtration on a 0,45 µm PTFE filter syringe to avoid nozzles clogging

Sintering Conditions

Curing process	Curing conditions	Resistivity	Nb silver bulk
Tunnel furnace	150°C/5mn	6,6 µΩ.cm	4,1
Tunnel furnace	180°C/5mn	5.8 µΩ.cm	3,6
Tunnel furnace	200°C/5mn	5,4 µΩ.cm	3,4
NIR	Few seconds	6 – 12 µΩ.cm	3,8 – 7,5
Photonic curing	<100 ms	5 – 10 µΩ.cm	3,2 – 6.3

Qualified Substrates (5B - ASTM D3359)

- PET : Melinex 406, Melinex 339, Melinex 520, Arcophane TCA, Arcophane STS, Folex BG-71
- PEN : Teonex
- KAPTON[®] Recommended surface treatment:
 - Temperature stabilization
 - Argon plasma
- Ceramic Use **ProtectInk S** (P-ID21001) as a protective layer for Smart Jet I

Shipping & Packaging

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

Limited Warranty

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