MINK-RO

Molecular ink / Technical Datasheet

R01.2

PRODUCT DESCRIPTION

MINK-RO is a particle-free silver ink with a tunable rheology enabling deposition through high viscosity screen printing and low viscosity methods including inkjet printing. It can be processed/metallized using heat (box or conveyor ovens) or intense pulsed light, producing conductive features with bulk resistivity as low as 3 mΩ/□/mil. MINK-RO produces smooth, reflective silver features with excellent adhesion to plastic and glass substrates. MINK-RO is also IME compatible. Features produced from MINK-HT can be thermoformed to produce complex 3D architectures with elongations as high as 100%.

PRODUCT BENEFITS

- High conductivity
- Tunable viscosity
- Strong adhesion on many substrates
- Thin deposit after sintering
- B-stageable process (drying + sintering)
- Smooth and reflective traces
- Less silver (compared to traditional PTF flake ink) so less sensitive to market fluctuation

MAIN CHARACTERISTICS

Appearance	Viscous, clear amber liquid
Filler Type	Silver Salt
Operating temperature (˚C)	185 ˚C
Application	Printed Conductive traces
Key substrates	PET, PETG, PC, Polyimide and Glass
Coverage (g/m²) wet	~30

PROCESSING

Screen printing	Available / with Both Polyester and Stainless-steel screens
Inkjet	Available / The viscosity must be adapted by fine tuning the formulation
Drying	UV Light or conveyor oven heat
Sintering	IPL Sintering (fast) or Thermal sintering (slower) in box or conveyor oven

TYPICAL PROPERTIES OF UNDRIED / UNSINTERED MATERIAL

Viscosity (cP)	5 to 10K
Density (g/cm3)	1.5
Shelf Life at 4 ˚C	6 months
Solvent / Thinner	1-octanol

TYPICAL PROPERTIES OF DRIED MATERIAL

Resistivity (mΩ/□/25µm)	3
Adhesion (ASTM F1842-15)	5B on all substrates
Crease (ASTM F1683-02)	<10% R Variation
Bending (ASTM F1683-02)	<10% R Variation
Max Elongation before break (ΔL/L) - Thermoforming	>75%
Thickness of dried deposit (µm) - screen printed with SS400 screen and 6um emulsion thickness)	<0.4

For questions or more information email:
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