Xerox® Silver Nanoparticle Ink for Ultrasonic Aerosol Jet® Printing

**PRODUCT FEATURES**
- Hydrocarbon-based ink
- Compatible with a variety of substrates: PEN, PET, PI, PC, PC-ABS blend, glass
- Low annealing temperature (120 – 130°C) enabled by small and uniform primary silver nanoparticles (8 nm ± 2 nm)
- Resistivity up to 3x bulk silver
- Compatible with Xerox® UV Curable Dielectric (xdi-UV1-C/T)

**PRODUCT PROPERTIES**
- **Ink Vehicle**: Hydrocarbon
- **Silver Content**: 50 – 55 wt%
- **Particle Size**: Z_{ave} < 20 nm
- **Shear Viscosity (25°C, 40 – 400 s⁻¹)**: 3 – 5 cP·s
- **Surface Tension**: 24 – 31 mN/m
- **Thermal Annealing**: 120°C, < 1 h

**MATERIAL PERFORMANCE (POST ANNEALING)**
- **Line Thickness**: 1 µm
- **Line Width**: 0.5 mm
- **Volume Resistivity**: 3.5 – 4.5x bulk Ag
- **Conductivity**: > 9 x 10⁴ S·cm⁻¹

**SAFETY AND HANDLING**
Safety and handling information is available in the product Safety Data Sheet (SDS).

**RELATED XEROX® PRODUCTS**
- Piezo Inkjet: xcm-nsIJ1
- Pneumatic Aerosol Jet®: xcm-nsPA1
- UV Curable Dielectric: xdi-UV1-C/T

**XEROX RESEARCH CENTRE OF CANADA**
With more than 40 years of delivering innovative materials options for Xerox, we have a proven track record for taking concepts from the lab to commercial viability.

Leveraging our broad expertise in materials research, development and engineering, along with our state-of-the-art facilities, we can help you navigate the technical challenges of bringing your product to the market.

*Conductive traces printed using an Optomec Sprint system were achieved using the following conditions: 0.3 mm nozzle, at 10 mm/s print speed, 50 sccm sheath gas, 50 sccm push gas (N₂).*

ISO 9001:2015 Certified Quality Management System

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