ESL ELECTROSCIENCE
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POLYMER SILVER CONDUCTOR 1901-SD

RoHS Compliant*

Slow-Drying Polymer Silver for RFID Antennas

ESL 1901-SD is a silver-filled, flexible resin material designed for use as a conductor on low-temperature substrates and may be used as an antenna in RFID applications. A slow-drying material to give excellent screen-life, the cured silver film remains reasonably flexible and the resistance of the antenna track remains constant over time. After fitting an appropriate chip, the RFID device can store information. The 1901-SD can also be used as an antenna in contactless smart cards. The paper, foil or plastic sheet bearing the printed antenna is laminated within a number of plastic layers and the individual cards are punched out. Many antenna patterns can be printed in a single operation.

This versatile polymer has also been successfully used on other substrates such as cloth.

PASTE DATA

Rheology:	Thixotropic, screen-printable paste
Viscosity: (Brookfield RVT, 10 rpm, No. 7 spindle, 25.5 ± 0.5 °C)	60 ± 10 Pa.s
Shelf Life (at 5°C):	6 months

PROCESSING

Screen Mesh, Emulsion:	200 or 325 S/S, 25 µm
Curing Schedule:	125°C / 10 min
Substrate for Calibration:	PVC plastic card
Thinner:	ESL 659

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TYPICAL PROPERTIES

Cured Thickness: (measured on a 100 mm x 0.25 mm conductor track)	25 - 35 µm
Approximate Coverage:	100 cm^2/g
Resistivity: (measured on a 100 mm x 0.25 mm conductor track)	< 20 mΩ/□
Printing Resolution: (line/space)	0.25 mm / 0.25 mm

***None of the six substances referred to in the RoHS Directive (2002/95/EC) are used in the formulation of this product.**

CAUTION: Proper industrial safety precautions should be exercised in using these products. Use with adequate ventilation. Avoid prolonged contact with skin or inhalation of any vapours emitted during use or heating of these compositions. The use of safety eye goggles, gloves or hand protection creams is recommended. Wash hands or skin thoroughly with soap and water after using these products. Do not eat or smoke in areas where these materials are used. Refer to appropriate MSDS sheet.