



## **METADUCT™ 1269**

### **PHOTOVOLTAIC CONDUCTIVE ELECTRODE INK**

METADUCT™ 1269 is a one component silver filled ink representing a new generation of conductive electrode inks specifically designed to meet the demanding requirements for electrodes used in Organic Photovoltaic, Dye Cell Solar, and Amorphous Silicon photovoltaic modules. This high performance ink is also suitable for the printing of OLED, Smart Window, and other highly conductive electrodes. METADUCT™ 1269 can be used with small and large area screen printers, using semi-automatic, automatic, or reel-to-reel printing equipment.

This novel conductive ink, targeting PV applications including BAPV & BIPV, offers the combination of excellent adhesion to a number of substrates, including PET & Glass, low resistance, and excellent thermal & humidity resistance leading to higher Jsc and PCE of solar cells. METADUCT™ 1269 develops optimum properties when dried for 3-5 minutes at 130C or 1-2 minutes at 140C.

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**PROPERTIES**

Viscosity	5000-10000 cps (Brookfield DV-II Viscometer) ( Cp-51 spindle/10rpm)
Cure/Dry	130°C/5 min 140°C/2 min (12 micron thickness)
Specific Gravity	2.85
Screen Life	> 2 hours
Tg	65°C
Durometer	80 (Shore A)
Percent Solids	87-88
Sheet Resistivity	< 10 milliohm/sq/mil
Volume Resistivity	< 5 x 10 <sup>-4</sup> ohm-cm
Tape Adhesion	Pass (3M-600 tape on PET & Glass)
Temp. Range	-40C to +150°C
Shelf Life	6 months @ 25°C
CTE:	Below Tg: 85 um/m/°C Above Tg: 195 um/m/°C

**FEATURED BENEFITS**

- Excellent Printability
- High conductivity
- Long screen life
- Excellent adhesion

**PROCESS PARAMETERS**

- Flat Bed and Reel-to-Reel printing equipment
- Substrates: PET, PEN, coated paper, Glass
- Screen Type: Polyester, Stainless steel, Electroform Ni (Rotary)
- Dries to pinhole-free, uniform film using convection or IR ovens
- Printed thickness of 8 microns using 280 mesh polyester screen
- Cleaning solvents include Butyl Acetate & Methyl Propyl Acetate

**APPLICATIONS**

- Electrode ink for PV applications (OPV, DSC, Amorphous Si)
- OLED electrode ink
- Printed electronic circuitry on rigid or flexible substrates
- Printed RFID antennas on plastic or coated paper

**PACKAGING**

- Frozen Syringes
- Plastic Poly Jars
- Pints, Quarts, 1 & 5 Gallon containers

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