

Micromax™ 5000

Electronic Inks and Pastes

Silver Conductor

Micromax™ 5000 silver conductor is used to fabricate low-voltage circuitry, especially on flexible substrates including print-treated and non-print-treated polyester. Using a unique combination of flake silver and resin technology, Micromax™ 5000 possesses excellent conductivity, abrasion resistance, and printability. Micromax™ 5000 is fully compatible with Micromax™ 7102 (overcoat carbon) and Micromax™ 5018 UV dielectric. It can be used with reel-to-reel, semiautomatic, and manual printers, and offers excellent residence time on the screen.

Product benefits

- Thinner printing, fast drying, vinyl resin

Product information

Solvent or thinner	Micromax™ 8260
Solid content	51.5 - 53.5 ^[1] %
Maximum Service Temperature	70 °C
[1]: 750 °C	

Rheological properties

Viscosity	3.5 - 16 ^[2] Pa.s
[2]: Brookfield 1/2RVT, 10 rpm #14 spindle, 25 °C	

Application technique

Mask mesh	280 ^[3]
Drying time	8 - 10 ^[4] min
Drying temperature	120 ^[4] °C
Theoretical coverage	4.5 ^[5] cm ² /g
Recommended film thickness, dried	8 - 9 μm
[3]: Screen Types: Stainless steel	
[4]: box oven	
[5]: at 7.62 μm	

Typical mechanical properties

Adhesion, pull tape	no material class transfer ^[6]
[6]: 3M Scotch Tape #600	

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Electrical properties

Surface resistivity	$\leq 15^{[7]}$ mOhm per square
[7]: at 25.4µm	

Storage and stability

Shelf life	6 ^[8] months
[8]: in unopened containers, from date of shipment, at temperature <25°C	

Additional information

How to use

Processing

- **Substrates**
 - Polyester, paper, epoxy glass, etc.
- **Screen types**
 - Polyester, stainless steel
- **Printing**
 - Reel-to-reel, semi-automatic, manual
- **Typical circuit line thickness**
 - Printed with 280-mesh Stainless : 8 - 9 µm
 - Printed with 195-mesh Polyester : 8 - 9 µm
- **Work life**
 - >2 hours
- **Clean-up solvent**
 - Ethylene diacetate or Methyl propasol acetate
- **Drying**
 - Box oven : 120°C for 8-10 minutes
 - Reel-to-reel : 140°C for 1-1.5 minutes
 - IR belt furnace : 130°C for 2-4 minutes
 - Dry and cure in a well ventilated oven or conveyor dryer where the exhaust meets environmental regulations.

Properties

Typical Physical & Composition Properties

Test	Properties
Crease (1 cycle, mΩ/sq/mil) (ASTM F1683)	≤ 18
Abrasion Resistance, Pencil Hardness (ASTM D3363-74) [H]	> 4

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Coverage (sqft/mil/gal) (dependent on print thickness)	475
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Information in this datasheet shows anticipated typical physical properties for Micromax™ 5000 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

Storage and shelf life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature (<25 °C). Shelf life of material in unopened containers is six months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

Safety and handling

For safety and handling information pertaining to this product, read Safety Data Sheet (SDS).

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