

Micromax™ 5876

Electronic Inks and Pastes

Screen-Printable Silver/Silver Chloride Paste for Screen Printing

Micromax™ 5876 is solvent-based silver/silver chloride screen-printable paste. It can be printed on polyester films and is best used as a cathode for electrochemical and biochemical sensors.

Product benefits

- Fast drying
- Low electrode polarization
- High solids for thick prints

Product information

Solvent or thinner	Micromax™ 3610
Density	2.7 g/cm ³
Solid content	81.5 - 85.5 ^[1] %
Ag:AgCl ratio	32 / 68
[1]: 150 °C	

Rheological properties

Viscosity	23 - 35 ^[2] Pa.s
[2]: Brookfield 0.5RVT, UC&S, SC4-14/6R, 10 rpm, 25 °C	

Application technique

Drying time	3 - 5 ^[3] min
Drying temperature	120 ^[3] °C
[3]: box oven	

Typical mechanical properties

Adhesion, cross hatch	5B ^[4] class
[4]: ASTM D3359-78	

Storage and stability

Shelf life	6 ^[5] months
[5]: in unopened containers, from date of shipment, at temperature <25 °C	

Additional information

How to use

Design & compatibility

- **Compatibility**
 - Only print-treated polyester film substrate should be used. For

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best results, the paste can also be printed over a silver (Micromax™ 5000 and Micromax™ 5025) underlay. Care should also be taken to avoid contacting the silver/silver chloride paste with reactive metals, such as aluminum, brass and steel.

Processing

- **Printing**

- The paste should be mixed thoroughly before use with a plastic spatula. If severe settling is found after long storage, mix and then jar roll sample overnight before use.

- **Thinning**

- Micromax™ 3610 should be used sparingly to make viscosity adjustments or to compensate for solvent loss due to evaporation.

- **Clean-up solvent**

- Ethylene glycol diacetate or Dipropylene glycol methyl ether.

- **Drying**

- Box oven : 120°C for 3-5 minutes
- Reel-to-reel : 140°C for 1-1.5 minutes

Properties

Typical Physical Properties

Test	Properties
Coat Weigh* (mg/cm ²) [160-mesh screen]	8 - 11
Silver Chloride Depletion* (Cathode)	> 60 min

* Silver chloride depletion : Minutes to reach 1 volt (cell voltage) at 0.5 mA/cm² with 8.5 mg/cm² coat weight.

Information in this datasheet shows anticipated typical physical properties for Micromax™ 5876 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

The silver/silver chloride paste is packaged in black jars to avoid exposure to light. Container of Micromax™ 5876 should be stored in stable environment at room temperature with lids tightly sealed. Storage in freezers is NOT recommended as this could cause irreversible changes to the material. Containers should be stored, tightly sealed, in a clean, stable environment at room

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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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