Micromax™ 5882

Electronic Inks and Pastes

Silver/Silver Chloride Composition for Screen Printing

Micromax™ 5882 is a solvent-based silver/silver chloride composition designed for screen printing high resolution lines (~200um or less in width) with good thickness onto polyester film. It is suitable for use as an electrode or a reference counter electrode for electrochemical sensors.

Product benefits

- Low electrode polarization
- High Conductivity
- Excellent stability on contact with high salt gels
- Excellent fine-line screen printing capability
- Prints with high thickness

Product information

Solvent or thinner	Micromax™ 8210	
Density	3.7	g/cm³
Solid content	83 - 86[1]	%
Ag:AgCl ratio	80 / 20	

[1]: 150 °C

Rheological properties

Viscosity	120 - 140[2]	Pa.s

[2]: Brookfield 0.5RVT, UC&SP, SC4-14/6R, 10 rpm, 25 °C

Application technique

Mask mesh	280 - 325	
Drying time	8 - 10[3]	min
Drying temperature	110 - 130[3]	°C
Theoretical coverage	90[4]	cm²/g
Recommended film thickness, dried	23 - 26[5]	µm

[3]: box oven

[4]: Approx. 90, Printed with 325 stainless steel mesh

[5]: 280 mesh screen

Typical mechanical properties

Adhesion, cross hatch	5B[6]	class

[6]: ASTM D3359-78

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Electrical properties

Surface resistivity	40 - 55[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

Design & compatibility

- Design
  - Polyester film substrates should be used. Micromax™ 5882 can also be printed over silver (Micromax™ 5000, Micromax™ 5025) or over carbon (Micromax™ 7105). Care should be taken to minimize contact of silver/silver chloride compositions with metals, especially reactive metals such as aluminum or brass, no contact should occur. Components made of these materials can be protected by taping or covering with an inert material.

Processing

- Printing
  - Micromax™ 5882 should be thoroughly mixed with a plastic or coated spatula before use. If settling is found after long storage, mix and then jar-roll composition sample overnight before use. It is best to use a polyester screen when printing to minimize contact with reactive metals.
- Thinning
  - Micromax™ 8210 may be used sparingly for slight adjustments to viscosity or to replace evaporation losses. However, the use of too much thinner or of a non-recommended thinner may affect the rheological behaviour of the material and its printing characteristics.
- Clean-up solvent
  - Ethylene glycol diacetate or Dipropylene glycol methyl ether.
- Drying
  - Box oven : 110°C-130°C for 8-10 minutes, with adequate airflow
  - Reel-to-reel : 130°C-140°C for 3-4 minutes, with adequate airflow

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Properties

Typical Physical & Composition Properties

Test	Properties
EKG Properties DC offset (mV)	< 5
EKG Properties AC Impendence (Ω)	< 60
Viscosity @50rpm (Pa.s) Brookfield 0.5RVT, UC&S, SC4-14/6R, 25°C	30 - 40

Information in this datasheet shows anticipated typical physical properties for Micromax™ 5882 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).

Revised: 2023-06-16 Source: Celanese Materials Database