

Micromax™ 5874

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Silver/Silver Chloride Composition for Screen Printing

Micromax™ 5874 is solvent-based composition designed for screen-printing on polyester. The composition is suitable for use as a reference/counter electrode for electrochemical sensors, for iontophoretic anodes and cathodes, or for a wide variety of biomedical applications.

Product benefits

- Low electrode polarization
- High Stability reference potential
- High solids for printing thick electrodes
- Fast drying
- Equal electrode capacity for iontophoretic anode & cathode

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

General Properties	Value Unit
Application	Membrane switch conductor
Solvent or thinner	Micromax™ 3610
Density	3.39 g/cm ³
Solid content ¹	83.4 to 86.4 %
Ag:AgCl ratio	65 / 35

TECHNICAL DATA

Rheological Properties	Value Unit
Viscosity ²	23 to 35 Pa.s

Application Technique	Value	Unit
Drying time ³	3 to 5	min
Drying temperature ⁴	120	°C
Theoretical coverage ⁵	53.1	cm ² /g
Mechanical Properties	Value	Unit
Adhesion ⁶	5B	class
Storage and Stability	Value	Unit
Shelf life ⁷	3	months

¹150°C

²Brookfield 0.5 RVT, Utility cup & spindle SC4-14/6R, 10 rpm, 25°C

³box oven

⁴box oven

⁵@25.4µm (1mil)

⁶ASTM D3359-78

⁷in unopened containers, from date of shipment, stable environment at room temperature between 5°C - 30°C

PROCESSING GUIDELINES

Equipment consideration

Micromax™ 5874 can also be printed over silver (Micromax™ 5000, Micromax™ 5025) or over carbon (Micromax™ 7102). 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.

Substrate

Only print-treated polyester film substrate should be used.

Printing

Micromax™ 5874 should be mixed thoroughly with a plastic or stainless-steel spatula before use. If severe settling is found after a long storage, mix and then jar-roll ink sample overnight before use. It is best to use a polyester screen when printing to minimize contact with reactive metals.

Clean-up solvent

Ethylene glycol diacetate or dipropylene glycol methyl ether work well.

Drying

Allow drying times of 1-2 minutes for well-ventilated ovens or conveyor dryers at 120°C. For box oven drying, allow 3-5 minutes at 120°C.

Typical Physical and Composition Properties

Test	Properties
Coat Weigh (mg/cm ²) [160-mesh screen]	11
Ag Depletion (Anode) (min)	> 40
AgCl Depletion (Cathode) (min)	> 40

Information in this datasheet shows anticipated typical physical properties for Micromax™ 5874 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 between 5°C - 30°C. Shelf life of material in unopened containers is 3 months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

Storage conditions on the product data sheets are intended to represent long-term material storage recommendations and not a shipping or temperature-at-receipt requirement.

Transportation: Under normal shipping conditions, without temperature control, Micromax™ products are not expected to exhibit a change in quality or fitness for use. Should extraordinary events result in extended transportation periods, Micromax™ recommends customers confirm products remain suitable for the intended application.

Safety and handling

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

SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use.

Safety Data Sheets are available.

WASTE TREATMENT

Prior to using any recommendations or suggestions for waste treatment, the user is required to know the appropriate local/state/federal regulations for on-site or off-site treatment which may require permits. If there is any conflict regarding our recommendations, local/state/federal regulations take precedence.

CONTACT INFORMATION

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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