Micromax™ 5874

Microcircuit and Component Materials

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 electorode 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

Product information

Solvent or thinner	Micromax™ 3610	
Solid content	83.4 - 86.4[1]	%

[1]: 150ºC

Rheological properties

Viscosity	23 - 35[2]	Pa.s

[2]: Brookfield 0.5 RVT, Utility cup & spindle SC4- 14/6R, 10 rpm25 °C

Application technique

Drying time	3 - 5[3]	min
Drying temperature	120[3]	°C
Theoretical coverage	53.1[4]	cm^2/g

[3]: Box oven

[4]: @1mil

Storage and stability

Shelf life	3[5]	months

[5]: in unopened containers, from date of shipment, at room temperature (<25 °C)

Additional information

How to use

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.

Processing

- 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.

Properties

Typical Physical and Composition Properties

Test	Properties
Density (g/cc)	3.39
Cross Hatch Adhesion (B) [ASTM Norm D3359078]	5
Coat Weigh (mg/cm^2) [160-mesh screen]	11
Ag Depletion (Anode) (min)	> 40
AgCl Depletion (Cathode) (min)	> 40
Ag : AgCl ratio	65/35

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.

Micromax™ 5874

Microcircuit and Component Materials

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 three 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: 2022-11-21 Source: Celanese Materials Database