

Micromax™ 5890

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Silver/Silver Chloride Composition for Screen Printing

Micromax™ 5890 is a solvent-based silver/silver chloride composition designed for screen printing onto polyester film. It is suitable for use as an electrode or a reference counter electrode for electrochemical sensors.

Product benefits

- Ratio of 3/1 Ag/AgCl
- Contains carbon black
- Good adhesion
- Good abrasion resistance
- High stability
- Fast drying
- Low viscosity for good printing resolution

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

General Properties	Value Unit
Application	Membrane switch conductor
Solvent or thinner	Micromax™ 4987
Density	2.38 g/cm ³
Solid content ¹	80 to 82 %
Ag:AgCl ratio	3 / 1

TECHNICAL DATA

Rheological Properties	Value Unit
Viscosity ²	14 to 20 Pa.s

Application Technique	Value	Unit
Drying time ³	8 to 10	min
Drying temperature ⁴	110 to 120	°C
Theoretical coverage ⁵	100	cm ² /g
Mechanical Properties	Value	Unit
Adhesion ⁶	5B	class
Electrical Properties	Value	Unit
Resistivity ⁷	45 to 75	mOhm per square
Storage and Stability	Value	Unit
Shelf life ⁸	6	months

¹150 °C

²Brookfield 0.5RVT, UC&S, SC4-14/6R, 10 rpm, 25°C

³box oven

⁴box oven

⁵Approx. 200, Printed with 325 stainless steel mesh

⁶ASTM D3359-78

⁷at 25.4 µm

⁸in unopened containers, from date of shipment, stable environment at room temperature between 5°C - 30°C

PROCESSING GUIDELINES

Design & compatibility

Design

Polyester film substrates should be used. Micromax™ 5890 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.

Printing

Micromax™ 5890 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™ 4987 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 behavior of the material and its printing characteristics.

Clean-up solvent

Ethylene glycol diacetate or dipropylene glycol methyl ether.

Drying

Box oven: 110°C-120°C for 8-10 minutes, with adequate airflow

Reel-to-reel: 120°C-130°C for 3-4 minutes, with adequate airflow.

Information in this datasheet shows anticipated typical physical properties for Micromax™ 5890 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 6 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
www.macdermidalpha.com

North America	Europe	Asia
470 Research Drive Wilmington, DE, USA 855.622.7813	Bristol & Bath Science Park Dirac Crescent, Emersons Green, Bristol, BS16 7FR, United Kingdom 44.117.4769148	No. 45 Hsing-Point Road Taoyuan City, 330457 Taiwan 886.3.3773588

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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