

Micromax™ 5075

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Silver Carbon Conductor

Silver carbon conductor Micromax™ 5075 is used to fabricate low-voltage circuitry, especially on flexible substrates. This composition has been specifically designed for applications requiring low-cost conductive paths where high conductivity is not required. In addition to conventional conductor applications, Micromax™ 5075 is particularly suitable for EMC-shielding and display leads.

Product benefits

- Low cost
- Excellent screen life
- Can be used with semi-automatic & manual printers
- Fast curing

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

General Properties	Value	Unit
Application	Membrane switch conductor	
Solvent or thinner	Micromax™ 8210	
Solid content ¹	37 to 40	%
Maximum Service Temperature ²	70	°C

TECHNICAL DATA

Rheological Properties	Value	Unit
Viscosity ³	13 to 23	Pa.s

Application Technique	Value	Unit
Mask mesh ⁴	165 to 325	
Drying time ⁵	10	min
Drying temperature ⁶	120	°C
Theoretical coverage ⁷	140 to 300	cm ² /g
Recommended film thickness	7 to 10	µm
Mechanical Properties	Value	Unit
Adhesion ⁸	5B	class
Adhesion ⁹	no material transfer	class
Electrical Properties	Value	Unit
Resistivity ¹⁰	≤200	mOhm per square
Storage and Stability	Value	Unit
Shelf life ¹¹	3	months

¹1050°C

²on 125µm polyester film

³Brookfield RVT, #14, 10 rpm, 25°C

⁴Screen Types: Stainless steel

⁵box oven

⁶box oven

⁷dependent on screen mesh size and type

⁸ASTM D3359-78

⁹3M Scotch Tape #810, on 125µm polyester film.

¹⁰at 25.4µm, on 125µm polyester film

¹¹in unopened containers, from date of shipment, stable environment at room temperature between 5°C - 30°C

PROCESSING GUIDELINES

Substrates

Polyester, polyimide, polycarbonate, epoxy-glass

Screen types

Polyester 66T-130T, stainless steel (SS) 165-325-mesh

Printing

Reel-to-reel, semi-automatic, manual

Optimum printing characteristics of Micromax™ 5075 are generally achieved in the temperature range 20°C - 23°C. It is therefore important that the material, in its containers, is at this

temperature prior to commencement of printing.

Typical circuit line thickness

7 - 10 μm

Work life

> 2 hours

Thinner

Micromax™ 5075 is optimized for screen printing and thinning is not normally required. Micromax™ thinner 8210 may be used sparingly for slight adjustments to viscosity or to replace evaporation losses. However, the use of too much thinner or the use of non-recommended thinner may affect the rheological behavior of the material and its printing characteristics.

Clean-up solvent

Diethylene glycol ethyl ether acetate or Ethylene glycol diacetate

Drying

Box oven: 120°C for 10 minutes

Reel-to-reel: 140°C for 1 minutes

Typical Physical Properties on 125 μm Polyester Film

Test	Properties
Abrasion Resistance, Pencil Hardness (ASTM D3363-74) [H]	> 2
Soldering	Not Recommended

All values reported here are results of experiments in our laboratories intended to illustrate product performance potential with a given experimental design. They are not intended to represent the product's specifications.

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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