Micromax™ 5642

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Low Temperature Fireable Silver Conductor

Micromax™ 5642 is a lead free* air firing silver conductor capable of being fired at 400°C using a conventional belt furnace. Interconnection to Micromax™ 5642 can be achieved by soldering, conductive adhesive or other methods.

Product Benefits

Low Firing Temperature 400°C/30 minute profile

Good Adhesion on glass and Indium Tin Oxide (ITO) coated glass

Good Conductivity

Lead free*

Smooth Appearance

Excellent Printability

*Lead and Cadmium "free" as used herein means that these are not intentionally added to the referenced product. Trace amounts however may be present.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

General Properties	Value	Unit
Application	Filter conductor	
Solvent or thinner	Micromax™ 8250	

TECHNICAL DATA

Rheological Properties	Value	Unit
Viscosity[1]	40 to 70	Pa.s

Application Technique	Value	Unit
Mask mesh[2]	200 to 250	
Drying time	10 to 15	min
Drying temperature	150	°C
Recommended film thickness	15 to 25	µm
Leveling time	5 to 10	min

Electrical Properties	Value	Unit
Resistivity[3]	≤7	mOhm per square

Storage and Stability	Value	Unit
Shelf life[4]	6	months

[1]Brookfield RVT, #14 spindle, 10 rpm, 25°C
[2]Screen Types: Stainless steel
[3]at 25µm dried thickness
[4]in unopened containers, from date of shipment, stable environment at room temperature between 5°C - 30°C

PROCESSING GUIDELINES

Substrates

Reported properties are based on tests with soda lime glass. Substrates of other compositions may yield variation in performance properties.

Screen

200-250 screen mesh is recommended.

Thinner

Paste should not need adjusting prior to use. Stirring is recommended before printing. To replace solvent losses due to evaporation, Micromax™ 8250 thinner may be added in small increments while thoroughly mixing.

Drying

Parts should be allowed to level at room temperature for 5-10 minutes and then dried for 10-15 minutes at 150°C.

Firing

Properties are based on a 25–30-minute firing cycle with 2-4 minutes at a peak temperature above 400°C. Firing may be done at higher peak temperatures up to 475°C or at longer peak times without degrading fired properties. Firing at temperature lower than 400°C may decrease adhesion and increase resistivity. Further validation testing is recommended if using a lower firing peak.

Properties

Information in this datasheet shows anticipated typical physical properties for Micromax™ 5642 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

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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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