

Micromax™ CB028

Electronic Inks and Pastes

Silver Conductor

Micromax™ CB028 silver conductor is used to provide electromagnetic interference/radio frequency interference (EMI/RFI) shielding on-board or to fabricate low-voltage circuitry, on rigid or flexible substrates. It can be used with manual or automatic screen printing equipment.

Product benefits

- Superior conductivity
- Fine line printing capability
- Excellent flexibility

Product information

Solvent or thinner

Micromax™ 3610

Rheological properties

Viscosity

15 - 30^[1] Pa.s

[1]: Brookfield HBT, #14 spindle & UC, 10 rpm, 25°C

Application technique

Mask mesh

200^[2]

Drying time

60^[3] min

Drying temperature

160^[3] °C

Theoretical coverage

120 - 230^[4] cm²/g

Recommended film thickness, dried

8 - 10^[5] μm

[2]: Screen Types: Stainless steel

[3]: box oven

[4]: dependent on print thickness

[5]: 200-mesh stainless steel

Electrical properties

Surface resistivity

≤12^[6] mOhm per square

[6]: at 25μm thickness

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Storage and stability

Shelf life

6^[7] months

[7]: in unopened containers, from date of shipment, at temperature <25°C

Additional information

How to use

Processing

- **Substrates**
 - Epoxy glass, polyimide film
- **Screen types**
 - Stainless steel, polyester
- **Printing**
 - Reel-to-reel, semi-automatic, manual
- **Typical circuit line thickness**
 - Printed with 200-mesh stainless steel screen
 - 8 - 10 µm
- **Work life**
 - > 1 hour
- **Clean-up solvent**
 - Ethylene diacetate or Methyl propasol acetate
- **Drying**
 - Box oven : 160°C (320°F) for 60 min
- **Maximum temperature exposure**
 - Lamination temperature >175°C may cause delamination of the Micromax™ CB028

Properties

Typical Physical Properties

Test	Properties
Resistivity after Flex (mΩ/sq/25.4µm) (15sec after test crease, 180°C, 1 cycle)	100
Abrasion Resistance, Pencil Hardness (ASTM D3363-74) [H]	≥ 2
Soldering	Not Recommended
%TML (Total Mass Loss) ATSM E595 (NASA Out gassing, Specification < 1.0%)	0.18

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%CVCM (Collectible Volatile Condensable Material) ATSM E595 (NASA Out gassing, Specification < 0.1%)	0.01
Change in Physical Properties after Environmental Tests	Insignificant
Change in Electrical Properties after Environmental Test*, (%)	< 10

*Environmental Test

- A. Thermal Shock (+85°C to -40°C, 30 min each, cycle)
- B. Dry Heat (+85°C, 10 days)
- C. Humidity (+40°C, 95% RH, 10 days) [MIL Std 202E, method 103, cond. A]
- D. Salt Spray (+35°C, 5% salt, 10 days) [ASTM B117]
- E. Silver Migration (1 V DC/mil gap, +40°C, 90% RH, 500hr., tested on 40-and 7-mil gaps)
- F. Sulfur Dioxide (+45°C, 90% RH, 400hr, in a 9-liter chamber containing 500 mg of flowers of sulfur)

Information in this datasheet shows anticipated typical physical properties for Micromax™ CB028 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 (<25°C). Shelf life of material in unopened containers is six 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).

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