Micromax™ 5448

Microcircuit and Component Materials

Carbon Conductive Composition

Micromax™ 5448 is a polymer-based, platable carbon paste printable on a variety of substrates. This composition usually will be applied over a fired-on silver that provides sulfur-proof layer for chip components.

Product benefits

- Excellent conductivity
- Excellent printed resolution
- Good adhesion on both fired silver and alumina substrates
- Good platability
- Cadmium, Lead, Nickel and Phthalate free*

*Cadmium, Lead, Nickel and Phthalate 'free' as used herein means that cadmium, lead, nickel, and phthalate are not intentional ingredients in and are not intentionally added to the referenced product. Trace amounts however may be present.

Product information

Solvent or thinner	Micromax™ 9245	
Solid content	50 - 56[1]	%

[1]: 150 °C

Rheological properties

Viscosity	60 - 80[2]	Pa.s

[2]: Brookfield HBT, SC4-14/6R, 10 rpm, 25 °C

Application technique

Mask mesh	250	
Mask emulsion	10 - 15	µm
Drying time	10	min
Drying temperature	150	°C
Recommended film thickness, dried	10 - 15	µm
Leveling time	5	min

Electrical properties

Surface resistivity	5000 - 15000[3]	mOhm per square

[3]: at 25.4µm

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Storage and stability

Shelf life	3[4] months

[4]: in unopened containers, from date of shipment, at temperature between 0° C-5° C

Additional information

How to use

Processing

- Substrates
  - Ceramic, glass, Cu foil, glass epoxy, paper
- Printing
  - 10-15µm cured thickness can be achieved using 250 mesh stainless steel screen with an emulsion thickness of 10-15µm.
- Drying
  - Allow wet prints to level for 5 minutes at room temperature. Dry 10 minutes at 150°C in a well-ventilated oven, or belt dryer. Drying process can be skipped and directly cured depending on the application.
- Curing
  - This composition is best cured at 200°C for 10 minutes or 180°C for 30 minutes. Variation in the curing temperature may result in variation in the final properties.
- Plating
  - Chips terminated with Micromax™ 5448 and processed as recommended can be electroplated in conventional processes.

Properties

- Information in this datasheet shows anticipated typical physical properties for Micromax™ 5448 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

Shelf life is three months from date of shipment when refrigerated (0-5°C). Storage at room temperature is not recommended. Materials should be allowed to equilibrate to room temperature before opening to prevent pick up of moisture from condensation.
After the containers are opened, use and storage conditions and the possible effects of contamination make shelf limits unpredictable.

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Safety and handling

For safety and handling information pertaining to this product, read Safety Data Sheet (SDS).

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