Micromax™ 5499A

Electronic Inks and Pastes

Polymer Encapsulant Composition

Micromax™ 5499A Polymer composition is intended for encapsulation on hybrid circuits, resister networks and chip components. Shorter curing time at 180 °C with improved printability compared to Micromax™ 5499.

Product benefits

- Halogen Free*
- Thermoset process (180 °C, 5 min)
- High adhesion
- Non use of Pb/Cd component as designed
- Black color prior to and after curing
- Co-curing process with edge termination/ encapsulant/marking is possible
- Lead, Cadmium, Nickel and Phthalate free*

* "Halogen Free" as used *"Halogen Free" as used herein means that the L8486 product is "Halogen Free" as defined in industry standard IEC 61249-2-21.
*Lead, Cadmium, Nickel and Phthalate 'free' as used herein means that lead, cadmium, nickel and phthalate are not intentional ingredients in and are not intentionally added to the referenced product. Trace amount however may be present.

Product information

Solvent or thinner	Micromax™ 8779	
Solid content	73 - 83[1]	%

[1]: 150 °C

Rheological properties

Viscosity	90 - 135[2]	Pa.s

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

Application technique

Mask mesh	200	
Mask emulsion	20	µm
Drying time	10	min
Drying temperature	150	°C
Recommended film thickness	25 - 35[3]	µm
Leveling time	5 - 10	min

[3]: cured thickness

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Storage and stability

Shelf life	3[4] months

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

Additional information

How to use

Design & Compatibility

- Design
  - For optimum smoothness, printing with a double pass squeegee is recommended.

Processing

- Substrates
  - Substrates of different compositons and from various manufacturers may result in variations in performance properties.
- Printing
  - Cured thickness 30µm, +/-5µm. This is best achieved by using a 200 mesh stainless steel screen with a 20µm emulsion thickness and squeegee of 70 durometer.
  - The composition should be thoroughly mixed before use. This is best achieved by slow, gentle hand stirring with a clean burr-free spatula (flexible plastic) for 1-2 minutes. Care must be taken to avoid air entrapment. Printing should be performed in a clean and well vetilated area.
  - Note : Optimum printing characteristics are generally achieved in the room temperature range of 20-23 °C. It is therefore important that the material, in its ocntainer, is at this temperature prior to commencement of printing.
- Thinning
  - The composition is optimized for screen printing. Thinner is normally not required. Use the Micromax™ recommended thinner for slight adjustments to viscosity or replace evaporation losses. The use of too much thinner or the use of a non recommended thinner may affect the rheological behavior of the material and its printing characteristics.
- Clean-up solvent
  - Micromax™ 8779
- Drying
  - Allow prints to level for 5-10 minutes at room temperature, then dry for 10 minutes at 150 °C.
- Curing

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- 180 °C for 5 minutes. Conditions need to be optimized for type of dryer.

Properties

- Information in this datasheet shows anticipated typical physical properties for Micromax™ 5499A 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 temperature 0-5 °C. Shelf life of material in unopened containers is three 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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