Micromax™ 5450

Microcircuit and Component Materials

Platable Termination Composition

Micromax™ 5450 is a polymeric platable silver composition. It is intended for use in chip resistor applications as an edge termination. It is applied by dipping and is then cured in a low temperature oven.

Product characteristics

- Single composition thermosetting resin
- Low temperature curing
- Excellent platability with high plated adhesion
- Excellent dipping performance
- High conductivity

Product information

Solvent or thinner	Micromax™ 9245	
Solid content	58.5 - 63.5	%

Rheological properties

Viscosity	18 - 20[1]	Pa.s

[1]: Brookfield RVT, Utility cup & spindle (SC4-14/6R), 10rpm, 25 °C ± 1 °C

Application technique

Drying time	10	min
Drying temperature	150	°C
Leveling time	5 - 10	min

Storage and stability

Shelf life	3[2]	months

[2]: in unopened containers, from date of shipment, in a temperature range 0 - 4 °C

Additional information

How to use

Design & compatibility

- Compatibility
  - Whilst Micromax™ has tested this composition with the materials specified above and the recommended processing conditions, it is impossible or impractical to cover every combination of materials, customer processing conditions and circuit layouts. It is therefore essential that customers thoroughly evaluate the material in their specific situations in order to completely satisfy themselves with the overall quality and suitability of the composition for its intended

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application(s).

Processing

- Application
  - Micromax™ 5450 is applied by dipping.
- Substrates
  - Substrates of different compositions and from various manufacturers may result in variations in performance properties.
- Dipping
  - Some settling of solids may occur on storage, therefore this composition must be stirred thoroughly prior to use. This is best achieved by slow, gently, hand stirring with a clean burrfree spatula (flexible plastic or stainless steel) for 1-2 minutes. Care must be taken to avoid air entrapment.
  - Dipping should be performed in a clean and well ventilated area.
  - Note : optimum dipping characteristics are generally achieved in the room temperature range of 20°C - 23°C. It is therefore important that the material, in its container,is at this temperature prior to commencement of printing.
- Thinning
  - This composition is optimized for dipping, thinning is not normally required.
  - Use the Micromax™ recommended thinner for slight adjusments to viscosity or to replace evaporation losses. The use of too much thinner or the use of a non-recommended thinner may affect the rheological behaviour of the material and its dipping characteristics.
- Drying
  - After dipping, the parts should be allowed to level at room temperature and then dried.
- Curing
  - After drying, 200°C peak held for 30 minutes.

Properties

- 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, details of which are available upon demand.

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General

Performance will depend to a large degree on care exercised in screen printing. Scrupulous care should be taken to keep the composition, dipping equipment and other tools free of metal contamination. Dust, lint and other particulate matter may also contribute to poor yields.

Storage and shelf life

Storage : Containers should be stored in a clean, stable environment in a temperature range 0 - 4 °C, with their lids tightly sealed. Storage in freezers (temperature < 0 °C) is NOT recommended as this could cause irreversible changes in the material.
Shelf life : This composition's shelf life is from date of shipment, for factory-sealed (unopened) containers, stored under 0 - 4 °C conditions.

Safety and handling

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

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