

Micromax™ 5450

Electronic Inks & Pastes

PRODUCT DESCRIPTION

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

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

General Properties	Value Unit
Application	Resistor termination
Solvent or thinner	Micromax™ 9245
Solid content	58.5 to 63.5 %

TECHNICAL DATA

Rheological Properties	Value Unit
Viscosity ¹	18 to 20 Pa.s

Application Technique	Value Unit
Drying time	10 min
Drying temperature	150 °C
Leveling time	5 to 10 min

Storage and Stability	Value	Unit
Shelf life ²	3	months

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

²in unopened containers, from date of shipment, stable environment at refrigerated temperature between 0°C - 5°C

PROCESSING GUIDELINES

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 application(s).

Applications

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 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 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 adjustments 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 behavior 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.

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

Containers should be stored, tightly sealed, in a clean, stable environment at refrigerated temperature between 0°C - 5°C. Storage at room temperature is not recommended. Shelf life of material in unopened containers is 3 months from date of shipment. Gradual polymerization and associated viscosity increase, and mechanical separation can be expected over a period of a few months. When refrigerating conditions are used for storage, 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.

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 & 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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