Micromax™ 1197F

Electronic Inks and Pastes

Platable Silver Termination For MLC Chip Applications

Micromax™ 1197F is a cadmium-free and lead-free, Ni-platable silver termination for use in multilayer capacitor (MLC) applications, which has a viscosity that is higher than typical MLC terminations for dipping small size bodies.

Product benefits

- Ni-platable
- High mechanical strength
- High thermal shock stability
- Cadmium-free*, lead-free*

*Cadmium and lead 'free' as used herein means that cadmium and lead 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™ 4553
Solid content	76 - 78[1] %

[1]: 150 °C

Rheological properties

Viscosity	100 - 130[2] Pa.s

[2]: Brookfield HAT, UC&SP, 10 rpm, 25 °C

Application technique

Drying time	10[3] min
Drying temperature	120 - 150[3] °C

[3]: box oven

Storage and stability

Shelf life	6[4] months

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

Additional information

How to use

Processing

- Dipping
  - The Micromax™ 1197F is suitable for carrier plate style dipping. If large size parts are dipped then blotting may be beneficial to minimize the amount of ink deposited on the top of the chip.

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- Drying
  - Micromax™ 1197F can be dried in a programmed belt dryer at 150 – 180 °C peak temperature for approximately 8 – 12 minutes total cycle time or a box oven dryer at 120 – 150 °C for 10 minutes. Some experimenting with the conditions is recommended to achieve the best dip cosmetics.
- Firing
  - Care must be taken to ensure that any gases/vapors from other chemicals or materials (e.g. halogenated solvents) do not enter the furnace muffle. It is also essential that the air supply to the furnace is clean, dry and free of contaminants. Air flows and extraction rates should be optimized to ensure that oxidizing conditions exist within the muffle, and that no furnace exhaust gases enter the room. Micromax™ 1197F termination composition is fired on a 40 minute firing cycle to a peak temperature of 690 °C, held for 5 – 10 minutes. Variations in the peak firing temperature and/or time at the peak temperature may result in variations in the final fired properties. Care must be taken to assess the appropriate firing conditions for a particular body type.

Properties

- Information in this datasheet shows anticipated typical physical properties for Micromax™ 1197F 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 shelflife

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. Thinning is not recommended.

Safety and handling

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