

Micromax™ 1197F

Electronic Inks & Pastes

PRODUCT DESCRIPTION

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.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

Application	Surface mount termination
Solvent or thinner	Micromax™ 4553
Solid content	76 to 78

TECHNICAL DATA

Rheological Properties	Value	Unit
Viscosity ¹	100 to 130	Pa.s

Application Technique	Value	Unit
Drying time ²	10	min
Drying temperature ³	120 to 150	°C

Storage and Stability	Value Unit
Shelf life ⁴	6 months

¹Brookfield HAT, UC&SP; 10 rpm, 25°C

²box oven

³box oven

⁴in unopened containers, from date of shipment, stable environment at room temperature between 5°C - 30°C

PROCESSING GUIDELINES

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.

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 shelf-life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature between 5°C - 30°C. Shelf life of material in unopened containers is 6 months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

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 and handling

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

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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