

Micromax™ 1173

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Ag Nickel Platable MLC Termination Composition

Micromax™ 1173 is an Ag nickel platable MLC composition designed for terminating Multilayer Ceramic Capacitors for use in surface mounted applications. This product is compatible with low, mid and high firing MLC dielectrics.

Product benefits

- Cd, Pb and Phthalate free*

* Phthalate, Lead oxide and Cadmium oxide 'free' as used herein means that cadmium and phthalate 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™ 8218
Solid content	74.2 to 75.2

TECHNICAL DATA

Rheological Properties	Value	Unit
Viscosity ¹	19 to 26	Pa.s

Application Technique	Value	Unit
Drying time ²	20	min
Drying temperature ³	110	°C

Storage and Stability	Value	Unit
Shelf life ⁴	6	months

¹Brookfield RVT SC4-14/6R, 25°C ± 1°C

²vented static oven

³vented static oven

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

PROCESSING GUIDELINES

Applications

Micromax™ 1173 is optimized for application by dipping. A minimum band width of 15 mil is recommended. The composition should be applied in the temperature range 23-28°C (73-82°F). Operating outside this range can cause poor cosmetics and coverage due to temperature viscosity effects. The paste is designed for operation over a 4-hr period.

Drying

Use a profiled belt driven dryer with an 8-min drying cycle and a peak temperature of 180°C (356°F). Alternatively use a vented static oven (designed for explosion-proof operation) for 110°C (230°F) for 20 min. Ensure safe exhaust of volatile products.

Firing

Micromax™ 1173 should be fired in a furnace which has a good supply of oil-free air to avoid subsequent solderability problems. A substrate should be chosen that does not interact with the termination during firing. Note that over-firing causes degradation of the solder leach performance and under-firing will lead to poor solderability.

Heating rate 40°C (104°F)/min

Cooling rate 40°C (104°F)/min

Peak Temperature 780°C (1436°F)

The information given herein is based on data believed to be reliable, but the Micromax™ company makes no warranties expressed or implied as to its accuracy and assumes no liability arising out of its use by others.

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 & 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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