

Micromax™ 00L1B

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Resistor Composition

Designed to give high productivity and high quality, Micromax™ 00L1B has been specifically developed for Chip Resistor applications. It also meets the market need for low cost manufacturing.

Product benefits

- Designed to give high power performance at low thickness
- Excellent blend ability for low resistivity application
- Improved green strength
- Cadmium, Nickel and Phthalate free*

*Cadmium, Nickel and Phthalate 'free' as used herein means that cadmium, nickel and phthalate are not intentional ingredients in and are not intentionally added to the referenced product. Trace amount however may be present.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

Application	Chip resistor
Solvent or thinner	Micromax™ 8250(T)

TECHNICAL DATA

Rheological Properties	Value	Unit
Viscosity ¹	80 to 180	Pa.s

Application Technique	Value	Unit
Drying time	10	min
Drying temperature	150	°C
Recommended film thickness	18 to 22	µm

Electrical Properties	Value	Unit
Resistivity ²	0.14 to 0.2	Ohm per square
Hot Temperature Coefficient Resistance ³	-100 to 100	ppm/°C
Cold Temperature Coefficient Resistance ⁴	-100 to 100	ppm/°C

Storage and Stability	Value	Unit
Shelf life ⁵	6	months

¹Brookfield HBT, SC4-14/6R, @10rpm, 25 °C

²Resistor geometry is 500sq, 25°C@20µm.

³Hot TCR (ppm/°C) 25 to 125 °C, Resistor geometry is 500sq.

⁴Cold TCR (ppm/°C) -55 to 25 °C, Resistor geometry is 500sq.

⁵in unopened containers, from date of shipment, at temperature 5-30°C

PROCESSING GUIDELINES

Terminations

Micromax™ 00L1B is designed for use with high silver-containing terminations. Reported properties were obtained using Micromax™ 5426 Ag/Pd termination.

Substrates

Properties are based on tests with 96% Alumina.

Printing

The composition should be thoroughly mixed before use. This is best achieved by slow, gentle, hand-stirring with a clean burr-free spatula (flexible plastic or stainless steel) for 1-2 minutes. Care must be taken to avoid air entrapment. Printing should be performed in a clean and well-ventilated area.

Note: Optimum printing 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

The composition is optimized for screen printing. Thinner is normally not 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 printing characteristics.

Drying

Allow prints to level at room temperature. Then dry in a well-ventilated oven or conveyor dryer.

Firing

Firing 850 °C peak held for 10 minutes on 30 minutes firing cycle.

Fire in a well-ventilated belt, conveyor furnace, or static furnace. Air flows and extraction rates should be optimized to ensure that oxidizing conditions exist within the muffle, and that no exhaust gases enter the room.

Properties

Information in this datasheet shows anticipated typical physical properties for Micromax™ 00L1B based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

General

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.

Storage and shelf life

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

Safety and handling

For safety and handling information pertaining to this product, read 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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