Micromax™ 00L2B

Electronic Inks and Pastes

Resistor Composition

Designed to give high productivity and high quality, Micromax™ 00L2B has been specifically developed for Chip Resistor applications. It also meets the market need of low cost of manufacturing.

Product benefits

- Designed to give high power performance at low thickness.
- Excellent blendability for low resistivity application.
- Cadmium free*

*Cadmium 'free' as used herein means that cadmium is not an intentional ingredient in and is not intentionally added to the referenced product. Trace amounts however may be present.

Product information

Solvent or thinner	Micromax™ 8250

Rheological properties

Viscosity	80 - 180[1]	Pa.s

[1]: Brookfield HBT, SC4-14/6R, @10 rpm

Application technique

Drying time	10	min
Drying temperature	150	°C
Recommended film thickness, dried	18 - 22	µm

Electrical properties

Surface resistivity	50 - 70[2]	mOhm per square
Hot Temperature Coefficient Resistance	≤400[3]	ppm/K
Cold Temperature Coefficient Resistance	≤400[4]	ppm/K

[2]: @20µm, 25°C

[3]: 25 to 125°C

[4]: -55 to 25°C

Storage and stability

Shelf life	6[5]	months

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

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Additional information

How to use

Processing

- Terminations
  - Micromax™ 00L2B were designed for use with high silver-containing terminations. Reported properties were obtained using Micromax™ 5426/5421E Ag/Pd termination. Similar performance properties have been observed with other gold and silver-bearing conductors.
- Substrates
  - Reported properties are based on tests with 96% alumina substrates. Substrates of other composition may yield variation in performance properties.
- Printing
  - The composition should be thoroughly mixed before use. This is best achieved by slow and gently 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 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. 10 minutes at 150°C, Target dried thickness. Dried Thickness 18.0 to 22.0 µm
- 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.

Micromax™Standard QA Firing Profile

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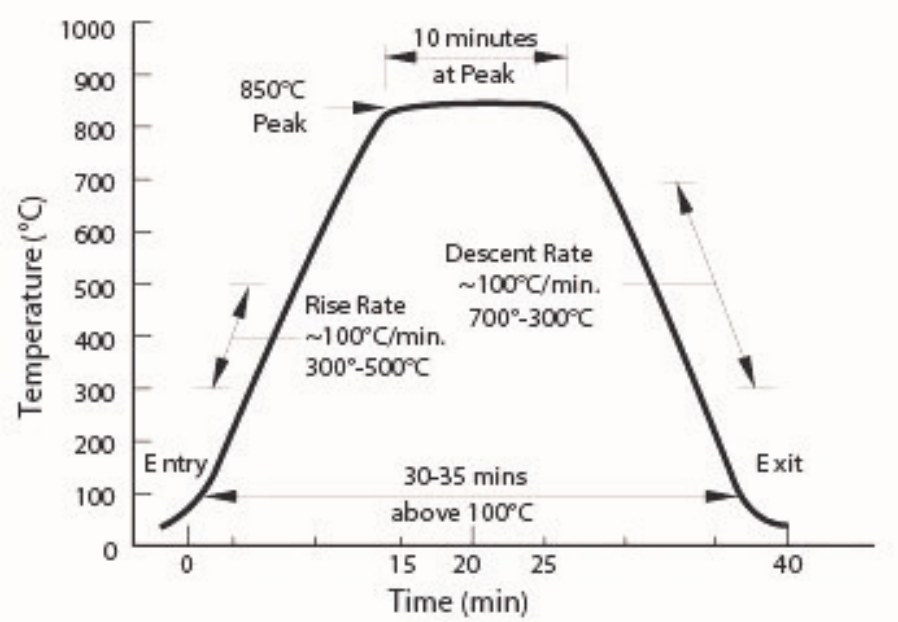

Properties

- Information in this datasheet shows anticipated typical physical properties for Micromax™ 00L2B 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

Performance will depend to a large degree on care exercised in screen printing. Scrupulous care should be taken to keep the composition, printing screens 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 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.

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Safety and handling

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