Micromax™ 5418

Electronic Inks and Pastes

Platable Termination For Chip Resistor Applications

Specially developed for chip resistors applications, Micromax™ 5418 is a platable lead-free*, cadmium-free* silver palladium C1 termination that meets the needs of a high performance and green product

Product benefits

- Superior sulfur resistance by 18% Pd content
- Freedom to design the desired %Pd by blending with Micromax™ 5421E (0.5%Pd) conductor
- Cadmium, Lead, Nickel and Phthalate free*
- High acid resistance and platable
- Excellent solder leach resistance with lead-free solder
- Compatible with Micromax™ 00X1Z (00X0) and 0FxxA resistor series

*Cadmium, Lead, Nickel and Phthalate 'free' as used herein means that cadmium, lead, nickel, and phthalate 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	75 - 77[1]	%
Fineness Of Grind, 4th scratch	≤20	µm
Fineness Of Grind, 50% point	≤10	µm

[1]: 1050 °C

Rheological properties

Viscosity	220 - 290[2]	Pa.s

[2]: Brookfield HBT, #14 spindle, UC&S, 10 rpm, 25 °C

Application technique

Mask mesh	325	
Mask emulsion	10	µm
Drying time	10 - 15	min
Drying temperature	150	°C
Recommended film thickness, dried	12 - 16	µm
Leveling time	5 - 10	min

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Electrical properties

Surface resistivity	≤70[3]	mOhm per square

[3]: at 10µm

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

- Substrates
  - Properties are based on tests using 96% alumina substrates. Substrates of other compositions and from various manufacturers may result in variation in performance properties.
- Printing
  - Properties are based on Micromax™ 5418 printed to 14±2µm dried thickness using 325 mesh stainless steel screen with an emulsion thickness of approximately 10µm.
- Drying
  - Allow wet prints to level for 5-10 minutes at room temperature. Dry 10-15 minutes at 150°C.
- Firing
  - Dried prints should be fired in a belt furnace. Use a 30-minutes cycle with a peak temperature of 850°C x 10 minutes.

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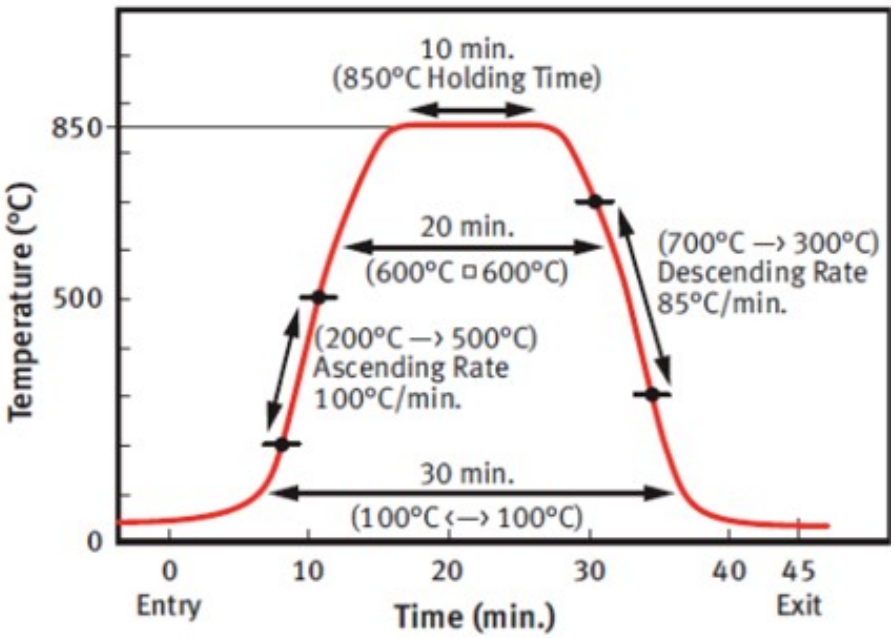
Micromax™ Standard Profile 850°C x 10 min., 30 min.

(Micromax™ QA Profile)



Properties

- Information in this datasheet shows anticipated typical physical properties for Micromax™ 5418 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 (<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.

Safety and handling

For safety and handling information pertaining to this product, read Safety Data

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Sheet (SDS).

Revised: 2023-06-26 Source: Celanese Materials Database