Micromax™ 5421E

Electronic Inks and Pastes

Platable Termination For Chip Resistors Applications

Specially developed for chip resistors applications, Micromax™ 5421E is a platable Leadfree*, Cadmium-free* silver/palladium C1 termination that meets the needs of low cost, high performance and green product.

Product benefits

- Lead free*
- Cadmium free*
- High acid resistance
- Dense fired film
- Platable
- Fast firing, 850 °C/30min profile
- Cost effective, 0.5% palladium content
- Compatible with Micromax™ 00X0srs resistors

*Cadmium and lead 'free' as used herein means that these are not intentionally added to the referenced product. Trace amounts however may be present.

Product information

Solvent or thinner	Micromax™ 4553	
Solid content	75.6 - 77.6[1]	%
Fineness Of Grind, 4th scratch	≤20	µm
Fineness Of Grind, 50% point	≤10	µm

[1]: 750 °C

Rheological properties

Viscosity	210 - 260[2]	Pa.s

[2]: Brookfield HBT, SC4-14/6R @10 rpm, 25 °C

Application technique

Mask mesh	325[3]	
Mask emulsion	15	µm
Drying time	15[4]	min
Drying temperature	150[4]	°C
Recommended film thickness, dried	16 - 20	µm
Leveling time	10 - 15	min

[3]: Screen Types: Stainless steel

[4]: box oven

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Electrical properties

Surface resistivity	≤10[5]	mOhm per square

[5]: @12µm

Storage and stability

Shelf life	6[6]	months

[6]: in unopened containers, from date of shipment, at room temperature (<25°C)

Additional information

How to use

Processing

- Substrates
  - Properties are based on test using 96% alumina substrates. Substrates of other compositions and from various manufacturers may result in variations in performance properties.
- Printing
  - Properties are based on Micromax™ 5421E printed to 18±2 µm dried thickness using 325 mesh stainless steel screen with an emulsion thickness of approximately 15µm.
- Drying
  - Allow the wet print to level at room temperature and then dried.
- 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

Properties

- Information in this datasheet shows anticipated typical physical properties for Micromax™ 5421E 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.

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Safety and handling

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

Adhesion solder after heat ageing

Celanese
The chemistry inside innovation™

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