

Micromax™ 5421E

Electronic Inks & Pastes

PRODUCT DESCRIPTION

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.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

General Properties	Value Unit
Application	Resistor termination
Solvent or thinner	Micromax™ 4553
Solid content ¹	75.6 to 77.6 %
Fineness Of Grind	≤20 µm
Fineness Of Grind	≤10 µm

TECHNICAL DATA

Rheological Properties	Value	Unit
Viscosity ²	210 to 260	Pa.s
Application Technique	Value	Unit
Mask mesh ³	325	
Mask emulsion	15	µm
Drying time ⁴	15	min
Drying temperature ⁵	150	°C
Recommended film thickness	16 to 20	µm
Leveling time	10 to 15	min
Mechanical Properties	Value	Unit
Adhesion	≥18	N
Electrical Properties	Value	Unit
Resistivity ⁶	≤10	mOhm per square
Storage and Stability	Value	Unit
Shelf life ⁷	6	months

¹750°C

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

³Screen Types: Stainless steel

⁴box oven

⁵box oven

⁶@12µm

⁷in unopened containers, from date of shipment, stable environment at room temperature between 5°C - 30°C

PROCESSING GUIDELINES

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

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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