

Micromax™ 5430E

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Platable Termination for Chip Resistors

Specially developed for chip resistor applications, Micromax™ 5430E is a screen printable and platable lead-free* silvertermination that meets the needs for low cost, high performance.

Product benefits

- 600-620°C low temperature firing
- Excellent cosmetics
- Excellent post-plating adhesion
- High acid resistance
- Screen printable • Lead, Cadmium, Nickel and Phthalate free*

* Lead, Cadmium, Nickel and Phthalate 'free' as used herein means that lead, 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

General Properties	Value Unit
Application	Resistor termination
Solvent or thinner	Micromax™ 8250
Solid content ¹	74 to 76 %
Fineness Of Grind	≤20 µm
Fineness Of Grind	≤10 µm

TECHNICAL DATA

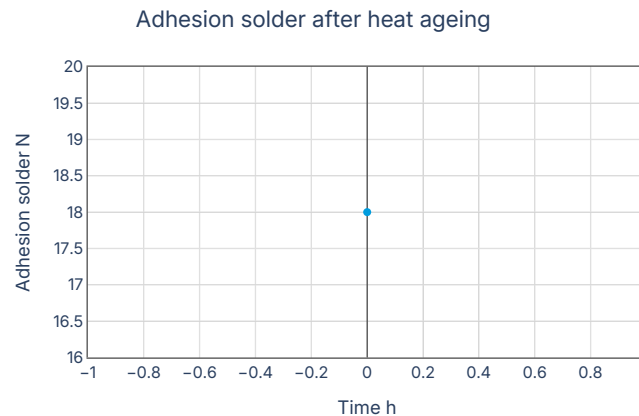
Rheological Properties	Value Unit
Viscosity ²	265 to 335 Pa.s

Application Technique	Value	Unit
Mask mesh	250	
Mask emulsion	20	µm
Drying time	15	min
Drying temperature	150	°C
Recommended film thickness	13 to 17	µm
Leveling time	5 to 10	min
Electrical Properties	Value	Unit
Resistivity ³	≤3	mOhm per square
Storage and Stability	Value	Unit
Shelf life ⁴	6	months

¹750°C

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

³at 10µm

⁴in unopened containers, from date of shipment, stable environment at room temperature between 5°C - 30°C


PROCESSING GUIDELINES

Substrates

Properties were measured on 96% alumina substrates. Substrates of other compositions and from various manufacturers may result in variation in performance properties.

Printing

Properties are based on Micromax™ 5430E printed to $15 \pm 2 \mu\text{m}$ dried thickness using 250 mesh stainless steel screen with an emulsion thickness of approximately $20 \mu\text{m}$.

Silver termination Micromax™ 5430E should be thoroughly mixed before use. This is best achieved by slow, gentle hand stirring with a clean, borrr-free spatula (flexible plastic or stainless steel) for 1-2 minutes. Care must be taken to avoid air bubble entrapment.

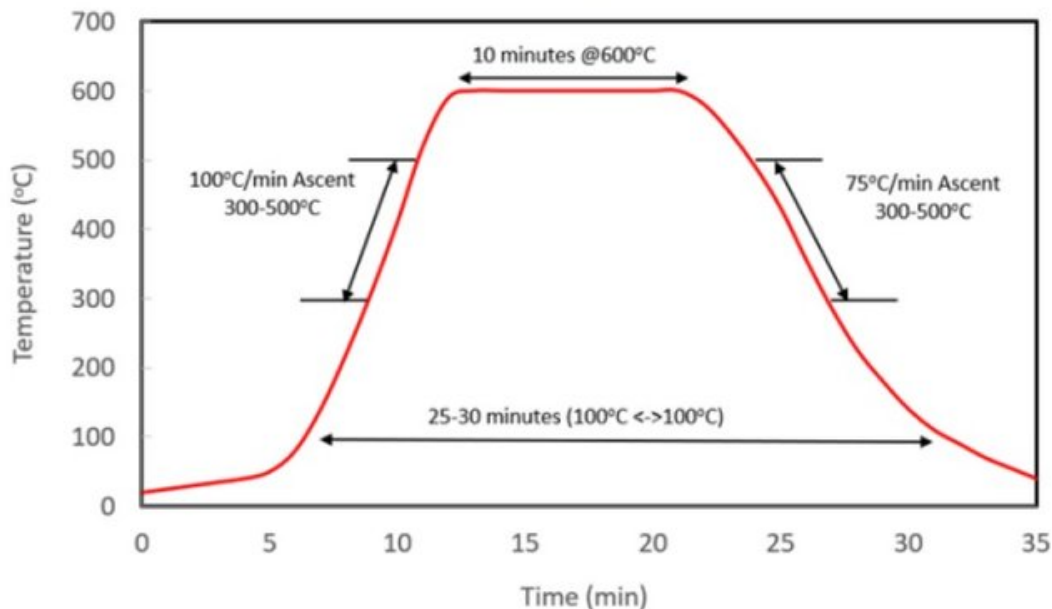
Drying

Allow the wet print to level for 10-15 minutes at room temperature. Dry for 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 $600\text{--}620^\circ\text{C}$ x 10 minutes.

Micromax™ Standard Profile 600°C x 10min.
(Micromax™ QA Profile)



Properties

Information in this datasheet shows anticipated typical physical properties for Micromax™ 5430E 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 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 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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