

Micromax™ 5715R

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Gold Conductor Composition

Micromax™ 5715R is a cadmium free*, screen printable, composition. It is used as a gold wire bondable conductor in high density hybrids. Micromax™ 5715R is capable of good automatic gold wire bonding yields with 1-mil and 2-mil wire. Excellent wire bond acceptance over a broad thickness range.

Excellent bond results have been shown with 1 mil Al wire.

*Cadmium 'free' as used herein means that this is 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	High reliability Au conductor
Solvent or thinner	Micromax™ 8672

TECHNICAL DATA

Rheological Properties	Value Unit
Viscosity ¹	450 to 600 Pa.s

Application Technique	Value Unit
Mask mesh	325
Mask emulsion	12 µm
Drying time	15 min
Drying temperature	150 °C
Theoretical coverage	50 to 80 cm ² /g
Recommended film thickness	10 µm

Application Technique	Value	Unit
Print resolution ²	175	µm
Print resolution ³	75	µm
Leveling time	10 to 15	min
Electrical Properties	Value	Unit
Resistivity ⁴	≤6.5	mOhm per square
Storage and Stability	Value	Unit
Shelf life ⁵	6	months

¹Brookfield HBT, UC&SP; SC4-14/6R, 10 rpm, 25°C

²Using special screens designed for fine line printing

³Using special screens designed for fine line printing

⁴at 8µm fired thickness

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

PROCESSING GUIDELINES

Printing

A 325-mesh stainless steel screen with an 12µm (0.5mil) emulsion thickness is recommended.

Drying

Allow the wet print to level for 10-15 minutes at room temperature. Dry for 15 minutes at 150°C.

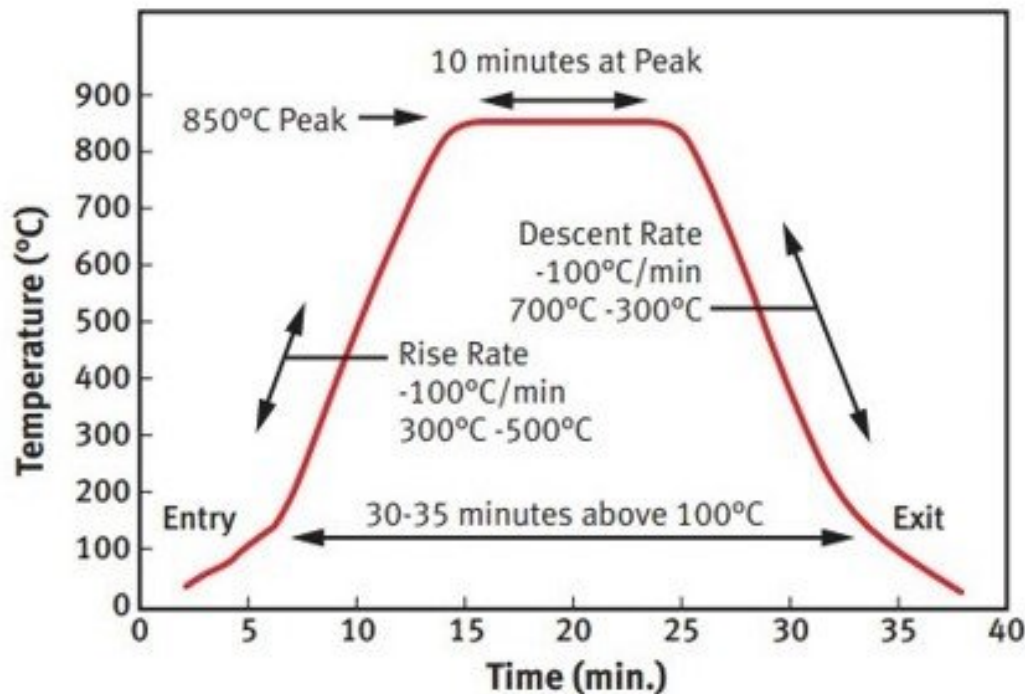
Firing

Dried prints should be fired in a belt furnace. Use a 30 minute cycle with a peak temperature of 850°C for 10 minutes. No significant changes in performance characteristics were seen after multiple refiring at 850°C.

Bonding

Hughes 2460-III Automatic Gold Wire Bonder, stage 150°C, ceramic tool, 1.0mil Au wire, tensile strength 8g min, elongation 3 to 5%.

Typical 850°C 30 Minute Firing Profile



Wirebonded Properties Automatic Thermosonic

Properties	Fired Thickness
Gold Wire Bonding*	6 µm 10 µm
1.0 mil Wire Diameter	
Pull Strengths Initial (Aug)	13.7g 13.0g
2.0 mil Wire Diameter	
Pull Strengths Initial (Aug)	40.5g 39.6g
*See Bonding conditions. All wire breaks. No bonds lifts	

Information in this datasheet shows anticipated typical physical properties for Micromax™ 5715R 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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