

Micromax™ 5444

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Silver Termination

Micromax™ 5444 is a plateable silver termination developed for Micromax™ 00X0A resistors on BeO (beryllium oxide) substrates.

Product benefits

- Excellent post-plating adhesion
- High acid resistance
- Thinner prints
- Fast firing-850°C/30 min profile
- Cadmium, Nickel and Phthalate free*
- Co-fireable with Micromax™ 00X0A resistors on BeO and other substrates
- Dense fired film

*Cadmium, Nickel and Phthalate 'free' as used herein means that cadmium, nickel, and phthalate are not intentional ingredients in and 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	Silver hybrid Ag conductors
Solvent or thinner	Micromax™ 8250

TECHNICAL DATA

Rheological Properties	Value Unit
Viscosity ¹	160 to 200 Pa.s

Application Technique	Value Unit
Mask mesh	250

Application Technique	Value	Unit
Mask emulsion	10	µm
Drying time	10	min
Drying temperature	150	°C
Shrinkage	16 to 20	%
Leveling time	5 to 10	min

Storage and Stability	Value	Unit
Shelf life ²	6	months

¹Brookfield HAT, SC4-14/6R, 10 rpm, 25°C

²in unopened containers, from date of shipment, stable environment at room temperature between 5°C - 30°C

PROCESSING GUIDELINES

Substrates

Termination is specially formulated to use over BeO substrates. Also compatible with substrates such as 96% alumina.

Printing

Properties are based on Micromax™ 5444 printed to 18±2µm dried thickness using 250-mesh stainless steel screen with an emulsion thickness of approximately 10µm.

Drying

Prints should be allowed to level at room temperature for 5 to 10 minutes and then dried for 10 minutes at 150°C.

Firing

Properties are based on a 30-minute firing cycle with 10 minutes at a peak of 850°C.

Properties

Information in this datasheet shows anticipated typical physical properties for Micromax™ 5444 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

www.macdermidalpha.com

North America	Europe	Asia
470 Research Drive Wilmington, DE, USA 855.622.7813	Bristol & Bath Science Park Dirac Crescent, Emersons Green, Bristol, BS16 7FR, United Kingdom 44.117.4769148	No. 45 Hsing-Point Road Taoyuan City, 330457 Taiwan 886.3.3773588

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

DISCLAIMER: All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. No statement or recommendation shall constitute a representation unless set forth in an agreement signed by officers of seller and manufacturer. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY IS MADE. The following warranty is made in lieu of such warranties and all other warranties, express, implied, or statutory. Products are warranted to be free from defects in material and workmanship at the time sold. The sole obligation of seller and manufacturer under this warranty shall be to replace any noncompliant product at the time sold. Under no circumstances shall manufacturer or seller be liable for any loss, damage or expense, direct, indirect, incidental or consequential, arising out of the inability to use the product. Notwithstanding the foregoing, if products are supplied in response to a customer request that specifies operating parameters beyond those stated above, or if products are used under conditions exceeding said parameters, the customer by acceptance or use thereof assumes all risk of product failure and of all direct, indirect, incidental and consequential damages that may result from use of the products under such conditions, and agrees to exonerate, indemnify, defend and hold harmless MacDermid, Incorporated and its affiliates therefrom. No suggestion for product use nor anything contained herein shall be construed as a recommendation to use any product in a manner that infringes any patent or other intellectual property rights, and seller and manufacturer assume no responsibility or liability for any such infringement.

© 2026 MacDermid, Inc. and its group of companies. All rights reserved. "(R)" and "TM" are registered trademarks or trademarks of MacDermid, Inc. and its group of companies in the United States and/or other countries.