

Micromax™ 4141A

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Dielectric Composition

Micromax™ 4141A dielectric is a low-k value composition, designed to be fired using a 900°C profile.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

General Properties	Value Unit
Application	High reliability dielectric
Solvent or thinner	Micromax™ 9450
Solid content	71 to 73 %

TECHNICAL DATA

Rheological Properties	Value Unit
Viscosity ¹	280 to 380 Pa.s

Application Technique	Value Unit
Mask mesh	280 to 325
Drying time	15 min
Drying temperature	150 °C
Theoretical coverage ²	80 to 110 cm ² /g
Recommended film thickness	45 to 55 µm
Leveling time	10 min

Electrical Properties	Value Unit
Dielectric Constant	3.9 to 4.6
Dissipation Factor	≤0.5 %
Insulation Resistance	≥1E12 Ohm
Breakdown Voltage ³	≥1000 V

Storage and Stability	Value Unit
Shelf life ⁴	6 months

¹Brookfield 2xHAT, 10 rpm, #14 SP&UC,, 25°C

²at 25.4 µm, based on 50 µm dried thickness

³at 25µm

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

PROCESSING GUIDELINES

Design & compatibility

Compatibility

Testing was done with Micromax™ QG150, Micromax™ 5715 and Micromax™ 5771. While they all work well, Micromax™ 5771 offers the best results.

Printing

The composition should be thoroughly mixed before use. This is best achieved by slow, gentle, hand stirring with a clean, burr-free, hard rubber spatula for 1-2 minutes. Care must be taken to avoid air entrapment. Printing should be performed in a clean and well-ventilated area. A 280 or 325-mesh screen with 3 prints is recommended.

Note: Optimum printing characteristics are generally achieved in the room temperature range of 20°C - 23°C. It is therefore important that the material, in its container, is at this temperature prior to commencement of printing.

Thinning

This composition is optimized for screen printing; thinning is not normally required. Use the Micromax™ recommended thinner for slight adjustments to viscosity or to replace evaporation losses. The use of too much thinner or the use of a non recommended thinner may affect the rheological behavior of the material and its printing characteristics.

Drying

Allow prints to level 10 minutes at room temperature. Dry in a well-ventilated oven or conveyor dryer for 15 minutes at 150°C.

Firing

Fire in a well-ventilated belt, conveyor furnace, or static furnace. Fire using a 60 minute cycle in air. The peak temperature is held at 900°C for 10 minutes.

General

Performance will depend to a large degree on care exercised in screen printing. Scrupulous care should be taken to keep the composition, printing screens and other tools free of metal contamination. Dust, lint and other particulate matter may also contribute to poor yields.

Information in this datasheet shows anticipated typical physical properties for Micromax™ 4141A 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.