

Micromax™ BQ321

Electronic Inks and Pastes

Platinum Conductive Composition

Micromax™ BQ321 is Pt composition designed for working electrodes in biosensor and polymer thick film (PTF) sensors. It provides high signal to noise ratios (high sensitivity) in a multiplicity of designs. It can be used on both flatbed and reel-to-reel manufacturing lines.

Product benefits

- High sensitivity
- Strong Adhesion to a variety of polyethylene terephthalate (PET) substrates

Product information

Solvent or thinner	Micromax™ 3610
Density	2.02 g/cm ³
Solid content	44 - 46.5 ^[1] %
[1]: 150°C	

Rheological properties

Viscosity	40 - 80 ^[2] Pa.s
[2]: Brookfield RVT, #14 spindle, 10 rpm, 25°C	

Application technique

Mask mesh	200 ^[3]
Drying time	5 - 10 ^[4] min
Drying temperature	130 ^[4] °C
Theoretical coverage	52 ^[5] cm ² /g
Recommended film thickness, dried	8 - 12 ^[6] µm
[3]: stainless steel	
[4]: box oven	
[5]: at 25.4µm	
[6]: 200-mesh stainless steel	

Typical mechanical properties

Adhesion, pull tape	no material class transfer ^[7]
[7]: Treated PET 127µm	

Micromax™ BQ321

Electronic Inks and Pastes

Electrical properties

Surface resistivity 5000 - 10000^[8] mOhm per square

[8]: at 25µm thickness, on 127µm polyester film

Storage and stability

Shelf life 6^[9] months

[9]: in unopened containers, from date of shipment, at temperature <25°C (>0°C)

Additional information

How to use

Processing

- **Screen types**
 - Polyester, stainless steel
- **Printing**
 - Reel-to-reel, semi-automatic or manual
- **Typical circuit line thickness**
 - Printed with 200-mesh stainless screen
 - 8 - 12 µm
- **Work life**
 - > 2 hours
- **Clean-up solvent**
 - Ethylene diacetate or Methyl propasol acetate
- **Drying**
 - Box oven : 130°C for 5-10 minutes
 - Reel-to-reel : 140°C for 1 minute

Properties

Typical Physical Properties on 5-mil Polyester Film

Test	Properties
Abrasion Resistance, Pencil Hardness (ASTM D3363-74) [H]	4
Soldering	Not Recommended

Information in this datasheet shows anticipated typical physical properties for Micromax™ BQ321 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

Micromax™ BQ321

Electronic Inks and Pastes

Micromax™ BQ Series compositions should be stored in a clean, stable environment at room temperature (~25°C) with their lids tightly sealed. Storage in high temperature (>30°C) or in freezers (<0°C) is NOT recommended as this could cause irreversible changes in the material. The shelf life of compositions in factory-sealed (unopened) containers stored under room temperature (~25°C) conditions is 6 months from the date of shipment. Some settling of solids may occur over time, so composition should be stirred thoroughly before use.

Safety and handling

For safety and handling information pertaining to this product, read Safety Data Sheet (SDS).

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.

© 2023 Celanese or its affiliates. All rights reserved. Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates. Fortron is a registered trademark of Fortron Industries LLC. KEPITAL is a registered trademark of Korea Engineering Plastics Company, Ltd.