

MicromaxTM IntexarTM PE874

Electronic Inks and Pastes

Stretchable Silver Conductor

Micromax[™] Intexar[™] PE874 is a high recovery stretchable silver conductor paste for printed low-voltage circuitry on elastomeric film and textile substrates. Micromax[™] PE874 is a silver-bearing conductor that possesses excellent stretchability, adhesion, and conduction. It is compatible with polyurethane (TPU) film and select synthetic fabrics.

Product benefits

- High recovery stretchable conductor
- Washable with proper encapsulation
- · Compatible with wide variety of fabric and film substrates
- Compatible with lamination

Product information

Solvent or thinner Density Solid content [1]: 150°C	Micromax™ 8260 2.41 63 - 68 ^[1]	g/cm³ %	
Rheological properties			
Viscosity [2]: Brookfield RVT, #14 spindle, 10 rpm, 25°C	20 - 60 ^[2]	Pa.s	
Application technique			
Mask mesh Drying time Drying temperature Recommended film thickness, dried [3]: Screen Types: Stainless steel	200 - 325 ^[3] 15 130 8 - 12	min °C μm	
Typical mechanical properties Adhesion, cross hatch [4]: ASTM D3359-78, w/3M Scotch Tape #600	5B ^[4]	class	
Electrical properties			
Surface resistivity	≤50 ^[5]	mOhm per square	
Resistivity retention after crease, 180°, 1 cycle, 2kg [5]: at 25µm, 5µm dried print thickness on ST505 PET film [6]: ASTM F1683, 180degc, 1 cycle, 2kg	≤5 ^[6]	%	ASTM F 1683

Printed: 2024-11-18



Micromax[™] Intexar[™] PE874

Electronic Inks and Pastes

Storage and stability

Shelf life [7]: in unopened containers, from date of shipment, at temperature <25°C

Additional information

How to use

Processing

Substrates

- Select synthetic fabrics
- Coated fabrics & membranes
- Thermoplastic polyurethane films

6^[7] months

 Micromax[™] PE874 is appropriate for many types of thermallystable substrates in wearable electronics applications. Due to the diverse nature of potential fabrics and films that could be considered, it is not always possible to provide detailed performance guidance. For more information, please call your local Micromax[™] representative.

Screen types

- 325-200 wire/inch stainless steel mesh
- 120-77 thread/cm polyester mesh

• Printing

- Automatic reel-to-reel
- Semi-automatic flat-bed
- Rotary screen/cylinder screen

Thinning

- Thinning with Micromax[™] 8260 may be desired in some cases depending on printing requirements.
- Drying

 Dry at 130 °C for 15 minutes in a well-ventilated oven or conveyor dryer, where the exhaust meets environmental regulations. Drying efficiency and good print quality/thickness control helps ensure best electrical and physical performance.

Clean-up solvent

- Ethylene diacetate
- Encapsulant
 - Micromax[™] PE773

Properties

Typical Physical Properties

Test	Properties
Abrasion Resistance, Pencil Hardness (ASTM D3363-74) [H]	1

Printed on Melinex ST505 Polyester Film. Information in this datasheet shows anticipated typical

Printed: 2024-11-18



MicromaxTM IntexarTM PE874

Electronic Inks and Pastes

physical properties for Micromax[™] Intexar[™] PE874 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 (<25°C). Shelf life of material in unopened containers is six months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

Safety and handling

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

Printed: 2024-11-18

Revised: 2024-09-06 Source: Celanese Materials Database

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 not intended for use in medical or dental implants. Regardless of any such product 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 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 the lowest that texist. 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 m

© 2024 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.

Page: 3 of 3