Micromax™ ME802

Electronic Inks and Pastes

Transparent Conductor

Micromax™ ME802 is part of the Micromax™ suite of materials developed for In Mold Electronic applications. Micromax™ ME802 is a transparent conductive ink capable of withstanding thermoforming and overmolding temperatures. This composition is intended to be used for Capacitive Switch applications.

Product benefits

- Highly transparent
- High elongation with minimal/no cracking after thermoforming
- Excellent stability at 85°C/85% RH
- Very good white light/LED stability

Product information

Colour	Blue	
Solid content	2.9 - 5.9[1]	%

[1]: 150°C

Rheological properties

Viscosity	30 - 60[2]	Pa.s

[2]: Brookfield DVII-Pro Cone plate at shear force 0.2/sec, 25°C

Application technique

Mask mesh	325[3]	
Drying time	5[4]	min
Drying temperature	120[4]	°C
Recommended film thickness, dried	0.3 - 0.7[5]	µm

[3]: Screen Types: Stainless steel

[4]: box oven

[5]: 325 mesh stainless steel

Electrical properties

Surface resistivity	≤500000	mOhm per square

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Storage and stability

Shelf life	6[6] months

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

Additional information

How to use

Processing

- Substrates
  - Polycarbonate, surface-treated polyester
- Screen types
  - Polyester, stainless stee
- Printing
  - Reel-to-reel, semi-automatic or manual
  - Polyester or steel mesh can be used. A water and solvent resistant emulsion is recommended.
  - If gelatinous particulate phase is present, gentle stirring and avoiding air entrapment will return the ink to a homogeneous state. Best print results are obtained with minimal squeegee pressure, a higher print speed and with a print/flood mode on the printer setting.
- Typical circuit line thickness
  - 0.3 - 0.7 µm
  - Printed with SD 56/28 (325mesh) stainless steel or 77-48 PET Screen
- Work life
  - > 1 hour
- Clean-up solvent
  - Ethylene glycol diacetate
- Drying
  - Box oven : 120 °C for 5 minutes
  - Reel-to-reel : 120 °C for 3 minutes
  - Dry in a well-ventilated box oven or belt/conveyor furnace. Air flow and extraction rates should be optimized to ensure complete removal of solvent from the paste. A strong air flow may help to reduce the drying temperature combination. It will also aid in achieving the lowest as-printed resistance.

Properties

Typical Physical Properties

Test	Properties
OD Absorbance	< 0.05

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%VLT	≥ 90
Low Haze	< 0.3% after 1000hrs at 85/85% humidity

Information in this datasheet shows anticipated typical physical properties for Micromax™ ME802 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).

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