Micromax™ 7112

Electronic Inks and Pastes

Platinum/Carbon Composition

Micromax™ 7112 is a Platinum/Carbon 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

- Good Printability
- High Sensitivity
- Strong Adhesion to a variety of polyethylene teraphthalate (PET) substrates

Product information

Solvent or thinner	Micromax™ 8210	
Density	1.6[1]	g/cm³
Solid content	34 - 40[2]	%

[1]: on 127µm Polyester Film

[2]: 150°C

Rheological properties

Viscosity	40 - 80[3]	Pa.s

[3]: Brookfield RVT, #14 spindle &UC, 10 rpm, 25°C

Application technique

Mask mesh	200[4]	
Drying time	5 - 10[5]	min
Drying temperature	130[5]	°C
Theoretical coverage	152[6]	cm²/g
Recommended film thickness, dried	8 - 12	µm

[4]: Screen Types: Stainless steel

[5]: box oven

[6]: at 25.4µm

Typical mechanical properties

Adhesion, cross hatch	5B[7]	class

[7]: Treated PET 127µm

Micromax™ 7112

Electronic Inks and Pastes

Electrical properties

Surface resistivity	0 - 800000[8]	mOhm per square

[8]: at 25.4µm dried thickness

Storage and stability

Shelf life	6[9]	months

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

Additional information

How to use

Processing

- Screen types
  - Polyester, stainless steel
- Printing
  - Reel-to-reel, semi-automatic or manual
- Typical circuit line thickness
  - 8 - 12 µm
  - Printed with 200-mesh stainless steel screen
- 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
  - 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/time considerable and to achieve the lowest as-printed resistance. Typical drying conditions. Static box oven : 130°C for 5-10 minutes.

Properties

Typical Dried Properties

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

Micromax™ 7112

Electronic Inks and Pastes

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).

Revised: 2023-07-28 Source: Celanese Materials Database