

# Micromax™ ME902

## Electronic Inks and Pastes

### Electrically Conductive Adhesive

Micromax™ ME902 is a part of the Micromax™ suite of materials developed for In-Mold Electronic applications. Micromax™ ME902 is an electrically conductive adhesive system for use in stencil-printing and syringe-dispensing applications. Its unique formulation provides good adhesion between SMD components and Micromax™ silver conductive pastes after heat curing. Micromax™ ME902 maintains some flexibility after drying, which enables handling & thermoforming of IME circuits on thin substrates. It maintains its properties after over-molding.

### Product benefits

- One part electrically conductive adhesive
- Good adhesion with flexibility for IME applications
- Excellent performance after thermoforming & over-molding
- Apply via stencil-printing or syringe-dispensing

### Product information

|                    |                          |
|--------------------|--------------------------|
| Solvent or thinner | Micromax™ 8270           |
| Solid content      | 75 - 77 <sup>[1]</sup> % |
| [1]: 150 °C        |                          |

### Rheological properties

|                                                 |                             |
|-------------------------------------------------|-----------------------------|
| Viscosity                                       | 60 - 75 <sup>[2]</sup> Pa.s |
| [2]: Brookfield RVT, #14 spindle, 10 rpm, 25 °C |                             |

### Application technique

|                                   |                           |
|-----------------------------------|---------------------------|
| Mask emulsion                     | 100 <sup>[3]</sup> μm     |
| Drying time                       | 20 <sup>[4]</sup> min     |
| Drying temperature                | 120 <sup>[4]</sup> °C     |
| Recommended film thickness, dried | 30 - 50 <sup>[5]</sup> μm |
| [3]: Screen Types: Metal stencil  |                           |
| [4]: box oven                     |                           |
| [5]: 100μm thick stencil          |                           |

### Electrical properties

|                                                    |                                          |
|----------------------------------------------------|------------------------------------------|
| Surface resistivity                                | 100 - 150 <sup>[6]</sup> mOhm per square |
| [6]: at 25.4μm, serpentine pattern, 14μm thickness |                                          |

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### Storage and stability

Shelf life

6<sup>[7]</sup> months

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

### Additional information

How to use

### Design & compatibility

- **Compatibility**
  - EFD Fluid Dispensing Systems, bench-top or robotic
  - Stencil-printing
  - Screen-printing (thinning is required)

### Processing

- **Substrates**
  - Micromax™ silver pastes on polycarbonate or surface-treated polyester
- **Work life (on stencil)**
  - > 1 hour
- **Clean-up solvent**
  - Ethylene glycol diacetate
- **Typical thickness (after drying)**
  - 30 ~ 50 µm
  - Stencil-printed with a ~100µm thick stencil
- **Drying**
  - Box oven : 120 °C for 20 minutes in a well-ventilated oven

### Properties

Typical Physical Properties

| Test                                                                               | Properties  |
|------------------------------------------------------------------------------------|-------------|
| Component Shear Strength (grams-force)<br>(1206-size SMD LEDs on Micromax™ silver) | 1000 - 1200 |

Information in this datasheet shows anticipated typical physical properties for Micromax™ ME902 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

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### 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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### Adhesion solder after heat ageing

