**PRODUCT DESCRIPTION**

ME602 is part of the DuPont suite of materials developed for In Mold Electronic applications. ME602 is a stretchable silver conductor capable of withstanding thermoforming and overmolding temperatures. This composition can be used for Capacitive Switch applications and interconnecting circuitry enabling fully integrated 3-dimensional functional electronic devices.

**PRODUCT BENEFITS**

- Excellent adhesion directly on polycarbonate and graphic inks
- Excellent performance after thermoforming and injection molding

**PROCESSING CONDITIONS**

**Substrates**
Polycarbonate, surface-treated polyester

**Screen Printing Equipment**
Reel-to-reel, semi-automatic or manual

**Ink Residence Time on Screen**
>1 Hour

**Screen Types**
Polyester, stainless steel

**Typical Drying Conditions**
Box oven: 120°C for 20 minutes
Reel-to-reel: 120°C for 4 minutes

---

**Typical Circuit Line Thickness**
8-12 Microns
Printed with SD 56/36 (280mesh) s/steel or 77-48 PET Screen

**Clean-Up Solvent**
Ethylene glycol diacetate

**Table 1. Composition Properties**

<table>
<thead>
<tr>
<th>Test</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solids (%) @ 150°C</td>
<td>49.0 – 53.0</td>
</tr>
<tr>
<td>Viscosity (Pa.s)</td>
<td>15 - 35</td>
</tr>
<tr>
<td>Thinner</td>
<td>DuPont™ 8265</td>
</tr>
<tr>
<td>Shelf Life (months)</td>
<td>6</td>
</tr>
</tbody>
</table>

**Table 2. Typical Physical Properties**

<table>
<thead>
<tr>
<th>Test</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheet Resistivity on PC (mΩ/sq/mil)</td>
<td>≤45</td>
</tr>
<tr>
<td>Resistivity after Thermoforming (mΩ/sq/mil)</td>
<td>≤300***</td>
</tr>
<tr>
<td>Coverage (cm²/g) [using screen type 325 s/steel mesh]</td>
<td>200</td>
</tr>
<tr>
<td>Abrasion Resistance (H) [ASTM pencil hardness]</td>
<td>≥H</td>
</tr>
<tr>
<td>Adhesion (B) [ASTM x-hatch, no material removal]</td>
<td>5</td>
</tr>
</tbody>
</table>

***Results can vary some depending upon the degree of elongation after thermoforming.

Tables 1 and 2 show anticipated typical physical properties for DuPont™ ME602 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

**DRYING**

After printing, ME602 will interact with polycarbonate if left wet for extended periods. It is therefore recommended to dry as soon as possible after printing.

Drying is a critical processing step and in order to achieve optimum performance, sufficient temperature/time should be allowed to ensure complete removal of solvent.
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.

**THERMOFORMING**

Thermoforming performance of ME602 can vary depending on the build structure, processing conditions, thermoforming technique, and equipment used. As such, parameters need to be assessed and optimized.

If more precision is needed with printed symbols and structures, high pressure forming has shown to give more accuracy as it ensures more even stretch. Forming temperatures around 160°C can be used. Stretchability >50% can be achieved.

**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 the Material Safety Data Sheet (MSDS).

---

**FOR MORE INFORMATION ON DUPONT™ ME602 OR OTHER DUPONT MICROCIRCUIT MATERIALS, PLEASE CONTACT YOUR LOCAL REPRESENTATIVE:**

**Americas**
DuPont Microcircuit Materials
14 TW Alexander Drive
Research Triangle Park, NC 27709 USA
Tel +1 800 284 3382 (calls within USA)
Tel +1 919 248 5188 (calls outside USA)

**Europe, Middle East & Africa**
Du Pont (UK) Ltd
Coldharbour Lane
Bristol BS16 1QD UK
Tel +44 117 931 3191

**Asia**
Du Pont Kubushiki Kaisha
MCM Technical Lab
DuPont Electronics Center
KSP R&D B213, 2-1, Sakado 3-chome, Takatsu-ku, Kawasaki-shi, Kanagawa, 213-0012 Japan
Tel +81 44 820 7575

DuPont Taiwan Ltd
45, Hsing-Pont Road
Taoyuan, 330 Taiwan
Tel +886 3 377 3616

DuPont China Holding Company Ltd
Bldg. 11, 399 Keyuan Road
Zhangjiang Hi-Tech Park
Pudong New District
Shanghai 201203
Tel +86 21 3862 2888

**South Korea**
DuPont Korea Inc.
3-5th Floor, Asia tower #726
Yeoksam-dong, Gangnam-gu
Seoul 135-719, Korea
Tel +82 2 2222 5275

**India**
E.I. DuPont India Private Limited
7th Floor, Tower C, DLF Cyber Greens
Sector-25A, DLF City, Phase-III
Gurgaon 122 002 Haryana, India
Tel +91 124 409 1818

**Singapore**
Du Pont Company (Singapore) Pte Ltd
1 HarbourFront Place, #11-01 HarbourFront Tower One
Singapore 098633
Tel +65 6586 3022

**mcm.dupont.com**

---

Copyright © 2015 DuPont. All rights reserved. The DuPont Oval Logo, DuPont™, and all DuPont products denoted with ® or ™ are registered trademarks or trademarks of E. I. du Pont de Nemours and Company or its affiliates.

This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experiments. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in end-use conditions, DuPont makes no warranties, and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see “DuPont Medical Caution Statement,” H-50102-5 K-28948 (10/15)