PRODUCT DESCRIPTION
DuPont™ PE873 is a stretchable silver conductor paste for printed low-voltage circuitry on elastic film and textile substrates. PE873 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
• Stretchable silver conductor
• Washable with proper encapsulation
• Compatible with wide variety of fabric and film substrates
• Compatible with lamination

PROCESSING
Screen Printing Equipment
• Automatic reel-to-reel
• Semi-automatic flat-bed
• Rotary screen/cylinder screen

Substrates
• Select synthetic fabrics
• Coated fabrics & membranes
• Thermoplastic polyurethane films

Screens
• 325 – 200 Wire/inch stainless steel mesh
• 120 – 77 Thread/cm polyester mesh

Curing
Dry at 100 – 160°C for 2 – 10 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.

<table>
<thead>
<tr>
<th>Test</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheet Resistivity (mΩsq/25µm) (5µm Dried Print Thickness on ST505 PET Film)</td>
<td>&lt;75</td>
</tr>
<tr>
<td>Resistivity After Crease (ASTM F1683, 180deg, 1 cycle, 2kg)</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>Abrasion Resistance (ASTM D3363 Pencil Hardness)</td>
<td>1H</td>
</tr>
<tr>
<td>Adhesion (Tape Cross Hatch) (ASTM D3359 w/3M Scotch Tape 600)</td>
<td>No Transfer</td>
</tr>
<tr>
<td>Clean-Up Solvent</td>
<td>Ethylene Diacetate</td>
</tr>
<tr>
<td>Encapsulant</td>
<td>PE771/PE773</td>
</tr>
</tbody>
</table>

Table 2-Typical Composition Properties

<table>
<thead>
<tr>
<th>Test</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solids (%) @ 150°C</td>
<td>60 – 65</td>
</tr>
<tr>
<td>Viscosity (PaS) Brookfield RVT, #14 spindle, 10rpm, 25°C</td>
<td>50 – 80</td>
</tr>
<tr>
<td>Density (g/cc)</td>
<td>2.0</td>
</tr>
<tr>
<td>Coverage (cm²/g @ 5µm)</td>
<td>350</td>
</tr>
<tr>
<td>Coverage (cm²/g @ 10µm)</td>
<td>175</td>
</tr>
<tr>
<td>Dried Print Thickness (microns)</td>
<td>8 – 12</td>
</tr>
<tr>
<td>Thinner</td>
<td>DuPont™ 8260</td>
</tr>
</tbody>
</table>

Printed on Melinex ST505 Polyester Film. This table shows anticipated typical physical properties for DuPont™ PE873 based on specific experiments and is not intended to represent the product specifications. Product specifications are available upon request.

SUBSTRATE TYPES
PE873 is appropriate for many types of thermally-stable 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 DuPont representative.
DUPONT™ PE873 STRETCHABLE SILVER CONDUCTOR

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. Thinning with DuPont™ 8260 may be desired in some cases depending on printing requirements.

SAFETY AND HANDLING
Please inform the DuPont product supplier if you intend to test PE873, alone or in combination with other materials, on human skin. For Safety and Handling information pertaining to this product, read the Material Safety Data Sheet (MSDS).

FOR MORE INFORMATION ON DUPONT™ PE873 OR OTHER DUPONT MICROCIRCUIT MATERIALS PRODUCTS, PLEASE CONTACT YOUR LOCAL REPRESENTATIVE:

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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.

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