PRODUCT DESCRIPTION
DuPont PE772 stretchable encapsulant is used to protect low-voltage circuitry printed on elastic film and textile substrates. PE772 is a thin, stretchable protective encapsulant that possesses excellent flexibility, adhesion, and abrasion resistance. PE772 is designed for wearable electronic applications that may require repeated washing.

PRODUCT BENEFITS
• Translucent stretchable encapsulant
• Improves wash and abrasion performance of electrical circuit
• Compatible with wide variety of fabric and film substrates
• Compatible with lamination
• Compatible with PE872 conductor
• Thermal cure 100-160°C; 2-10 minutes

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 help ensure best electrical and physical performance.

Table 1-Typical Physical Properties

<table>
<thead>
<tr>
<th>Test</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor Resistivity Change After Crease (ASTM F1683, 180deg, 1 cycle, 2kg (PE872 5µm dried orint thickness on Cetus® OS5000U fabric)</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>Flexibility ∆% After Crease over PE871 Ag (ASTM F1683, 180deg, 1 cycle, 2kg)</td>
<td>No Opens No Cracking</td>
</tr>
<tr>
<td>Abrasion Resistance (ASTM D3363 Pencil Hardness)</td>
<td>1H</td>
</tr>
<tr>
<td>Adhesion (Tape Cross Hatch) (ASTM D3539 w/3M Scotch Tape 600)</td>
<td>No Transfer</td>
</tr>
<tr>
<td>Clean-up Solvent</td>
<td>Ethylene Diacetate</td>
</tr>
<tr>
<td>Conductor</td>
<td>PE872</td>
</tr>
</tbody>
</table>

Table 2-Typical Composition Properties

<table>
<thead>
<tr>
<th>Test</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Clear</td>
</tr>
<tr>
<td>Solids (%) @ 150°C</td>
<td>21-25</td>
</tr>
<tr>
<td>Viscosity (PaS) Brookfield RVT, #14 spindle, 10rpm, 25°C</td>
<td>40-80</td>
</tr>
<tr>
<td>Density (g/cc)</td>
<td>1.06</td>
</tr>
<tr>
<td>Coverage (cm²/g @ 5µm)</td>
<td>600</td>
</tr>
<tr>
<td>Coverage (cm²/g @ 10µm)</td>
<td>420</td>
</tr>
<tr>
<td>Dried Print Thickness (microns)</td>
<td>5-10</td>
</tr>
<tr>
<td>Thinner</td>
<td>DuPont R8260</td>
</tr>
</tbody>
</table>

Printed on Melinex ST505 polyester film unless stated otherwise. This table shows anticipated typical physical properties for DuPont PE772 based on specific controlled experiments in our labs and are not intended to represent the product specifications. Product specifications are available upon request.

SUBSTRATE TYPES
PE772 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 PE772 STRETCHABLE ENCAPSULANT FOR WEARABLES

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 PE772, 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 PE772 OR OTHER DUPONT MICROCIRCUIT MATERIALS PRODUCTS, PLEASE CONTACT YOUR LOCAL REPRESENTATIVE:

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