Product Description
DuPont 9141 platinum conductor has been designed to form conductor tracks when fired on alumina substrates. It is applied to the ceramic substrate by screen printing and fired in a conveyor furnace in an air (oxidizing) atmosphere. It may be used to form conductive tracks, for example for use as electrodes for sensor applications, for applications designed to operate at elevated temperatures, or for localized heating of the substrate.

Product Benefits
- Dense fired platinum film
- High TCR
- Lead-free* and cadmium-free*

*Cadmium and lead “free” as used herein means that cadmium and lead are not intentional ingredients in and are not intentionally added to the referenced product. Trace amounts however may be present.

Processing
Substrates
Substrates of different compositions and from various manufacturers may result in variations in performance properties.

Printing
DuPont 9141 prints easily using 200 - 325 mesh stainless steel screens with a 10-15µm emulsion, at printing speeds up to 25 cm/s (10 in/s).

Drying
Allow prints to level at room temperature, then dry in a well ventilated oven or conveyor dryer at 150°C.

Typical Physical Properties

<table>
<thead>
<tr>
<th>Test</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fired Thickness (µm)</td>
<td>7 - 10</td>
</tr>
<tr>
<td>Resistivity (mΩ/sq)</td>
<td>60 - 100</td>
</tr>
<tr>
<td>TCR (ppm/°C)</td>
<td>≈3500</td>
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<tr>
<td>Adhesion (N)</td>
<td>&gt;18</td>
</tr>
</tbody>
</table>

Table 1 & 2 show anticipated typical physical properties for DuPont 9141 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

Processing Conditions

Firing
Fire in a well ventilated belt, conveyor furnace, or static furnace.

Printing - 325 stainless steel screen with a 12µm emulsion build up.
Drying - allow prints to level for 10-15 minutes at room temperature, then dry for 10-15 minutes at 150°C.
Firing Temperature - 850°C - 1000°C
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).