The PC10000 series is a Pb-free resistor series that was developed for extremely high temperature applications, which makes them ideal for applications in harsh environments. The system is designed to be screen printed on alumina and processes at 1100°C. The system forms a stable dense microstructure which is stable at high temperatures.

### Typical Properties

<table>
<thead>
<tr>
<th>PC10000 Series</th>
<th>PC10981</th>
<th>PC10812</th>
<th>PC11038</th>
<th>PC11975</th>
<th>PC11040</th>
<th>PC11976</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D Part Number</td>
<td>CL80-10981</td>
<td>N/A</td>
<td>N/A</td>
<td>CL85-10975</td>
<td>N/A</td>
<td>CL85-10976</td>
</tr>
<tr>
<td>Resistivity (Ω/sq.)</td>
<td>6.75 – 8.25</td>
<td>10 - 15</td>
<td>45 - 55</td>
<td>90 - 110</td>
<td>450 - 550</td>
<td>0.8K – 1.1K</td>
</tr>
<tr>
<td>Viscosity (Kcps)</td>
<td>150 - 300</td>
<td>150 - 300</td>
<td>150 - 300</td>
<td>150 - 300</td>
<td>150 - 300</td>
<td>150 - 300</td>
</tr>
<tr>
<td>Termination</td>
<td>Prefired at 850°C</td>
<td>3504</td>
<td>3504</td>
<td>3504</td>
<td>3504</td>
<td>3504</td>
</tr>
</tbody>
</table>

#### Key Benefits
- REACH\(^1\) and ROHS\(^2\) compliant
- Lead Free
- High Temperature 1100°C firing
- Formulated to fire on alumina substrates
- Compatible High Temperature Overglaze: PC11004

### Recommended Processing Guidelines

**Printing Conditions**
280 – 325 stainless steel mesh or nylon screen, 1.1-1.3 mil wire and 0.5 mil emulsion.
Allow prints to level 5-10 minutes at room temperature

**Print Speed:**
Up to 10in/sec (25 cm/sec)

**Drying Conditions:**
150°C for 10 minutes

**Firing Conditions:**
1100°C peak temperature with a 10 minute dwell time, total cycle time of 60 minutes

**Thickness Information (µm)**

<table>
<thead>
<tr>
<th>PC10981</th>
<th>PC10812</th>
<th>PC11038</th>
<th>PC11975</th>
<th>PC11040</th>
<th>PC11976</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fired (µm)</td>
<td>10 - 14</td>
<td>10 - 14</td>
<td>10 - 14</td>
<td>10 - 14</td>
<td>10 - 14</td>
</tr>
</tbody>
</table>
Technical Data Sheet

6.75 ohm/sq to 1.1 Kohm/sq Resistor System

Thinner:
N/A

Warranty
Material guaranteed to meet specifications for 6 months from date of shipment.

Handling & Precautions:
Use in a well-ventilated area.
Avoid contact with skin.
Wash with soap and water.

Storage
Store in a dry location at 5 – 25 °C.
DO NOT REFRIGERATE.
Allow paste to come to room temperature prior to opening. Spatulate well before using, as settling may occur during storage.

Legend:

1) RoHS compliant according to the latest ** Directives (European Union) of Restriction of Hazardous Substances ("RoHS") and its subsequent amendments (including the exceptions related to Pb)

2) RoHS compliant according to the latest ** Directives (European Union) of Restriction of Hazardous Substances ("RoHS") and its subsequent amendments (including the exceptions related to Pb)

* See the data sheet issue date (DD/MM/YY) as reference of validity of latest edition which is available on request.