Technical Data Sheet

**Product Type:** Conductor

**SC1000**

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**Description**

SC1000 (LPA416-151) is a screen printable Silver conductor for application of dielectric on steel. SC1000 shows excellent fired film density, high conductivity, good solder leach resistance and excellent solder acceptance.

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**Key Benefits**

- REACH¹ and ROHS² compliant
- Excellent solderability and leach resistance
- Compatible with Heraeus SD 1010 and SD 1019
- Compatible with Heraeus resistor SR 21 Series
- Excellent initial and aged adhesion, even after multiple firings
- Very good conductivity
- Excellent fired film density
- Free of lead, cadmium and nickel

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**Typical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Viscosity:</strong></td>
<td>20 – 45 Pas (25 °C, D = 100 s)</td>
</tr>
<tr>
<td><strong>Solids:</strong></td>
<td>82.5 % ± 1.5 %</td>
</tr>
<tr>
<td><strong>Printing Speed:</strong></td>
<td>Up to 20 cm / s</td>
</tr>
<tr>
<td><strong>Shelf Life:</strong></td>
<td>3 months from date of shipment with correct storage (in a dry, cool (5 – 25 °C) and dark place with container tightly shut)</td>
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</tbody>
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**Form:**

Fired Paste

**Fired Film Thickness**: 10 – 15 µm (FFT)

**Resistivity**: ≤ 3.5 mΩ /sq (FFT: 12 µm)

**Solderability**: Good ≥ 95 % (255 °C, 5 s dip) (SAC 305)

**Adhesion, Aged**: ≥ 18 N (48 h, 150 °C) (SAC 305)

**Leach Resistance**: ≥ 3 dips (245 °C, 10 s each) (SAC 305)

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**Thinner**

HVS 100

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¹ REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
² ROHS = Restriction of Hazardous Substances
Recommended Processing Guidelines

1. Spatulate well prior to processing. 
   When stored in a fridge: The paste should have acquired room temperature before being opened, to avoid condensation.
3. Level at room temperature for 5 – 10 minutes.
4. Dry at 150 °C for 10 – 20 minutes.
5. Fire at 850 °C (peak) for 10 – 12 minutes, and with a total firing cycle time of c. 30 – 60 minutes.

Dielectric:
SD 1010

Overglaze:
SD 1019

Resistor:
SR 21-350-018
SR 21-350-025
SR 21-350-100

Storage
Store in a dry location at 5°C – 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.

SPECIAL NOTE:
Some of these materials may show resistance shifts due to thermal storage. Stability baking has been shown to minimize this behavior.

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