

## Technical Data Sheet

### THICK FILM MATERIALS

Product Type: Conductor  
SC1000



Silver Conductor

#### 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.

#### Key Benefits

- REACH<sup>1</sup> and ROHS<sup>2</sup> 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

#### Typical Properties

##### Viscosity:

20 – 45 Pas

(25 °C, D = 100 s<sup>-1</sup>)

##### Solids:

82.5 % ± 1.5 %

##### Printing Speed:

Up to 20 cm / s

##### Shelf Life:

3 months from date of shipment with correct storage (in a dry, cool (5 –25 °C) and dark place with container tightly shut)

##### 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)  
(SAC305)

##### Leach Resistance:

≥ 3 dips (245 °C, 10 s each)  
(SAC305)

#### Thinner

HVS 100



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### 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.*
2. Print through a 200 – 325 mesh stainless steel screen. Total thickness: 50 – 110 µm.
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.

### Compatibility

**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

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