

## Technical Data Sheet

### THICK FILM MATERIALS

Product Type: Conductors

Product Name: C3606



#### Platinum Conductor Paste

##### Description

C3606 is a conductor paste consisting of pure platinum and organic vehicle only and it fires to a catalytic, conductive and stable metallization. C3606 has a rheology suitable for screen printing. It can be co-fired with green refractory ceramics and forms a dense outer electrode.

##### Key Benefits

- Chemically resistant
- High temperature firing
- Co-fireable on zirconia or alumina and other tape
- It fires to a dense Platinum film
- Free of lead, cadmium and nickel
- Free of phthalate
- REACH<sup>3</sup> and ROHS<sup>4</sup> compliant

##### Processing

- 1) Spatulate well prior to processing.  
  
When stored in a refrigerator, the paste should have acquired room temperature before being opened, to avoid condensation.
- 2) Print through a 325 mesh stainless steel screen. Total thickness: approx. 75 µm
- 3) Level at room temperature for 10 minutes.
- 4) Dry at 150 °C for 10 – 20 minutes.
- 5) Fire at 1500 °C (peak) for 60 – 180 minutes.

##### Thinner

HVS 507

##### Typical Properties (Paste)

Form	Pseudoplastic paste
Viscosity	20 – 28 Pas (25 °C, D = 100/s)
Solids	86.5 % ± 1.5 %
Tape Substrates	Al <sub>2</sub> O <sub>3</sub> , ZrO <sub>2</sub>
Shelf Life	6 months from date of shipment with correct storage (in a dry, cool place with container tightly shut).

##### Typical Properties (Fired)<sup>1</sup>

Fired Film Thickness <sup>2</sup> (FFT)	8 – 15 µm
Resistivity <sup>2</sup>	≤ 20 mΩ/□ (FFT: 12 µm) (post-fired on Al <sub>2</sub> O <sub>3</sub> 96 %)
Roughness, fired (typical), n = 20	Rz: 8.06 µm, Std: 1.0 µm Ra: 1.28 µm, Std: 0.15 µm

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#### Legend:

1) Typical properties based on laboratory test methods. For optimum results all materials should be fired in a profiled furnace supplied with dried, hydrocarbon and other contaminant free air (PP-1).

2) Measured after printing with a 325 mesh steel screen; screen thickness and emulsion thickness combined was c. 75 µm, and the resultant printed track was 500 µm wide.

3) REACH compliant according to the latest \*\* Annex XIV to Regulation (EC) of the European Parliament and of the council on the Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH") by European Chemicals Agency and its subsequent amendments; the material does not contain any substance listed in Annex XIV.

4) 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

**Heraeus Electronics**  
Heraeus Deutschland GmbH & Co. KG  
Heraeusstraße 12 – 14  
63450 Hanau, Germany  
www.heraeus-electronics.com

**Americas**  
Phone +1 610 825 6050  
electronics.americas@heraeus.com

**China**  
Phone +86 21 3357 5457  
electronics.china@heraeus.com

**Asia Pacific**  
Phone +65 6571 7677  
electronics.apac@heraeus.com

**Europe, Middle East and Africa**  
Phone +49 6181 35 3069, +49 6181 35 3627  
electronics.emea@heraeus.com