

Conductors

C 3657

Platinum Conductor Paste

Description:

C 3657 is a screen – printable platinum conductor, which possesses a good conductivity. It is particularly useful for the manufacture of O₂ sensors.

Properties (Paste):

Viscosity:	30 – 45 Pas (25°C, D = 100 s ⁻¹)
Solids:	67.5 % +/- 2.5 %
Printing Speed:	Up to at least 10 cm / s
Shelf Life:	6 months with correct storage (2 to 23°C, in a cool, dry, dark place and with the container tightly shut).

Processing:

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.
3. Level at room temperature for 10 minutes.
4. Dry at 150 – 180°C for 10 – 20 minutes.
5. Fire at 850°C – 950°C (peak) for 10 minutes, and with a total firing cycle time of c. 30 – 60 minutes (the higher the temperature, the denser the surface produced and the better its adhesion).

Properties (Fired)*:

Fired Film Thickness **:	c. 5 µm
Resistivity **:	60 – 90 mOhms / □ (FFT: 5 µm)
Fired Film Density:	> 90 %

Thinner:

HVS 100

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

** 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.

Conductors

C 3657

Platinum Conductor Paste

The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for a particular application.

Europe [TH]
W. C. Heraeus GmbH
Thick Film Materials Division
Heraeusstr. 12 – 14
63450 Hanau
Germany
Tel: +49 (6181) 35 – 5466
E-Mail: th-info@heraeus.com
Internet: www.heraeus-th.com

North America
Heraeus Incorporated
Thick Film Materials Division
24 Union Hill Road
W. Conshohocken, PA 19428
USA
Tel: +1 (610) 825 – 6050
E-Mail: techservice.hcd@heraeus.com
Internet: www.thickfilm.net

Asia [TH]
Heraeus Materials Technology Shanghai Ltd.
No. 1 Guang Zhong Road
Zhuanquiao Town, Minhang District
201108 Shanghai
People's Republic of China
Tel: +86 (21) 3357 - 5473
E-Mail: th.hmts@heraeus.com
Internet: www.heraeus-th.com