

Component Metallizations

OS1/OS2/OS3

Platinum Oxygen Sensor Materials

Description:

OS1 (LP11-4493) - A fritted platinum ink which fires to a catalytic, conductive and stable metallization. This material is particularly suited to poorly controlled firing atmospheres and profiles.

OS2 (CL11-5100 and CL11-5349) - A fritless platinum ink which fires to a metallization similar to OS1. However, where firing atmosphere and profile are well controlled OS2 will result in a higher output sensor. The CL11-5100 has a screen printable rheology and the CL11-5349 is suited for brushing or dipping.

OS3 (CL11-6109) - A fritted platinum ink which fires to a metallization similar to OS1. The OS3 uses an acid resistant frit which makes this material ideal for use in hostile environments.

● Key Benefits:

- Highly catalytic pure Pt surface
- Compatible with many zirconia body compositions
- Range of bonding systems available
- Maximized output voltage
- Excellent response time

● Typical Properties:

Viscosity:

(OS1) LP11-4493:
5.5-10.3 Kcps, Haake Rotovisco PKII,
1° @ 300 sec⁻¹, 25°C

OS2 (CL11-5100):
70-110 Kcps, Brookfield HAT
#14 spindle @ 10 rpm, 25°C

OS2 (CL11-5349):
16-24 Kcps, Brookfield RVT
SC4-14 spindle and 6R utility cup
@ 10rpm, 25°C

OS3 (CL11-6109):
10-19 kcps, Haake Rotovisco PkII,
1° @ 20 sec⁻¹, 25°C

Solids:

OS1	85.25 ±0.25%
OS2	84.5 ±1% (CL11-5100)
	73.2 ±1% (CL11-5349)
OS3	75.6 ±1%

● Processing Parameters:

Drying Temperature:

OS1	90-150°C
OS2	90-130°C
OS3	90-130°C

Firing Temperatures:

OS1	840-950°C
OS2	900-1200°C
OS3	800-950°C

A dry, clean flowing air atmosphere should always be used for firing.

Thinner: RV-372 (Terpineol)

Warranty:

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

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.

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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.

Americas

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

Europe

W.C. Heraeus GmbH
Thick Film Materials Division
Heraeusstr. 12-14
63450 Hanau
Germany
Phone: +49 (6181) 35-5466
E-mail: th-info@heraeus.com
Internet: www.heraeus-th.com

Asia

Heraeus Materials Technology
Shanghai Ltd.
No. 1 Guang Zhong Road
Zhuanqiao Town, Minhang District
Shanghai 201108
People's Republic of China
Phone: + 86 (21) 6442-6838
E-Mail: th.hmts@heraeus.com
Internet: www.heraeus-th.com