Heraeus

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 calalytic 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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