Heraeus

Resinates

GP P 12/1

Gold - Palladium Resinate Solution / DPIS*

* Development Product Information Sheet

Description
GP P 12/1 is a liquid precious metal product for use on glazed ceramic and quartz glass. It contains gold and palladium in form of dissolved organo metallic compounds.

After firing a highly reflective white gold layer is obtained. Due to simultaneous sintering of non-precious metal oxides it offers high adhesion between gold-palladium and substrate.

Key Benefits
- Suitable for IR/heat reflective layers on quartz glass
- Free of lead, cadmium and nickel
- Free of phthalate
- REACH [3] and RoHS [4] compliant

Typical Properties (Solution)

Form:	Liquid solution
Viscosity:	140 - 170 mPas (20 °C, D = 50 sec^{-1})
Au/Pd Ratio:	4.42 : 1
Coverage:	Approx. 500 cm^2 / g (FFT at 0.3 µm)
Shelf Life:	6 months from date of shipment with correct storage (in a dry, cool (5 – 25 °C) and dark place with container tightly shut)

Processing
1. Do not spatulate or shake prior to processing. Solution can built some deposit which will not dissolve, especially after a long period storage - this can cause defects after firing.

   When stored in a refrigerator allow the solution to come to room temperature prior to opening, to avoid condensation.

2. The precious metal liquid can be applied by brush or spray application. For spray application it is necessary to add 25 - 35 % of thinner.

3. Level at room temperature for 5 minutes

4. Dry at room temperature for further 60 minutes

5. Fire at 820 °C (peak) for 10 - 15 minutes, with a total firing cycle time of 50 – 60 minutes.

Thinner V 16 for spraying
V 35
V 39

Typical Properties (Fired) [1]

Fired Film Thickness [2]: (FFT)	0.1 - 0.3 µm
Fired Residue:	12.8 – 13.2 %

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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 on quartz glass

3 REACH compliant according to the Commission Regulation (EU) No 143/2011 of 17 February 2011 amending Annex XIV to Regulation (EC) No 1907/2006 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; we define a material as REACH compliant, as long as substances used are not recorded in the Annex XIV.

4 RoHS compliant according to the Directives (European Union) No 2011/65/EC of Restriction of Hazardous Substances ("RoHS") and its subsequent amendments (including the exceptions No. 7. c. I of the EU Directive e.g. related to Pb)

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