

Resinates

RL AG 160709 H



Resinate Silver Ink / DPIS*

* Development Product Information Sheet

Description

RL AG 160709 H is a liquid silver ink for brush and spray application and use on glass, alumina and glazed alumina.

RP 160709 contains silver in form of soluble organo-metallic compounds. After firing a conducting silver film is obtained. To reach higher film thicknesses it is necessary to brush several layers on top of each other. Each applied layer has to be fired separately.

Key Benefits

- Free of lead, cadmium and nickel
- Free of phthalate
- RoHS ² and REACH ³ compliant

Processing

1. When stored in a refrigerator allow product to come to room temperature prior to opening, to avoid condensation.
2. The silver ink RP 160709 is a liquid material for brush/spray application. To receive suitable layer thicknesses it is necessary to make some tests prior to final application.
3. After application material should be dried at 90 °C for 10 minutes in a drying oven or for at least 2 hours at room temperature (RT).
4. Suitable total firing cycles are 40 – 60 minutes (RT to RT) with 8 to 13 minutes peak at 450 – 630 °C.

Thinner

HVS 100
RV 372
Dipentene

Typical Properties (Solution)

Form:	Orange to brown liquid
Viscosity:	1 – 20 mPas (20 °C, D = 30 rpm)
Chem. Characterization:	Contains silver in form of soluble organo metallic compound
Metal Content ⁴ :	19.0 % ± 1.0 % Ag
Ash Content ⁵ :	18.75 – 20.50 % (Gravimetric method)
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)

Note:

The material is light sensitive and sensitive to hydrolyze by air humidity.

Typical Properties (Fired) ¹

Color:	Semi-matt and semi-transparent thin layer
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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 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)
- 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 Inductively coupled plasma optical emission spectrometry (ICP-OES), also referred to as inductively coupled plasma atomic emission spectroscopy (ICP-AES), is an analytical technique used for the detection of trace metals.
5. A balance with five digits after point is used. Between 0.5 – 1.0 g of material are weight in a porcelain crucible (three porcelain crucibles are used). Then cover with a small piece of ash free filter paper and fire in an electric kiln. Heating curve as follows: Heating up to 300 °C within 60 minutes, than heating up to 800 °C within 15 minutes, hold this temperature 15 minutes. Cooling down naturally. Weight out the residues and calculate the percentages.

** See the data sheet issue date (DD/MM/YY) as reference of validity of latest edition which is available on request.

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