

## Resinates

### A 4841 - H Blue



#### Barrier Solution / DPIS\*

\* Development Product Information Sheet

#### Description

The liquid metal barrier solution A 4841-H Blue is a sprayable organo-metallic solution for use on different metal alloys. After firing a transparent metal oxide film is achieved. This film works as barrier between metal substrate and metal layer, applied in a second step.

#### Key Benefits

- Besides barrier function it provides good adhesion between precious metal layer and substrate.
- Free of lead, cadmium and nickel
- Free of phthalate
- REACH <sup>2</sup> and RoHS <sup>3</sup> compliant

#### Processing

1. When stored in a refrigerator allow product to come to room temperature prior to opening, to avoid condensation.
2. The solution is miscible with halogenated hydrocarbons, some higher alcohols (e.g. Terpineol), esters and ketones (e.g. Cyclohexanone). Not miscible with aliphatic and aromatic hydrocarbons, lower alcohols, esters and ketones.
3. Application method recommended:
  - Air brush spray
  - Electrostatic spray

4. Firing (peak temperature) recommended:

High temp enamels on steel:	700 - 760 °C
Stainless steel:	535 - 540 °C
Mg alloy:	400 - 480 °C
Titanium alloy:	400 - 480 °C
Aluminum alloy:	500 - 540 °C

**Thinner**      V 16 for spraying  
                   V 35 for brushing  
                   V 39

#### Typical Properties (Solution)

Form:	Blue liquid
Viscosity:	0.5 - 5 mPas (25 °C, 60 rpm)
Chemical Characterization:	Silicon resinate, synthetic and natural resins dissolved in organic solvents
Solid Content <sup>4</sup> :	3.0 % ± 2.0 %
Coverage:	Not applicable
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)

#### Typical Properties (Fired) <sup>1</sup>

Color: Clear (colorless transparent)

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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 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.
- 3 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)
- 4 Ash content measurement method: A balance with five digits after point is used. Between 0.5 – 1.0 g of material are weighted in a porcelain crucible (three porcelain crucibles are used). Thereafter cover with a small piece of ash free filter paper and fire in an electric kiln. Heating profile as follows: Heating up to 300 °C in 60 minutes than heating up to 800 °C in 15 minutes and hold this temperature 15 minutes long. Subsequently cool down naturally. Weight the residues and calculate the percentages. Any change of the a. m. parameters will induce different results.

\*\* 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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