


**GENERAL INFORMATION**

RH2W is a ready-to-use white rhodium for bath plating. This white rhodium plating electrolyte is commonly used in larger rhodium installations due to the minimal components needed for maintenance. The deposition speed is slower than other formulations allowing for accurate consumption control. This balanced deposit also makes it an ideal choice for large or flat surfaces permitting complete surface coverage in low current density areas. RH2W is efficient at room temperature allowing minimal water evaporation.


**Product form**

Metal concentration	2g/l (Rh)
Solution form	Liquid
Plating solution color	Orange
Storage time	2 years
Volume	1 liter

**Deposit data**

Solution appearance	Shiny
Purity (%)	99.9
Hardness [HV 0.01]	800-900
Density [g/cm <sup>3</sup> ]	12.4
Plating solution color	White
Thickness range [μm]	0,02 - 0.20



Operating data	RANGE	OPTIMAL
Voltage [V]	2-6	3.0
Current density [A/dm <sup>2</sup> ]	0.5-10	3.0
Working temperature [°C]	20-60	40 - 50
Exposure time (sec)	20 - 60	40.0
Cathode efficiency [mg/Amin]	4-8	6.0
Anode-cathode ratio	1:1-4:1	2:1
Anode type	Titanium platonized	
Agitation	Moderate	

Metal concentration	METAL	RANGE (g/l)	OPTIMAL (g/l)
	Rhodium	0.6 - 5.0	2.0

**Color coordinates**

L*	88.6
a*	0.6
b*	2.1
c*	2.2

**PREPARATION**

**RH2W** is a ready-to-use galvanic bath at the concentration of 2 g/l. No preparation is required.

**EQUIPMENT**

Working vessel: Pyrex glass / PVC / polypropylene.

Power supply: DC current rectifier with low residual AC (<5%).

Heating element.

Anode Type Platinized Titanium [1.5-2.5 µm].

For larger bath volumes:

Magnetic driven filter pumps with 5-15 µm cartridge (before use, boil and wash the cartridges with demineralized water for 3 hours to prevent organic contamination).

Amp/min counter.

**PRE TREATMENT**

**RH2W** can be deposited directly onto Silver, Palladium, Gold, Nickel and its alloys. An intermediate deposit or precious metal plating strike is necessary before depositing onto Tin, Lead, Zinc, Cadmium, Aluminum and Iron.

**POST TREATMENT**

The electrolyte should be removed from the surface as quick as possible. Wash off the bath residual in a recovery rinse (still rinse). Rinse the parts in circulating deionized water and dry.

**WATER PURITY**

To prevent contamination of the bath both during its preparation and any replenishing operations, use demineralized water with a conductivity of less than 3µS/cm (containing no traces of organic compounds, Chlorine, Silicon, or Boron).

**BATH MAINTENANCE**

Small-sized **RH2W** (until 5 liters) can be used until the rhodium solution is completely exhausted without adding any rhodium concentrate replenisher solution. For larger volumes add **RH5RW** replenisher solution to restore the optimal rhodium concentration. For perfect electrolyte performance it is advisable to maintain the rhodium concentration at values not lower than 80% of the initial concentration; for example, with a bath operating at a concentration of 2 g/l, additions should be done after a consumption of 0.4 g/l of rhodium. Keep in mind that at optimum conditions a bath working at 2 g/l deposits about 8-10 mg of Rh per ampereminute. Given the cost of rhodium and to have a precise evaluation of the metal consumption it is advisable to perform periodic analytical checks.

**SUPPLEMENTARY INFORMATION****CORRELATED PRODUCTS:**

**RH2FW:** Rhodium for plating solution concentrate 2g/100ml

(For ready to use solution: dilute **RH2FW** in 900ml of demineralized water)

**RH5RW:** Rhodium W replenisher 5g/100ml (addition of 20ml of **RH5RW** restores 1g of rhodium)

**RH2RW:** Correction replenisher per Rhodium W 2g/100ml (addition of 50ml of **RH5RW** restores 1g of rhodium)

**SAFETY INFORMATION**

Being an acidic solution, the electrolyte is corrosive therefore is an irritant to the skin, eyes and mucous membranes. Caution should be exercised when using the product, avoiding contact with the eyes and skin. Use gloves and safety goggles. Keep away from cyanide based chemicals. For further information please refer to the relative MSDS.

**DISCLAIMER**

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