


**GENERAL INFORMATION**

RH2BX is a ready-to-use extra black rhodium for bath plating. This black rhodium electrolyte has been designed specifically for decorative electroplating applications by granting alternative color options for finishes. The final color produced can be considered black with blueish undertones which makes the black color appear deeper. This solution works at rather low temperature thus making it ideal for two-tone designs as high temperature plating processes typically destroy traditional plating masks. RH2BX can be replenished and maintained by completely restoring the rhodium content and the color with an all inclusive replenisher. The formulation is 100% arsenic free both in the metal deposited and in the chemical itself and falls within REACH complianc. ATTENTION: The solution may present dust in the bottom of the bottle, but this will absolutely not affect the quality of the product. In any case it is advisable to shake the bottle before using.


**Product form**

Metal concentration	2g/l (Rh)
Product's pH	Acidic
Solution form	Liquid
Solution form	Ready-to-use
Plating solution color	Dark red
Storage time	2 years
Volume	1 liter

**Deposit data**

Solution appearance	Shiny
Hardness [HV 0.01]	700
Density [g/cm <sup>3</sup> ]	11.2
Plating solution color	Dark black
Thickness range [μm]	0,02 - 0.4



Operating data	RANGE	OPTIMAL
Voltage [V]	2.4-3	2.7
Current density [A/dm <sup>2</sup> ]	2-2,5	2.0
Working temperature [°C]	25-35	30
Exposure time (sec)	60 - 180	120.0
Cathode efficiency [mg/Amin]	6-8	7.0
Anode-cathode ratio	1:1-4:1	2:1
Anode type	Platonized titanium	
Agitation	Moderate	

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

**Color coordinates**

L*	55.0
a*	-0.1
b*	0.0
c*	0.2

**PREPARATION**

**RH2BX** 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**

**RH2BX** 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 RH2B (until 5 liters) can be used until the rhodium solution is completely exhausted without adding any rhodium concentrate replenisher solution.

**SUPPLEMENTARY INFORMATION**

Free sulfuric acid concentration has to stay close to 20 g/l.

**CORRELATED PRODUCTS:**

**RH2FBX:** Rhodium for plating solution concentrate 2g/250ml

(For ready to use solution: dilute **RH2FBX** in 750ml of demineralized water)

**RH2RBX:** Rhodium BX replenisher 2g/100ml (addition of 50ml of **RH2RBX** 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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