

Instructions

Gesswein® Cold Black Rhodium Solution

SKU: 2100909

Description

The Cold Black Rhodium Solution deposits dark anthracite-grey, particular decorative Rhodium coatings. The layers are very abrasion resistant, color consistent and uniform. The electrolyte is preferably used for decorative coatings in the jewelry and eyewear industry. The Cold Black Rhodium Solution is characterized by easy handling and usability. It works at room temperature so a time and energy expensive heat up can be dropped. Coatings up to 0.5 µm can be deposited.

Operating data

Rhodium content	2.0 g/l Rh
pH-Value	<1
Density	1.02 – 1.07 g/cm ³

Operating conditions

Voltage	2 - 3 Volt
Bath temperature	20 - 27°C
Exposure time	2 min (1 - 5 min)
Anodes	Platinised titanium or mixed-metal-oxide MOX
Anode/Cathode Surface	1 : 1
Agitation	Advantageous
Current density	1.0 – 1.5 A/dm ²
Bath filtration	From 10 liters
Deposition rate	7.9 mg/Amin

Deposition data

Hardness	300 - 370 HV
Layer thickness	Max. 0.5 µm
Layer density	Approx. 10.5 g/cm ³

Form of delivery

- Ready for use (2 g Rh/ltr.)
- Concentrate form (2 g Rh/100ml)
- Rhodium replenisher (2 g Rh/100ml)

Solution preparation concentrate form

First mix the concentrate or shake the bottle well. Then mix 100 ml of the Black Rhodium Bath concentrate with 900 ml distilled

Bath control/regeneration

Regeneration should be made at the latest after 20% of the Rhodium content is worked out. For 1g of Rhodium 50 ml of Rhodium replenisher JE23- 1 must be added. For control of the deposition weight we recommend an ampere minute counter.

Even by bigger baths control should take place in regular intervals. If required we accomplish a bath analysis for you.

The Black Rhodium Bath should not be treated with charcoal. Otherwise the function would be destroyed.

The Black Rhodium electrolyte may lose its dark colour when it has been in long use. This indicates probably a worked out rhodium content.

Recommended pre-treatment

After electrolytic degreasing rinse well and dip in 3 – 5% sulfuric acid. So a contamination of the rhodium bath will be avoided. After a further rinsing the Rhodium deposition can be done.

Storage/Warehousing

Store closed and separated from food products and forage in convenient and special marked boxes. Do not bring in contact with cyanides or cyanide solutions, because the solutions contain acid sulfur.

Risks/Disposal

Before drain off the hydrous solutions in the canalization a liquid waste treatment should take place. The specifications of the local responsible water authority are to be regarded.

Please refer to our safety data sheet