

Red Gold Plating Bath JE224

Description:

The red gold plating bath JE224 is a neutral gold electrolyte with a stable pH value that works without free cyanide. The electrolyte is used for deposition of 18-carat red gold-copper coatings. It is suitable for technical and decorative applications as the deposited layers are very hard and abrasion resistant. Despite gold-saving coatings with low carat, the electrolyte has very good corrosion and tarnish resistance. Under optimal conditions, high-gloss and adhesive gold coatings gold layers up to max. 10 µm layer thickness can be achieved.

Operating data:

Gold content: 4 g/L (3,5-4,5)
Copper content: 3 g/L (2,5-3,5)
pH 7,5 (7,2-8,0)
Density > 1,07 g/ml

Deposition data:

Hardness: 380 - 400 HV
Layer thickness: max. 10 µm
Alloy composition: 75% Au, 25% Cu

Working conditions:

Tension: 1,6 V (1,4-1,8)
Bath temperature: 57 °C (55-60)
Anode material: platinized titanium/mixed oxid
Goods movement: required
Anode-/cathode surface: 2:1
Deposition rate: approx. 45 mg/Amin
Power density: approx. 0,3 A/dm² (0,1-0,5)
Bath filtration: from 10 Liter

Form of delivery:

Ready for use with 4 g/L Au
Regeneration Solution JE224

Bath control/Regeneration:

Regeneration must take place at the latest after gold recovery of 20 %. For 1 g of deposited fine gold, 10 ml of potassium gold I-cyanide solution (100 g/L Au) and 10 ml of regeneration solution JE224 must be added.

To check the deposited precipitate weight, we recommend using an ampere minute counter. The pH value and density should be checked regularly and corrected accordingly. If the pH value is too high add diluted phosphoric acid and if the pH value is too low if it is too low pH carefully add 10 % potassium hydroxide solution. The bath should be checked at regular intervals. We are happy to carry out a bath analysis for you.

Recycling:

The used solution contains precious metal, which we work up for you. The recovery of this solution can be profitable from 10 liters.

Storage:

Store closed and dark, in suitable and well-marked containers. Do not bring in contact with cyanides or cyanide solutions.

Risks / Elimination:

Before desistance of the liquid solution in the canalization a wastewater treatment should be affected. The specifications of the local water authority should be regarded. We will gladly dispose the solution professionally for you.

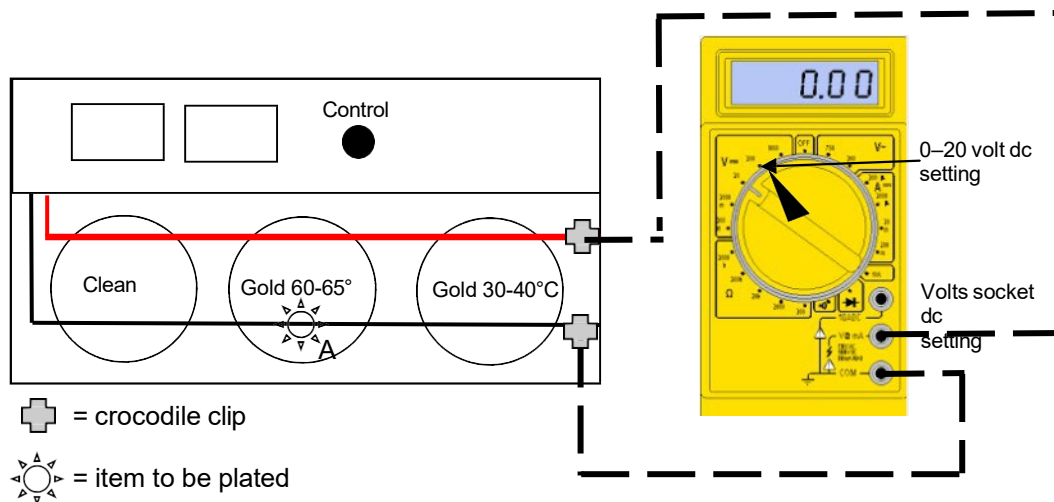
Please consider our safety data sheet!

HARD GOLD PLATING INFORMATION

CONTROL METHOD USING VOLTS.

This method is less accurate than using the amp method and the control of thickness is less reliable.

Experienced electroplaters often note the connection between amps and volts and this saves them having to calculate the area of the items to be processed.



Make the connections as per drawing above, note that different types of multimeter have different configurations but they must have a 0 to 20 volt dc setting.

As this method uses the voltage applied to the item to be plated, the unit it can be used in the conventional way by placing the items to be processed on the cathode bar. In this case the multimeter is used only to determine the exact voltage required.

Note that these voltages can be very small, often 1.0 to 2.0 volts. With **RED** and **Green** gold plating the colour produced is controlled by the voltage, due to depositing a 2 or 3 metal alloys.

1. Attach the items to be plated onto the normal hooks or wires used.
2. Clean the item in the normal way.
3. After rinsing, TURN the CONTROL to zero and place the items into the Gold tank.
4. Using the CONTROL, turn the power up carefully, reading the voltage from the MULTIMETER. It may be necessary to agitate the items if the plating time exceeds 15 seconds
To use a MICROAGITATOR. Plug the normal connection into the side of the agitator.

Multimeter parts can be purchased locally or inexpensive kits complete with wires, clips and meters are available from your Electroplating material supplier.