



TIFOO

GOLD PLATING SOLUTION - FLASH

MANUAL

GOLD PLATING SOLUTION FLASH

Safety

The electrolyte solution contains gold in the form of potassium dicyanoaurate. Please strictly avoid heating the electrolyte solution and the contact with concentrated acids. Work only in well-ventilated rooms and wear gloves when using in order to avoid skin contact. In case of acute poisoning 4-dimethylaminophenol or thiosulfate can be administered as antidotes.

Application fields

This plating solution can not be used on nickel-free steel!

The gold plating electrolyte FLASH is employed to gold plate materials which are usually difficult to plate such as stainless steels, chrome, chrome alloys or chromecoated metals. Once the surface is treated with the gold plating electrolyte FLASH a thicker coating can be achieved using other gold plating solutions (brush and tank electroplating).

For decorative purposes, the coating with the FLASH electrolyte is sufficient. The gold plating electrolyte FLASH does not work for aluminium, many aluminium alloys, titanium, normal iron (for such materials you can use the Tifoo gold plating electrolyte for brush electroplating) and in general with acid-sensitive materials.

Important Data

Gold content: 5 g / Litre

pH-value: 1

Current density: 1-2 A/dm²

Anode material: platinated titanium or graphite electrode

Working temperature: 20 - 30 °C

Needed voltage for pen plating: about 7 - 10 volts

Suited material: stainless steel, chromium and nickel

Unsuited material: copper and alloys containing copper

Using the Gold Plating Solution FLASH

The right preparation of the object is crucial for good results when electroplating. In order to gild stainless steel, polish the object on spots with larger impurities ideally with fine steel wool. Then degrease the object with the Tifoo Degreaser. As the Gold electrolyte FLASH itself is acidic (pH <1), a previous activation of the surface with acid normally isn't necessary to achieve good results. Take out the needed amount of gold electrolyte from the bottle. Then make the sponge or swab absorb the electrolyte and apply with circular movements (please wear gloves!)

Application example

Gilding a hookah

In order to demonstrate the impressive results that can be achieved with the Gold Plating Solution FLASH, we'll describe you the gilding process of metal parts of a hookah. The Gold Plating Solution FLASH however, can be applied directly on the chrome-plated parts.

Preparation of the workpiece

To prepare the hookah on the subsequent electroplating treatment the entire surface was first accurately cleaned with the Tifoo Degreaser, in order remove grease residue, fingerprints and other contaminants.



The brush plating is then set up and the graphite rod electrode plugged in. Connect the brush to the positive pole of the power supply and the workpiece to the negative pole with the alligator clip.



Now the electrolyte has to be prepared: mix about 0,5 - 1% of the gelling agent (Tifoo gelling agent) with the required amount of electrolyte solution.



The gelling agent makes the electrolyte viscous and prevents the dripping of the electrolyte solution from the surface of the workpiece. It also helps to reduce the consumption of valuable electrolytes. Stir the mixture properly.

Now you can start with the electroplating. To do so, moisten the swab placed on the electroplating brush with a bit of water and then immerse it for 10 seconds in the electrolyte until it has completely absorbed by the liquid. This is crucial to get good electric contact and to close the circuit during the application. Apply the electrolyte with circular movements.



Make sure that the power supply indicates a peak of current. If this is not the case, check again if everything is properly connected and if the swab is saturated with the electrolyte solution. Immerse then the swab at regular intervals into the reservoir of the gold electrolyte. After a short time a considerable part of the surface is already completely gold plated.



Apply a bit more of the material to the more elaborated or unshaped parts.
You can be proud of the final result!



Hints and trouble shooting

- Contact with copper or alloys containing copper (e.g.: 925 silver) destroys the gold plating solution completely. => Copper cannot be gold-plated without barrier layer (nickel or palladium).
- When used with the GalvanoPen, this plating solution deposits very slowly (better work with the Tifoo gold plating solution Midas or with the GalvanoBrush)
- During the gold-plating process, there can be differences in colour within the gold layer, but they will fade away after a longer electroplating process.
- Stainless steel with no nickel content can not be plated.
- **There may be a production-related cloudiness or precipitation within the plating solution. This does not need to be filtered and has no effect on the functionality of the gold plating solution.**

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