



TIFOO

GOLD-ELECTROLYTE - MIDAS

INSTRUCTIONS

GOLD-ELECTROLYTE MIDAS

Security

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 wellventilated rooms and wear gloves when using in order to avoid skin contact. In case of acute poisoning 4dimethylaminophenol or thiosulfate can be administered as antidotes.

Application fields

Due to its high gold content (8 grams per liter) the gold plating electrolyte MIDAS is ideal for the 24 carat gilding with the Tifoo Galvano Brush, the Tifoo pen plating kit and tank (Tifoo tank plating kit) gold plating. The electrolyte contains a small amount of cobalt. The cobalt ensures that the gold deposits as hard gold: compared to "normal" soft gold, hard gold is much more abrasionresistant and durable; additionally the cobalt act as brightening agent, i.e. the deposited gold is already shiny and usually doesn't have to be polished.

Materials suitable to be gold plated:

Ideally you should prime the objects with nickel or palladium. Gold plating goes very well on copper, brass, bronze, silver, gold, nickel silver without any pretreatment.

Unsuitable:

aluminum, titanium zinc, tungsten, Stainless steel (--> it works if you previously deposit a thin gold layer with the Gold Flash gold plating electrolyte)

Instruction for use

The gold electrolyte has a purple color. This has nothing to do with the gold content but comes from the hardness and gloss additive cobalt. At low temperatures (e.g. during the transport in winter), it may happen that a sediment forms in the electrolyte solution, which looks then turbid. If you notice such turbidity, warm the bottle in a water bath gently to about 40 degrees Celsius, the precipitate will dissolve again and you'll get the clear, violet electrolyte.

Brushplating

For brush plating it is necessary to use the graphite rod anodes. Plug the electroplating brush in the positive pole socket and clamp the workpiece to the negative pole. Voltage: 5-8 volts.

Tank plating

With tank plating it is possible to deposit shiny hard gold layers. You need a current density of 0.5 Ampere per square decimeter, which is usually achieved with a voltage of approximately 3 volts. Anode material: graphite. Beyond the gold deposition, the process generates hydrogen (gas bubbles), this is a normal behavior of the electrolyte and does not affect the quality of the deposition. Should thick layers of gold (> 0.5 to 10 microns) be applied, then the electrolyte solution has to be stirred or the workpiece has to be put in motion (otherwise, the gold layer might get streaky, but this can be resolved by a final polish).

Wichtige Daten:

pH-value: ~ 4

Voltage for brush plating: 4-6 Volt

Current density for tank plating: 0,5 A/dm²

Gold content: 8 g / l

Layer growth: 5,5 µm / hours (at 0,5 A/dm²)

DONT MIX WITH ACID OR GOLD-ELECTROLYTE FLASH!

Never use old swabs or top-parts with Midas and the pen.

Hint

This gold plating solution is compatible with the Tifoo Red gold additive. Depending on the amount added, you will obtain rose gold until red gold.

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