



TIFOO

GOLD-STAR

MANUAL

Tifoo Gold-Star

Security

This product contains small amounts of potassium gold cyanide. That's why it's absolutely necessary to avoid the contact of this product with strong acids for this can release the highly toxic hydrocyanic acid. Avoid contact with the skin (wear gloves!). The ingestion of bigger amounts is dangerous and you have to consult a doctor immediately.

Application fields of Tifoo Gold-Star

Tifoo Gold-Star is compatible with the following metals:

- iron and steel (after being nickel-plated with Tifoo Nickel-Star)
- copper
- brass
- nickel silver
- nickel (after being activated with our Galvano-Activator)
- silver (after being activated with our Palladium activator)

Doesn't work on the following metals:

aluminium, lead, bronze, titanium, zinc, tin, chrome, stainless steel and objects that have been treated with NickelStar (you can use our gold plating solution Flash on Nickel-Star)

Instructions for use

Preparation

First of all, clean the parts you want to gild thoroughly with Tifoo Degreaser before putting it in the immersion bath. Pour the needed amount of Tifoo Gold-Star (so that the object can be immersed completely) from the bottle in a suitable heat-resistant receptacle (e.g. a beaker made of borosilicate). **IMPORTANT:** Before using it, you have to mix the Tifoo Gold-Star with the Tifoo Reductor for currentless immersion baths because if you don't, the Gold-Star won't deposit gold.

Please follow the following mixing indications:

Mixing proportion:

50 mL of Gold-Star + 1 mL of Reductor

100 mL of Gold-Star + 2 mL of Reductor

250 mL of Gold-Star + 5 mL of Reductor

Preparation for silver

Especially for silver: silver is hardly or not at all active in the Gold-Star, so that the silver piece first has to be dipped in the Tifoo Palladium Activator (30 seconds to 1 minute at its maximum). The silver will be plated then with a dark (anthracite) palladium layer. This is normal and no reason to be worried. The following gilding substitutes the dark colouration completely with a gleaming gold layer. After the

palladium activation, the object has to be rinsed and can be directly dipped into the Gold-Star. An intermediate polishing can be necessary after the first gilding (the gold is sometimes stained) - polish with Tifoo PowerPolish, degrease and gild again - and the gilding of the silver will be perfect.

Preparation of nickel

In order to plate nickel, you should use the Tifoo Activator after degreasing. You'll find the latter in our online shop. Dip the nickel surface in the activator for 30 to 60 seconds, rinse with clear water and then quickly in the Tifoo Gold-Star in order to gild the object.

Execution

After the preparation, dip the object to be gilded in the bath and heat the latter up to 90 °C. A first light gilding starts at 60 °C, but at 90 °C, the reaction will be at its best. Copper will be turning reddish gold before turning into yellow gold. The gilding can be stopped by turning off the heat source so that all of the variations of reddish gold on the copper can be achieved. If there is too much material in the bath, the yellow gilding will already stop before turning yellow golden. In this case, you can achieve more yellow gilding by adding more Gold-Star and more Reductor. You will always obtain a yellow gilding on brass and nickel. A short gilding (2 to 5 minutes at 90 °C) are normally enough. Thicker gold layers will be a bit reddish, but you can polish then afterwards to give them their yellow golden colour.

Important specifications:

pH-value: ~ 7

Gold content: 1.36 g / l

Operating temperature: 85-95 °C

Productiveness: 200-300 nm layer thickness on ~10 dm²

Don't acidify! This causes the release of hydrocyanic acid!

Troubleshooting

- when the reductor is mixed with the Gold-Star, it should be used up as quickly as possible
- if you want to store the mixed or reduced Gold-Star, please do this in a cool and dark place.

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