

# **X-Gold / X-Gold Strong**

## **Direct gold plating directly on chrome - Damascus steel - Carbon steel**

### **Safety Instructions:**

X-Gold contains a cyanide complex. Please avoid heating the electrolyte and contact with concentrated acids at all costs. Work only in well ventilated areas and wear gloves when using to avoid skin contact with the electrolyte. As an antidote for acute poisoning, 4-dimethylaminophenol or thiosulfate can be administered.

### Fields of application

X-Gold is used to gold plate difficult to coat materials such as stainless steels / stainless steel, chrome or chromium plated alloys / metals.

Subsequently, thick gold plating can be carried out with the other gold electrolytes (pin and bath electroplating). For decorative purposes, plating with the X-Gold is sufficient. X-Gold does not work on aluminum, many aluminum alloys, titanium, regular iron (use our regular gold for this) and generally acid sensitive base materials.

### **X-Gold data**

Gold content: 4 or 6 grams / liter

pH-value: 1

Anode material: platinized titanium or graphite rod electrode

Working temperature: 20 - 30 °C

Required voltage pin plating: approx. 7 - 10 volts

Current density: 1-2 A/dm<sup>2</sup>

With the Betzmann Galvanic Systems pin plating set, you can coat workpieces on a limited area without the need to immerse the entire piece in the electrolyte. The process is therefore ideal for galvanic repair work on damaged areas or relatively large or immobile parts.

Our electroplating system see [www.real-gold.de](http://www.real-gold.de) is designed exactly for such applications. With easily exchangeable rod anodes (e.g. copper, graphite, nickel), a wide variety of electrolytes and base materials can be applied or processed. The specially developed electroplating tampon enables the electrolyte to be applied effectively and without damaging the material. In pin electroplating, the anode required in each case is inserted into the pin (e.g. graphite electrode or platinum electrode for the X-Gold) and the part to be coated is switched cathodically (i.e. negative pole).

### **Use of the X-Gold:**

Decisive for good results with electroplated coatings is the correct pretreatment of the object. For gilding stainless steel or chrome, it is best to polish the object in areas of coarser contamination with fine steel wool. Then degrease the object with the electrocleaner see [www.real-gold.de](http://www.real-gold.de).

Since X-Gold itself is acidic (pH <1), prior activation of the surface with acid is usually not necessary to obtain good plating results. Take the required amount of gold electrolyte from the bottle and use the yellow binder for larger pens to keep the loss of electrolyte as low as possible. To do this, mix approximately 1% by weight (1% w/w) of Betzmann Gel former into the electrolyte. Then pick up the electrolyte with the sponge or tampon and apply it in circular movements. Make sure to regularly rinse or dab off the resulting foam (be sure to wear gloves).

### **Application example**

Required utensils for gilding with X-Gold

Betzmann Electroplating Set

Degreaser - Cleaner

X-Gold

Beaker with water

small drip pan / collecting tray

Steel wool fine

Kitchen roll

Normal polarity:

Positive cable with handle and electrode and pad as positive.

Minus cable with crocodile clip attached to the workpiece and connection in the minus pole

Graphite electrode and cotton pad, from an intended layer thickness more than 2 $\mu$  with platinum electrode

Voltage: from 6 Volt

Wear protective gloves, safety goggles

Use at min. room temperature

Can be used liquid or thickened - thickening with our gel former possible

Use only distilled water

Polish surface to gloss by hand or machine

Degrease surface with our electrocleaner, acetone or similar.

Then apply the gold by means of anode pad with light circular movements on the surface until a rich gold shine is formed.

No drying phase or similar necessary.

For decorative layers it is sufficient to use X-Gold, for all others it is recommended to apply a thicker coating afterwards with our 24 carat gold.

Rinse with water and polish to shine with a soft cloth and our care product!

Training film: [https://youtu.be/eO3j6OX7W\\_Q](https://youtu.be/eO3j6OX7W_Q)