

METAKEM
Precious metals & anodes

Gold-SP-Bath

High-quality gold pen baths in various
colours for decorative applications



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Au

Gold

Precious metal baths

Gold-SP-Bath

Properties

Type of bath:	ready-to-use solution for pen electroplating
Gold:	2 g / 100 ml bottle, larger containers on request
Voltage:	Gold-SP Red: 4 - 10 V Gold-SP Rosé: 4 - 10 V Gold-SP Yellow: 8 - 15 V Gold-SP Green: 4 - 15 V
Deposition rate:	approximately 0.1 µm can be deposited during a 1-min treatment of the surface to be treated with constant pen movement
Layer:	gold - with other alloying components, depending on the colour of the bath
Durability:	1 year in sealed original packaging.



Request product:

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2024/11 | Item number: 10.108-11

Gold-SP-Pen-baths are a selection of ready-to-use gold pen baths with different colours of the gold layer obtained. Areas of application include the selective coating of small surfaces, as well as decorative applications on jewellery, spectacles, cutlery and small repairs to electronic components.

Equipment

The following basic equipment is required:

- ♦ An electroplating pen with felt tips (ask for **METAKEM's metal electroplating pens**, as well as felt tips)
- ♦ A rectifier with voltage display and an adjustment range up to 15V (ask for **METAKEM's PiccoPlate unit**)
- ♦ **Gold-SP** - in the desired colour shade

Application Notes

Coating Process

The pen is connected to the positive pole of the rectifier using a sufficiently long cable. The negative pole is connected to the substrate to be coated; a crocodile clip is usually used as a contact aid. The set voltage on the rectifier should be readable.

Before coating, the felt tip should be completely saturated with electrolyte solution. The felt tip must be soaked in the electrolyte about 2 - 3 times / min.

The specified deposition rate is only a rough estimate, as it depends heavily on the type of coating, among other things. If the felt tip has become dry, remove it from the pen and soak both sides with the electrolyte. Then insert the felt tip firmly back into the pen.

Caution: The **Gold-SP** solutions contain toxic cyanide. When using the felt tips, it is therefore strongly recommended to handle them with titanium tweezers and rubber gloves. Use new felt tips for different colours and remove any residual solution from the pen.

Pre-Treatment

As with all electroplating applications, the substrates must be thoroughly cleaned before each coating. The best results are achieved when the substrates are cleaned in a degreasing ultrasonic bath followed by electrolytic degreasing. Finally, rinse with deionised water.

If fine structures are to be reproduced, the surface must be dried very quickly, as after coating. If this is not done, the electrolyte may run, resulting in blurred borders.

Pen Gold Plating

The connections of the pen (anode, positive pole) and substrate (cathode, negative pole) must be made as described above.

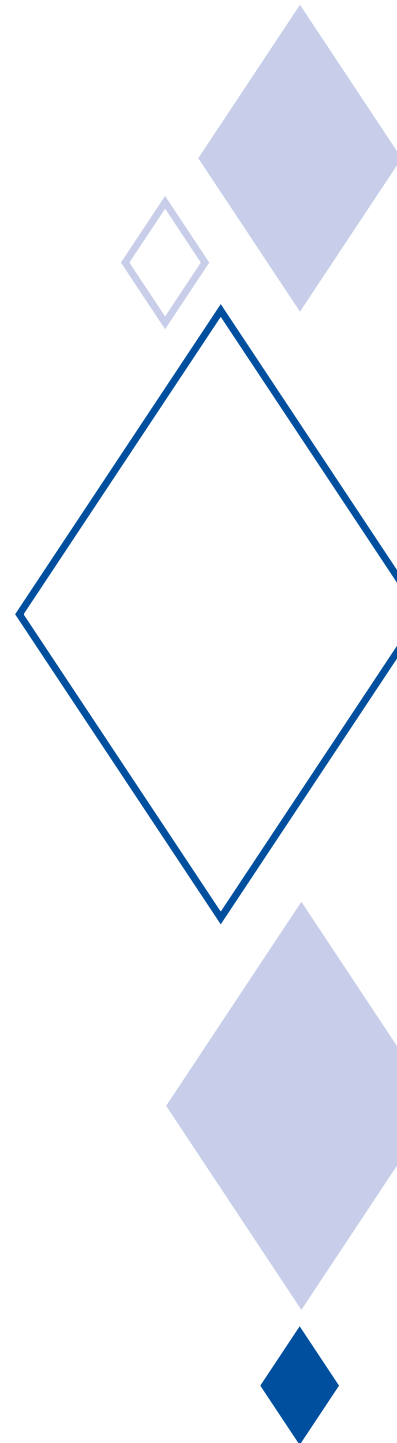
The rectifier is switched on and the voltage is set according to the list given under Properties. The felt tip is soaked with the electrolyte from both sides and then firmly inserted into the pen. The pen is then dipped once more into the electrolyte and moved back and forth or in small circles with light pressure over the area to be coated. The following applies to achieve the best results and constant deposition:

- ♦ The composition of the electrolyte
- ♦ Smooth movement of the pen
- ♦ To prevent the pen from drying out, moisten it again with fresh electrolyte approx. 2 – 3 times / min

The felt tip should be replaced from time to time.

Using a higher voltage in the specified range produces a more intense colour.

If crystals have formed in the electrolyte after cold storage, heat it up to 30°C until the crystals have dissolved again.



Post Treatment

The remaining electrolyte should be removed from the surface as quickly as possible after coating. Rinsing with deionised water is sufficient.

Waste Disposal

Used baths, such as collected rinsing water, must not be discharged into waste water due to the cyanide content.

Please contact us for proper disposal.

Precautionary Measures

Safety-relevant information can be found in the safety data sheet.

**For further information
please contact us:**

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