

Product description

Pen-plating is suitable for selectively applying gold, silver and rhodium on the smallest surfaces. The method is predominantly used for pieces of jewellery (stone settings, clips), glasses and other items. The coatings applied using pen-plating are very thin. If you would like to produce stronger electroplating coatings, we recommend using the standard process with covering lacquer and subsequent electroplating in the relevant electrolyte.

Supplied as

Pen Silver 360-S (30 ml, ready to use)	Item no. 86909900
Pen Gold Bath 204-S yellow (30 ml, ready to use)	Item no. 86908000
Pen Gold Bath 204-S green (30 ml, ready to use)	Item no. 86908060
Pen Gold Bath 204-S rose (30 ml, ready to use)	Item no. 86908030
Black Rhodium Plating Bath DK-S (50 ml, ready to use)	Item no. 81010230
Rhodium WhiteStar® PEN (50 ml, ready to use)	Item no. 81012169
Rhodium WhiteStar® PEN+ (50 ml, ready to use))	Item.-Nr. 81015439

Operating parameters

Operating temperature:	room temperature
Time:	a few seconds
Product movement:	pen movement
Anode material (+):	plating pen with felt
Cathode material (-):	pincers or clamp
Voltage:	Silver Plating Bath SCANDIA 360-S: 4 V Pen Gold Bath 204-S yellow, green: 6 V Pen Gold Bath 204-S rose: 6 V Black Rhodium Plating Bath DK-S: 10 V Rhodium WhiteStar® PEN: 6–9 V Rhodium WhiteStar® PEN+: 6–9 V

Process overview

Pretreatment of the product

Intensive surface pretreatment is required for a strongly adhesive pen-plating result. This should be performed using *Ultrasonic Cleaning Concentrate ULTRA CLEAN*, *Degreasing Salt A* and subsequent pickling in 10% sulphuric acid. After the respective process baths, the parts need to be rinsed several times in water. The last rinsing step before pen-plating should be performed in deionised water. The surface being coated then needs to be thoroughly dried.

Coating:

Place the felt of the plating pen in the relevant precious metal bath for about one to two minutes and then insert the tip until it stops in the cleaned pen. Contact the piece of jewellery using the pincers. Then, use the plating pen to paint over the area being plated several times without pressure. After coating, the piece of jewellery should again be rinsed under running water and, if necessary, electrolytically degreased, pickled and then dried.

General information:

Before each use, the plating pen should be well rinsed with running mains water to remove any residue from the inside that could prevent contacting with the felt. A felt needs to be replaced if it has blackened significantly at the tip or another electrolyte is being used.

After use, the felts should be stored in a rinsing glass with distilled water to prevent them drying out.

Hazard information, storage, disposal

The rhodium pen-plating baths contain acids and must **not** be brought into contact with cyanides or cyanide-based solutions.

The occupational safety measures and regulations specified in the safety data sheet must be observed.

The yellow and green Pen Gold Baths and the Pen Silver 360-S are classified as toxic according to the German Hazardous Substances Ordinance (GefStoffV). The baths contain cyanides and must **not** be brought into contact with acids or acidic solutions.

The occupational safety measures and regulations specified in the safety data sheet must be observed.

The rose Pen Gold Bath is a basic corrosive solution. The occupational safety measures and regulations specified in the safety data sheet must be observed.

All baths must be sealed and stored separately from food in suitable and labelled containers. Spent bath solutions and drag-out rinses must **not** be discharged into the waste water without first being treated.

The information on our product and the method are based on intensive research and technical experience of this application. We provide these results to the best of our knowledge and reserve the right to make technical changes in the course of product development.

However, this does not relieve the user of their responsibility to check our specifications for their own use before application.

If you have any questions or would like a consultation, please contact our application technology service at any time.

We would also be happy to discuss our further electroplating product range.