

# Silberbeschichtung

## Silver Plating Guide for Beginners

### Brush / Tampon and Bath Plating

This guide is easy to understand, technically reviewed, and suitable for beginners. It applies equally to brush/tampon plating and bath plating using the cyanide-free silver electrolyte BMG-103.1.

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### 1. What is Silver Plating?

Silver plating is an electrochemical process where a bright, shiny silver layer is deposited onto a conductive surface using direct current.

Silver is used for:

- decorative finishes
- repair and restoration of silverware
- electrical contacts (excellent conductivity)
- jewelry, antiques, technical parts

→ The electrolyte used is completely cyanide-free, making it safer and easier to use.

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### 2. Suitable Materials

Directly plateable:

- Copper
- Brass
- Gold
- Silver
- Nickel
- German silver

If adhesion is poor:

- apply a copper layer first, or
- use a thin gold flash layer

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### 3. Safety

The electrolyte is not classified as hazardous, but may cause irritation:

- Wear protective gloves
- Wear safety goggles
- Avoid skin and eye contact
- Work in a well-ventilated area

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## 4. Surface Preparation

### 4.1 Polishing

- Polish the surface to a high gloss
- Silver reproduces the surface exactly

### 4.2 Cleaning & Activation

- Thoroughly degrease (electro cleaner, no current or ~5 V)
- Activate the surface (no current or ~2.7 V)
- Handle only with gloves afterward

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## 5. Electrical Connections

- Negative (-): workpiece (cathode)
- Positive (+): electrode / anode pad

### Electrodes:

- Graphite electrode (bath)
- Silver electrode (recommended)
- Fabric/cotton pad (brush plating)

→ For layers above approx. 2 µm, use silver or platinum electrodes.

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## 6. Technical Parameters (Guidelines)

- Voltage: approx. 2.7–3 V and above
- Temperature: at least room temperature
- Deposition speed: very fast

→ Always start with low voltage.

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## 7. Silver Bath Plating

### Additional notes:

- Place workpiece centrally in the bath
- Use graphite plate or silver electrode
- Never use steel anodes

### Procedure:

1. Slightly warm electrolyte if needed
2. Connect workpiece (negative)
3. Connect electrode (positive)

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4. Slowly apply voltage
5. Plate evenly
6. Remove and rinse

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## 8. Brush / Tampon Silver Plating

**Typical applications:** repairs, small areas, edges, touch-ups

**Additional notes:**

- Keep pad clean and well rinsed
- Use smooth, circular motion
- Do not stay in one spot

**Procedure:**

1. Soak pad with silver electrolyte
2. Workpiece to negative, electrode to positive
3. Move evenly with light pressure
4. Plate until a solid silver layer forms

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## 9. Post-Treatment

- Rinse immediately with water
- Dry with a soft cloth
- Polish gently with a care product or cotton cloth

Silver can be replated or restored at any time.

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## 10. Common Beginner Issues

**Dull or gray layer:** insufficient polishing or voltage too low

**Poor adhesion:** unsuitable base material or missing copper/gold layer

**Spots:** uneven brush movement or insufficient cleaning