

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.

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.

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
-

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

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

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.

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.

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)

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

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
-

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.

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