

Platinelektrolyt

Platinum Plating Guide for Beginners

Brush / Tampon and Bath Plating

This guide is beginner-friendly, practical, and aligned with internationally accepted sources and training standards. It applies equally to brush/tampon plating and bath plating using a platinum electrolyte (e.g. BMG-110.3).

Platinum is considered one of the most noble precious metals. It is extremely corrosion-resistant, color-stable, and maintains its brightness even at layer thicknesses up to approx. 3 μm .

1. What Is Platinum Plating?

Platinum plating is an electrochemical process that deposits a bright, silvery-white platinum layer onto a conductive surface. The coating is decorative and functional, offering excellent durability and chemical resistance.

2. Electrolyte & Layer Properties

- Platinum content: approx. 5–10 g per liter
- achievable thickness: up to ~3 μm without color change
- very uniform, bright deposit

➡ For best adhesion, platinum is plated onto nickel or a thin gold layer.

3. Suitable Substrates

Recommended:

- Nickel (polished)
- Gold / gold flash

Conditionally suitable:

- Copper or brass (with nickel underlayer)

Not recommended:

- Steel or iron without undercoating
 - Aluminum without special pretreatment
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4. Safety

- not classified as hazardous, but irritating
 - Wear protective gloves
 - Wear safety goggles
 - Avoid skin and eye contact
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5. Surface Preparation

Polishing

- Polish surface to high gloss
- Platinum exactly reproduces the surface finish

Cleaning & Degreasing

- Thoroughly degrease (electro cleaner, acetone, etc.)
 - Clean clamps and contact points
 - Handle only with gloves afterward
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6. Electrical Connections

- Positive (+): handpiece with electrode and fabric/cotton pad
- Negative (-): workpiece with crocodile clip

Electrodes:

- Platinum anode (ideal)
 - Graphite anode (alternative)
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7. Technical Parameters (Beginner Guidelines)

- Voltage: start at ~3 V
 - Temperature: minimum room temperature
 - Electrolyte: liquid or thickened (gel former optional)
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8. Brush / Tampon Platinum Plating

Typical uses: jewelry, repairs, partial areas

Procedure:

1. Soak pad with platinum electrolyte
 2. Connect polarity correctly
 3. Plate using light, circular movements
 4. Build a uniform platinum layer
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9. Platinum Bath Plating

Additional notes:

- Center the workpiece in the bath
- Use platinum or graphite anodes
- Never use steel anodes

Procedure:

1. Bring electrolyte to room temperature
 2. Connect workpiece (negative)
 3. Connect anode (positive)
 4. Slowly increase voltage
 5. Build desired thickness
 6. Remove and rinse
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10. Post-Treatment

- No drying or curing time required
 - Rinse with water
 - Polish gently with a soft cloth and care product
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11. Common Beginner Issues

Dull finish: insufficient polishing, voltage too low

Uneven deposit: uneven movement (brush), poor anode placement (bath)

Poor adhesion: missing nickel or gold underlayer, poor cleaning

Key takeaway:

Platinum plating delivers maximum durability and brightness – surface preparation and proper underlayers define success.