Rhodium Plating – Your Questions Answered

Keep your process simple. This is the key to getting a great finish on your rhodium plating. But before you begin, remember the Golden Rule: If it’s not clean, it won’t plate.

If it's not clean, it won't plate!

So, it shouldn’t be a surprise that the first orders of business are to –

1. Polish the piece to a brilliant, high finish.
2. Clean thoroughly in an ultrasonic cleaner.
3. Rinse distilled water.
4. Steam clean.
5. For 30-60 seconds, electro clean at 100-120° F, using 2-6 volts in a stainless beaker with the positive lead attached to the beaker and the negative attached to the piece.
6. Rinse again in distilled water.
7. For 30-60 seconds, use activator at room temperature with 0 volts.
8. Rinse yet again in distilled water.

Now that the piece is all squeaky clean, let’s get down to business —

1. For 15-25 seconds, heat the rhodium plating solution to 100° F, using 2-4 volts with the negative lead attached to the piece hung on a gold wire, and positive to platinum titanium anode. *Note: The more time in the rhodium, the fewer volts; the less time, more volts.*
2. Rinse in distilled water.
3. Steam dry and wipe with a soft cloth.

Simple enough, right? Well, what if it doesn’t go as smoothly as planned and you end up with black plating, dark spots, or a frosty-looking finish? Here are some troubleshooting tips that may help —
Be sure to use a gold hook to suspend the piece from an alligator clip for plating. Never use copper in rhodium because it will contaminate your solution.

- Keep your plating bath covered when it’s not in use.
- If you’re getting black plating –
  - Check that your mounting is clean.
  - Be sure to use an electro cleaner or activator.
  - Check that your voltage isn’t too high.
  - Replace your rhodium solution because it may be contaminated.
- Dark spots are usually caused by pieces not being thoroughly cleaned. You can usually remove them using a soft, buff wheel with red rouge and light pressure, however, it’s best to clean the pieces first and avoid the spots in the first place.
- Frosty rhodium is usually the result of high voltage.
Now you’re on your way to achieving a great finish with your rhodium plating.

For treatment and disposal of spent rhodium plating solution, click here.

Watch our videos on rhodium plating at the links below:

[Rhodium Plating: White Gold](#)

[Rhodium Plating: Black](#)

[Rhodium Plating: Silver](#)

QUESTIONS, QUESTIONS, QUESTIONS

Be sure to use an electro-cleaner or activator.
Rhodium plating is a hot topic. Here are some of the questions we found on our forums regarding rhodium plating:

How can I get a good plating on silver? Is there any good way of sizing silver that has the hard plating finish on it?

Silver plating is a bit different. It needs to be nickel or palladium plated prior to rhodium plating.

Anybody been successful with black rhodium plating? Is it any trickier than white rhodium?

We use 45-4150 to do our black rhodium plating. And the process is the same as with white.

I’m wondering how I can protect the shank if I only want to plate the setting?

Red fingernail polish does the trick. The polish acts like a mask and the plating won’t go through it. Remove the polish with acetone.

I have been using your rhodium only for gold and want to start plating silver, will that contaminate the rhodium? Do you need separate rhodium for sterling silver?

If you’re putting a pre-plate on your silver, then you don’t need a separate bath.

Is it safe to rhodium plate in a polishing room?
With proper ventilation, yes. We use a rhodium containment hood (47-6010).

Do you have any other rhodium plating questions for us? Let’s hear them in the comments below!