## Gold Plating Service's - Plating Procedure Chart

### Pre-Treatment Solutions	Anode Required	Brush Voltage	Bath Voltage	Recommended Plating Time	Solution Temperature
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Chrome Stripper	Stainless Steel	6 - 10 Volts	7 Volts	As Required to Fully Remove Chrome	Room Temperature
Copper Strike	Stainless Steel or Copper	2 - 4 Volts	2 - 4 Volts	10 - 15 Seconds	Room Temperature
Electro-Cleaner	Stainless Steel	7 Volts	7 Volts	30 - 30 Seconds	Heated 120 °F (Bath Only)
Surface Activator	Stainless Steel	7 Volts	7 Volts	15 - 30 Seconds	Room Temperature
TriVal - Acid Gold Strike	Platinum Plated Titanium	7 Volts	7 Volts	5-10 Seconds	Room Temperature
Wood's Nickel Strike	Pure Nickel	7 Volts	7 Volts	20 - 30 Seconds	Room Temperature

### Plating Solutions	Anode Required	Voltage	Recommended Plating Time	Temperature
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24K, 18K, 14K - Brush Application	Stainless Steel	3 - 5 Volts	As Required	Room Temperature
24K, 18K, 14K - Bath Application	Stainless Steel	2 - 3 Volts (2.7 optimal)	Time to deposit one micron ~ 5.5 minutes	Room to 100 °F
24K Pen Gold - Brush/Pen Application	Stainless Steel	4 - 6 Volts	As Required	Room Temperature
24K Pure Gold - Brush Application	Platinum Plated Titanium	2 - 4 Volts	As Required	Room Temperature
24K Pure Gold - Bath Application	Platinum Plated Titanium	1.5 - 2.0 Volts	Time to deposit one micron ~ 5 minutes	120 - 150 °F
Bright Acid Copper - Brush Application	Stainless Steel	1 - 3 Volts	As Required	Room Temperature
Bright Acid Copper - Bath Application	Pure Copper w/ Air Application	1.5 Volts	2 - 4 Minutes	Room Temperature
Bright Nickel - Brush Application	Pure Nickel Anode	3 - 4 Volts	10 - 20 Seconds per 1 in	Room Temperature
Bright Nickel - Bath Application	Pure Nickel Anode	2 - 3 Volts	1 - 2 Minutes	110 - 130 °F
Bright Silver NC - Brush Application	Stainless Steel	3 - 5 Volts	1 - 2 Minutes	Room Temperature
Bright Silver NC - Bath Application	Stainless Steel	1 - 3 Volts	1 - 2 Minutes	Room Temperature
Eco - Rose Gold - Bath Application	Stainless Steel	3 - 4 Volts (bath)	1 - 2 Minutes	130 - 140 °F
Palladium - Brush Application	Platinum Plated Titanium	5 Volts	15 - 30 Seconds	Room Temperature
Palladium - Bath Application	Platinum Plated Titanium	2 - 2.5 Volts	15 - 30 Seconds	110 - 120 °F
Rhodium - Bath Application	Platinum Plated Titanium	4 Volts	30 - 60 Seconds	Room Temperature
Rose Gold - Brush Application	Stainless Steel	5 - 7 Volts	As Required	Room Temperature
Rose Gold - Bath Application	Stainless Steel	4 - 6 Volts	30 - 120 Seconds	120 - 130 °F

### Pre-Treatment Solutions Required to Activate Surface of Metal

<table>
<thead>
<tr>
<th>Type of Metal</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>Cannot perform at a amateur level. Please seek professional plating company to apply Nickel onto Aluminum for proper adhesion. Once Nickel is applied correctly. Then follow pre-treatment recommendations.</td>
<td>Electro-cleaner</td>
<td>Surface Activator</td>
</tr>
<tr>
<td>Brass, Bronze, Nickel, Silver, Copper, Gold, Rhodium, etc.</td>
<td>Electro-cleaner</td>
<td>Surface Activator</td>
<td>Plating Solution</td>
</tr>
<tr>
<td>Chrome plated item</td>
<td>Electro-cleaner</td>
<td>Surface Activator</td>
<td>Plating Solution</td>
</tr>
<tr>
<td>Stainless Steel / Steel</td>
<td>Electro-cleaner</td>
<td>Wood's Nickel Strike</td>
<td>Plating Solution</td>
</tr>
<tr>
<td>Titanium</td>
<td>Can not be plated onto with our products</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Metals Where a Diffusion Barrier Should Be Considered

**What is the purpose of a diffusion barrier?**
There are types of metals that will corrode under a thin layer of gold plating, this eventually may disolor the gold plated surface. In this case a diffusion barrier can prevent discoloration of the gold plated surface.

<table>
<thead>
<tr>
<th>Metal Type</th>
<th>Diffusion Barrier Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>Palladium/Nickel</td>
</tr>
<tr>
<td>Brass</td>
<td>Palladium/Nickel</td>
</tr>
<tr>
<td>Silver</td>
<td>Palladium/Nickel (Optional)</td>
</tr>
<tr>
<td>Stainless Steel / Steel</td>
<td>Palladium/Nickel</td>
</tr>
</tbody>
</table>