

## Gold Plating Service's - Plating Procedure Chart

Pre-Treatment Solutions	Anode Required	Brush Voltage	Bath Voltage	Recommended Plating Time	Solution Temperature
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 - 90 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
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 Agitation	1.5 Volts	2 - 4 Minutes	Room Temperature
Bright Nickel - Brush Application	Pure Nickel Anode	3 - 4 Volts	10 - 20 Seconds per <sup>2</sup> 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			
Type of Metal	Step 1	Step 2	Step 3
Aluminum	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.		
Brass, Bronze, Nickel, Silver, Copper, Gold, Rhodium, etc.	Electro-cleaner	Surface Activator	Plating Solution
Chrome plated item	Chrome Stripper in proper mode	Surface Activator	Plating Solution
Stainless Steel / Steel	Electro-cleaner	Wood's Nickel Strike	Plating Solution
Titanium	<b>Can not be plated onto with our products</b>		

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 discolor the gold plated surface. In this case a diffusion barrier can prevent discoloration of the gold plated surface.
Metal Type	Diffusion Barrier Material
Copper	Palladium/ Nickel
Brass	Palladium/ Nickel
Silver	Palladium/ Nickel (Optional)
Stainless Steel / Steel	Palladium/ Nickel