



Gold Plating Services

Technical Data Sheet

Bright Acid Copper Plating Solution

Gold Plating Services' **Bright Acid Copper Plating Solution** deposits a brilliant ductile copper with excellent leveling. This copper can be applied as an undercoat for nickel. As with any other acid copper solution, it may be necessary to apply a preliminary strike coating on steel, aluminum, and zinc substrates. Cyanide copper solutions are often used, although an alkaline nickel strike or non-cyanide alkaline copper can also be used on steel or aluminum parts. Plastics and other non-conducting material must be coated with a continuous conducting metallic film prior to plating with acid copper.

Make sure the work is connected to the common lead and the power is on and set to the lowest position on the power supply before immersion into the copper solution. For small tanks the maximum voltage will be 1 – 2 volts DC.

Operating Conditions

	<u>Range</u>
Temperature	70° to 100° F
Anode to Cathode Ratio	2:1 or higher
Tank Voltage	1 - 3 VDC
Filtration	Continuous
Current Density	30 – 50 A/sq. ft.
Anode	Copper (Anode Should Be Bagged in Polypropylene bag)
Agitation	Vigorous air agitation*
Copper sulfate	28oz per gallon optimum
Sulfuric acid	120mL/gallon
Chloride Ions	50ppm
Brightener	1% v/v

Vigorous air agitation is recommended for the operation of this bath. Low pressure filtered air blower is recommended to keep the solution in motion and more importantly to provide oxygen that will dissolve cuprous ions at the surface of the anodes. Mechanical agitation may also be used in addition to air agitation.

*Many hobbyists and small tank users find an aquarium pump works well for this. Install the solution end of the air tubing near the lower end of the copper anode to insure that free oxygen is being applied to the anode.