



Turning your world to gold

Technical Data Sheet  
**24k Brush Gold Solution / Pen Gold  
Plating Solution**

**Brush Gold**

Gold Plating Services' **24K Brush Gold Plating Solution** is cobalt hardened, acid gold electroplating solution that will yield a relatively low stress, fine grained deposit with hardness range of 130-200 Knoop. This solution is ideally suited for printed circuit boards fingers, contacts, fine select applications as well as decorative deposits.

The purity and hardness of the final electrodeposited gold will be equivalent to Type I, and II, Grade C, specifications as indicated in MIL-G-45204C, as follows;

<b>Purity -</b>	99.7 percent gold minimum (24 karat)
<b>Hardness -</b>	Knoop hardness 130-200
<b>Density of Plate -</b>	12.45 mg/in <sup>2</sup> /μm thick
<b>Theoretical Coverage</b>	~ 1300 in <sup>2</sup> /8 oz solution to an average thickness of 10 micro-inches (0.25μm). Note: this coverage is based on the assumption that all gold in the solution will be deposited. In actual practice this is not likely since there is normally solution loss during use.

**Operating Conditions**

	<u>Range</u>
Gold content-	Variable - standard solution contains ~4 grams per 275grams solution, (~8.5oz).
Temperature	Room
Anode to Cathode Ratio	N/A
Specific Gravity	1.08 – 1.15 (11-16 Be)
pH	5.8 - 6.3
Time to deposit 0.00002'' (0.5 micron)	N/A
Cathode Efficiency	35%
Filtration	N/A
Current Density	Variable – 25 to 200 milliamperes / in <sup>2</sup> , (120 ma/in <sup>2</sup> – nominal)
Voltage	3-6 volts DC
Anode	Type 316 stainless steel, platinum plated titanium or carbon
Application tip	cotton
Agitation	continuous solution movement over surface