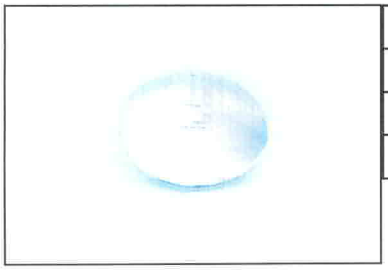
Technical data sheet and product guideline

GT4PINK

GoldenRose 18 kt pink gold micron solution for bath

BATH

Color coordinates



L	83.9
a	9.6
b	14.7
c	17.6

Product form

Metal concentration	4 g/l (Au)
Form	Liquid
Material color	Blue
Storage time	2 years
Format	Ready to use
Chemical type	Acidic
Volume	1 liter

Operating data

	Range	Optimal
Voltage (V)	1.0 - 3.0	1.8
Current density (A/dm2)	0.3 - 0.8	0.7
Working temperature (°C)	40 - 50	40
Exposure time (sec)	60 - 1200	480
pH	4.8 - 5.2	5.0
Cathode efficiency (mg/Amin)	50 - 55	50
Deposition speed	1 micron in 240 sec	2 micron in 480 sec.
Solution density	12 - 16	14
Anode/cathode ratio	3-4:1	4:1
Anode type	Platinized titanium	
Agitation	Moderate	

Metal concentration

Metal	Range (g/l)	Optimal (g/l)
Gold	3.5 - 4.5	4.0
Copper	1.8 - 2.2	2.0

Deposit data

Purity (%)	75
Hardness (HV 0,01)	400-450
Density (g/cm3)	16
Thickness (um)	0.2 - 5
Appearance	Shiny
Color	Pink

Preparation

GT4PINK is a ready-to-use plating bath at the concentration of 4 g/l of gold. No preparation is required while filling the working tank.

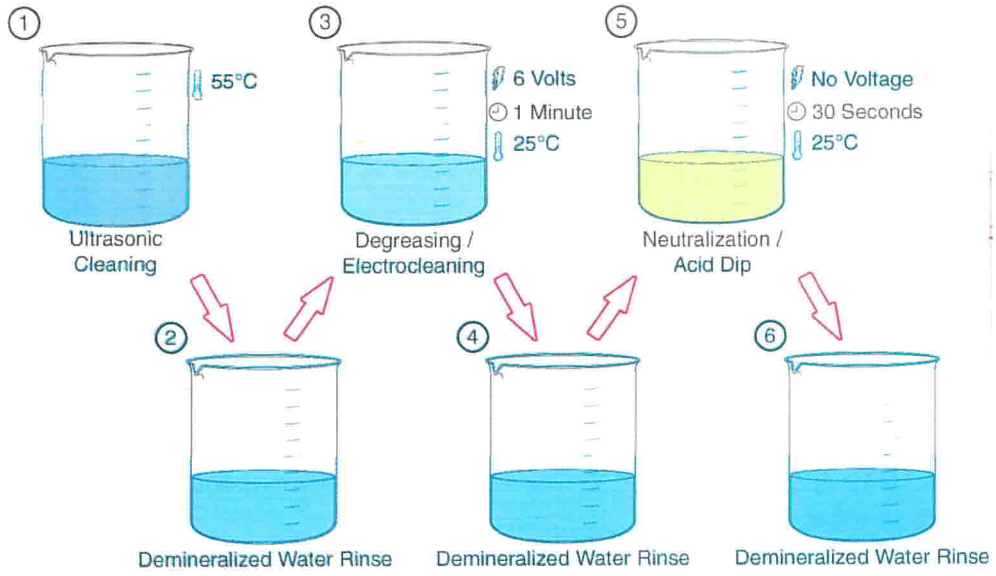
Equipment

Working vessel materials: Pyrex glass / PVC / polypropylene
Power supply: DC current rectifier with low residual AC (<5%)
Heating element
Anode type: Platinized titanium [1.5-2.5 µm] or stainless steel

For larger bath volumes only:

- Magnetic driven filter pump with 5-15 µm cartridge (before use, boil and wash the cartridges with demineralized water for 3 hours to prevent organic contamination)
- Amp/min counter

Pre treatment



Bath maintenance

It is necessary to maintain the bath according to the optimal operating conditions by the addition of a gold solution (obtained by dissolving salts of GOLD (I) POTASSIUM CYANIDE 68.3% in hot demineralized water) and some units of REPLENISHER.

The REPLENISHER units contain alloying metals, additives, and brighteners necessary for maintaining the electrolyte at optimal parameters. Replenishment is pre-calibrated based on Amp/minute consumption.

Maintenance schedule:

Every 900 Amp/min. restore with:

- 50 grams of gold salt to 68% AUS683
- 1 liter of replenisher K18R

In addition to REPLENISHER, common system recovery products, may be necessary to maintain the electrolyte over the long term. The latter are listed here below:

• K18BR, brightener useful in the event that the deposit lacks brilliance or if cloudy effect is visible at the medium-low current density areas.

• K18M, wetting agent to increase the wettability of the pieces.

• K18SCA and K18SCB, acidic and alkaline conductive salts respectively to increase the density of the bath in case it is too low or to adjust the pH in case it is not too far with respect tot the reference values range.

• K18A, liquid additive to be used in the case of a hazy deposit

Post treatment

Electrolyte should be removed from the surface of the itemes hanged on the rack as quick as possible. Rinse off the bath rests in a recovery tank (still rinse) then wash in circulating deionized water (washing tank) and finally dry.

Water purity

To prevent contamination of the bath both during its preparation and any subsequent replenishing operations, use demineralized water with a conductivity of less than 3 µS/cm (containing no traces of organic compounds, Chlorine, Silicon, or Boron).

Safety information

Being an acidic solution, the electrolyte is an irritant to the skin, eyes and mucous membranes. Caution should be exercised when using the product, avoiding contact with the eyes and skin. Use gloves and safety goggles. Keep away from acid based chemicals. For further information please refer to the relative MSDS.

Regarding the shipment of GT4PINK we remind that it is classified as dangerous good with class 9: ENVIRONMENTALLY DANGEROUS GOOD. For further information please refer again to the related MSDS on paragraph 14.

Additional hints

For maximum performance and in particular in terms of resulting color do not use an excessive agitation. A moderate agitation of the pieces to be plated will be sufficient. For larger volumes it is sufficient the use of a magnetic drive filter pump with a not too much high capacity.

The solution pH should be held at the nominal value; it is possible to correct it by the folowing procedure:

- Use 20% potassium hydroxide solution (KOH) to raise it or alkaline conducting salts K18SCB on the basis of how much far is this parameter with respect to the nominal value.
- Use K18SCA acidic conducting salts to lower it.

In case a strong drag-out is present, the solution density should be brought back to its initial value by adding a mixture of the conducting salts, K18SCA and K18SCB made with the ratio of 1:4. 15 g/l of such mixture restores the solution density of 1 Bé.

All the operative parameters influence the colour deposited, especially temperature and pH. It is strongly recommended to consult our Technical Customer Service before modifying the nominal operative conditions.