


**GENERAL INFORMATION**

GP1-1N is a yellow gold pen plating solution which deposits a brilliant 1N gold color to the surface applied. 1N can be described as a greenish yellow color with evidently green undertones and is a common color throughout Europe. It is a perfect solution to for two-tone plating applications where a greenish gold color is required. It can also be used to highlight specific details or cover solder joints on 1N gold colored items. This yellow gold pen plating solution is nickel, lead, and cadmium free.

**Product form**

Metal concentration	1 g/ 100 ml
Product's pH	Alkaline
Solution form	Liquid
Solution form	Ready-to-use
Plating solution color	Transparent-Green
Storage time	2 years
Volume	100 ml

**Deposit data**

Purity (%)	100.0
Hardness [HV 0.01]	90 - 100
Density [g/cm <sup>3</sup> ]	19.6
Thickness range [µm]	0,05 - 0.2



Operating data	RANGE	OPTIMAL
Voltage [V]	See information section	
pH	8 - 10	8.0
Working temperature [°C]	20 - 30	25

Metal concentration	METAL	RANGE (g/l)	OPTIMAL (g/l)
	Gold	10	10.0

**Color coordinates**

L*	88.2
a*	0.8
b*	28.2
c*	28.2

**PREPARATION**

GP1-1N is a ready-to-use pen plating solution at the concentration of 1 g/ 100 ml. No preparation is required. It is important to check, once the product has been received, the integrity of its packaging.

**EQUIPMENT**

Power supply: Pen plating machine (5 Amp – 12 Volt rectifier)  
Anode: A pen with a platinum collar  
Tips: Fiber (white or brown)

**PRE TREATMENT**

Work pieces designated to undergo a pen plating operation, must go through the same cleaning procedures as recommended for bath plating operations. GP1-1N can be deposited directly onto silver, palladium, gold, nickel and its alloys. An intermediate deposit or precious metal plating strike is necessary before depositing onto materials containing tin, lead, zinc, aluminum or iron.

**POST TREATMENT**

Electrolyte should be removed from the surface as quick as possible. Rinse off the bath rests in a recovery rinse (still rinse). Rinse the parts in running water and dry.

**BATH MAINTENANCE**

Use the gold pen plating solution until it is completely exhausted, without the additions of any replenisher-additives.

**SUPPLEMENTARY INFORMATION****Choosing the correct working temperature and voltage.**

Work at room temperature. The best voltage for using GP1-1N is to be chosen upon the kind of tip used on the pen:

- White tips: 8 -10 V
- Brown tips: 7 - 9 V
- PENGRAF: 3 - 5 V

**About the temperature**

Work at room temperature, in the range of 20 - 30°C.

**About the color of the solution**

The color of the solution is initially transparent but during time it tends to switch gradually to pale green until blueish tones as the cyanide degrades. For this reason it is advisable to use it in a short time.

**SAFETY INFORMATION**

Being an alkaline solution, the electrolyte is corrosive therefore 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 cyanide based chemicals. For further information please refer to the relative MSDS.

**DISCLAIMER**

All recommendations and suggestions in this bulletin concerning the use of our products are based upon tests and data believed to be reliable. Since the actual use by others is beyond our control, no guarantee expressed or implied, is made by Legor Group, its subsidiaries or distributors, as to the effects of such use or results to be obtained, nor is any information to be construed as a recommendation to infringe any patent.