



AURALL™ 364-A Strike Bath

For Electronic Finishing Applications

Regional Product Availability

- North America

Description

AURALL 364-A Strike Bath is designed to plate thin, adherent, pure gold electrodeposits onto copper, nickel and nickel alloys.

Advantages

- Compatible with plating processes using AURALL 305 and 305M Electrolytic Gold
- Provides initial layer of adherent gold on nickel, copper and iron based substrates or underplates

Bath Make-up

CAUTION! Hazardous cyanide-containing chemical.

Chemicals Required	Metric	(U.S.)
AURALL 364-A Strike Make-up Solution	750 ml/l	(75% v/v)
Gold Metal as Potassium Gold Cyanide	2.0 g/l	(0.25 toz./gal.)
AURALL 364-A Strike PGC-Replenisher	200 ml/tr. oz. gold metal as PGC	

Make-up Procedure

CAUTION! Hazardous cyanide-containing chemical.

- 1) Add AURALL 364-A Make-up Solution to a clean tank.
- 2) Dissolve Potassium Gold Cyanide separately in warm distilled or D.I. water and add to tank.
- 3) Add AURALL 364-A Strike PGC-Replenisher. Mix thoroughly.
- 4) Adjust to final volume with distilled or D.I. water.
- 5) Mix thoroughly.
- 6) Check pH and specific gravity and adjust if necessary.

Bath Operation–Metric

Parameters	Range	Recommended
Gold Concentration	1.0–2.5 g/l	2.0 g/l
pH	3.5–4.0	3.8
Specific Gravity	1.09–1.12	1.11
Temperature	32–50°C	43°C
Current Density	0.05–0.20 A/dm ²	
Agitation	Solution and mechanical	
Deposition Rate	0.03 microns per minute at 0.1 A/dm ²	

Bath Operation–U.S.

Parameters	Range	Recommended
Gold Concentration	0.12–0.30 toz./gal.	0.25 toz./gal.
pH	3.5–4.0	3.8
Specific Gravity	12–16° Baumé	14° Baumé
Temperature	90–120°F	110°F
Current Density	0.5–2.0 A/ft ²	
Agitation	Solution and mechanical	
Deposition Rate	1.3 microinches per minute at 1 A/ft ²	

Bath Maintenance **CAUTION! Hazardous cyanide-containing chemical.**

Potassium Gold Cyanide

Gold metal is replenished by additions of Potassium Gold Cyanide. Replenishment is carried out on the basis of analysis or on an ampere minute schedule confirmed by analysis.

Pure Gold Brightener

It may be necessary to replenish the brightener separately in addition to that which is contained in the AURALL 364-A Strike PGC-Replenisher, particularly after idle periods. If deposits have become red or brown in appearance, up to 2.5 ml/l (0.25% v/v) of Pure Gold Brightener may be added.

AURALL™ 364-A Strike Acid Salt

Solution pH is lowered by additions of AURALL 364-A Strike Acid Salt. Add 1.5 g/l (0.15% v/v) AURALL 364-A Strike Acid Salt to lower pH by 0.1 unit.

Solution pH is raised by additions of potassium hydroxide. Add 0.5 g/l (0.05% v/v) potassium hydroxide to raise pH by 0.1 unit.

AURALL 364-A Strike Conductivity Salt

Maintain specific gravity in recommended range with AURALL 364-A Strike Conductivity Salt. Add 10.0 g/l (1.0% v/v) AURALL 364-A Strike Conductivity Salt to raise specific gravity by 0.01 (1.0 Baumé).

Note: If large additions of Conductivity Salt are required, it may be necessary to readjust the pH of the plating bath.

AURALL 364-A PGC-Replenisher

Add 200 ml of AURALL 364-A PGC-Replenisher per one troy ounce of gold metal.

Product Data

For the specific Product Data values, please refer to the Certificate of Analysis provided with the shipment of the product(s).

Associated Products

AURALL 364-A Make-up Solution
AURALL 364-A Strike Conductivity Salt
Pure Gold Brightener
AURALL 364-A Acid Salt
AURALL 364-A PGC-Replenisher

Equipment

Tanks: Polypropylene
Anodes: Platinized (titanium, tantalum, or columbium)
Heaters: Silica sheathed or PTFE coated immersion
Filtration: 0.5–5.0 micron filters with pump capacity for 4 turnovers per hour

Handling Precautions

Before using this product, consult the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage.

WARNING! DO NOT ACIDIFY this product or working bath containing this product below specified operating pH range, or below pH 7 if no range is specified. Acidification may release highly toxic cyanide gas, which can be fatal if swallowed, inhaled or absorbed through the skin.

CAUTION! Keep combustible and/or flammable products and their vapors away from heat, sparks, flames and other sources of ignition including static discharge. Processing or operating at temperatures near or above product flashpoint may pose a fire hazard. Use appropriate grounding and bonding techniques to manage static discharge hazards.

CAUTION! Failure to maintain proper volume level when using immersion heaters can expose tank and solution to excessive heat resulting in a possible combustion hazard, particularly when plastic tanks are used.

Storage

Store products in tightly closed original containers at temperatures recommended on the product label.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Electronic Materials Technical Representative for more information.

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