

## NEUTRA/Gold 103

### An Immersion Gold Plating Process

#### Product Description

NEUTRA/Gold 103 is an immersion/electroless gold bath designed to plate over copper and nickel substrates. A plating thickness of up to 25 micro-inches of 23.99 karat gold can be achieved in 20 minutes. NEUTRA/Gold 103 is excellent for gold tab plating touch-up and/or as a substitute final finish on electroplated nickel/gold reworks.

#### Performance Features

- NEUTRA/Gold 103 can be used as a gold final finish.
- NEUTRA/Gold 103 is compatible with most soldermasks as it operates at a pH of 7.00
- NEUTRA/Gold 103 plates a nearly pure gold deposit (23.99 karat)

#### Physical Specifications

Physical State	Liquid
Appearance	Clear to Light Yellow Solution
Odor	Mild Amine
Freeze/Thaw Stability	Do Not Freeze
Specific Gravity	1.1
pH	7.25

#### Equipment Requirements

Tanks: Constructed of polypropylene, polyethylene, PVC, CPVC, or steel lined.

Racks: Constructed of plastisol-coated steel.

Heaters: Teflon.

Ventilation: Required

#### Product Make-Up

Use NEUTRA/Gold 103 at full strength. Do not dilute or combine with other additive.

# Technical Data Sheet

## Operating Parameters

Parameter	Range	Optimum
Temperature	140-180°F	Based Upon Desired Thickness Of Gold Deposit
Immersion Time	10-30 Minutes	Based Upon Desired Thickness Of Gold Deposit
Agitation	Mechanical	N/A
Ventilation	Required	N/A
Filtration	Recommended	N/A

## Control and Replenishment

The bath volume should be maintained with additions of deionized or distilled water. During use, the pH of the bath will change. Maintain the pH between 7.0 And 7.5 with additions of dilute ammonium hydroxide. To eliminate the risk of hydrogen cyanide gas evolution, never allow the pH of the bath to fall lower than 6.5. The bath should be replaced when the time to initiate gold plating exceeds 30 seconds.

## Safety and Handling

NEUTRA/Gold 103 contains free cyanide, which can be liberated as toxic and lethal hydrogen cyanide gas by contact with acids. Store this product away from acids and assure no contact with acids during use. Read and understand this products MSDS before handling.

## Waste Treatment

This product contains free cyanide, which must be treated before disposal. Additionally, spent solutions of NEUTRA/Gold 103 may contain copper and/or nickel. Once the cyanide has been treated, subsequent treatment to precipitate these metals is required. Individual users should verify the nature of spent solutions to assure compliance with local, state, and federal regulations. Contact Seacole for specific details and/or further waste treatment recommendations.

## Ordering Information

NEUTRA/Gold 103 is available in 4-liter amber glass bottles and is available in concentrations of 0.25, 0.50, or 1.00 troy ounce of gold per gallon.

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