

## ENVIRO/Strip Cu

### A One Step Peroxide/Bifluoride Solder and Tin Stripping Solution

#### Product Description

ENVIRO/Strip Cu is an economical, single step, hydrogen peroxide/bifluoride based tin and tin-lead stripping solution designed specifically for spray applications. Depending upon use, ENVIRO/Strip Cu is capable of stripping up to 150 g/L (20 opg) total metal with minimal precipitate formation. ENVIRO/Strip Cu is equally effective stripping plated or fused solder. Additionally, the copper inhibitor package minimizes copper attack, leaving a uniformly clean and bright copper surface, improving AOI inspection; and virtually eliminating the potential for solution exotherm. ENVIRO/Strip Cu is suitable for feed and bleed replenishment.

#### Performance Features

- High throughput yields while minimizing precipitate (sludging) formation.
- ENVIRO/Strip Cu is designed to be operated in spray application and is suitable for feed and bleed replenishment.
- ENVIRO/Strip Cu exhibits minimal copper attack, improving process latitude and copper appearance after stripping.

#### Physical Specifications

Physical State	Liquid
Appearance	Transparent Amber
Odor	Slight Peroxide Odor
Stability	Stable
Specific Gravity	~1.121
pH	4-6

#### Equipment Requirements

Tanks: Constructed Of Polypropylene, Polyethylene, PVC Or CPVC.

Fasteners: Should Be Constructed Of Hastalloy C Or 316 Stainless Steel.

Racks: Should Be Polyethylene, Polypropylene, Or Plastisol Coated Steel.

Cooling Coils: Constructed Of Polyethylene, Polypropylene, Teflon Or Plastisol Coated Steel. Cooling Coils Are Required During Operation.

Ventilation: Recommended

NOTE: Processing materials constructed of steel or titanium are unsuitable.

## Technical Data Sheet

### Product Make-Up

ENVIRO/Strip Cu should not be diluted prior to use. Assure all tanks or process equipment is thoroughly cleaned prior to adding ENVIRO/Strip Cu. Refer to the procedure below.

#### Procedure

1. Thoroughly rinse the tank and inspect for cleanliness paying special attention to the heaters and heater sheathings, and cooling coils.
2. Add ENVIRO/Strip Cu to the desired volume.

### Operating Parameters

Before preparing the working bath, make sure the tank is clean and free of all prior chemistry, dirt, or previous solution deposits

Temperature	70 - 90°F
Exposure Time	Suited To Individual Requirements (Adjust The Conveyor Speed So The Breakpoint Occurs At 60 - 70% Within The Spray Chamber.)
Method Of Application	Spray Or Immersion
Agitation	Solution Agitation In Immersion Applications Full Cone Nozzles At 20-35 Psi In Spray Applications

Cleanliness: Excessive sources of chloride, copper and iron contamination will reduce the strip rate due to excessive hydrogen peroxide destabilization.

### Control and Replenishment

ENVIRO/Strip Cu can be operated on a feed and bleed addition basis utilizing a specific gravity controller. Strip time will increase with solution use and metal concentration. The temperature of the stripping bath will affect the strip rate exponentially as the temperature is increased. As the bath ages the strip speed will diminish. The bath should be dumped when additions of ENVIRO/Strip Cu will no longer increase the speed and/or the copper concentration exceeds 4,000 mg/L.

Alternatively, the product can be replenished manually with additions of stabilized 50% hydrogen peroxide to maintain the hydrogen peroxide concentration at 8% (a new bath contains 15% hydrogen peroxide). Replenishments of hydrogen peroxide should be discontinued when copper and other hydrogen peroxide destabilizing contaminants reach concentrations which consume the peroxide at a rate whereby continued additions are not economical. Generally, this will occur after 4-6 replenishment additions. Use the procedure below to measure the hydrogen peroxide concentration.

## Technical Data Sheet

### Determination Of Hydrogen Peroxide Concentration

Equipment Required	Reagents Required
Buret, 50 ml	Ceric Sulfate 0.10 N
Erlenmeyer Flask, 250 ml	Sulfuric Acid - 25% V/V
Pipet, 0.5 ml	Ferriin Indicator

#### Procedure

1. Pipette exactly 0.5 ml of ENVIRO/Strip Cu into a 250 ml beaker containing 10 ml of 25% v/v sulfuric acid and 5 drops of indicator.
2. Titrate with standardized Ceric Sulfate 0.1N from a reddish to a blue/clear endpoint. Record the number of mls of Ceric Sulfate required.

#### Calculation

$$\frac{A \times B \times C}{D \times 12} = \% \text{ by volume hydrogen peroxide}$$

Where A	=	mls of titrant required
B	=	N of titrant (0.10)
C	=	34 (formula wt of H <sub>2</sub> O <sub>2</sub> )
D	=	mls of sample (0.5)

The hydrogen peroxide concentration should be maintained between 4-8 % v/v.

#### Safety and Handling

Read and understand MSDS before using.

#### Waste Treatment

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

ENVIRO/Strip Cu is available in 5 gallon pails, and 50 gallon drums.

13505 Industrial Park Blvd. Plymouth, MN 55441