



# SILVER STRIP LR-525

For Electronic Finishing Applications

## DESCRIPTION

Silver Strip LR-525 is an alkaline non-cyanide electrolytic stripping process designed for removal of silver flash from copper and copper alloy base materials. Silver Strip LR-525 is particularly suitable for reel-to-reel or cut strip spot plating equipment.

## ADVANTAGES

- Extended bath life compared to conventional back-stripping processes
- Non-cyanide based electrolyte
- Effectively removes silver flash without discoloring the silver or copper surfaces
- Suitable for use in high speed reel-to-reel and cut strip applications

## BATH MAKE-UP

Chemicals Required	Metric	(U.S.)
Deionized Water	500 ml/l	(50% v/v)
Silver Strip LR-525 Part A	75 g/l	(10 oz./gal.)
Silver Strip LR-525 Part B	120 ml/l	(12% v/v)

Dilute to final volume with deionized water.

## MAKE-UP PROCEDURE

1. Add deionized water to tank.
2. Add Silver Strip LR-525 Part B and mix thoroughly.
3. Add Silver Strip LR-525 Part A and mix until completely dissolved.
4. Dilute to final volume with deionized water and mix thoroughly.

### Bath Operation—Metric

Parameter	Range	Recommended
Silver Strip LR-525 Part A	60–90 g/l	75 g/l
Silver Strip LR-525 Part B	115–125 ml/l	120 ml/l
Temperature	30–49°C	40°C
pH	10.7–11.3	
Current Density	1–5 A/dm <sup>2</sup>	
Cathode	Stainless Steel (Plate or Mesh)	
Cathode: Anode Ratio	1:1 minimum	

### Bath Operation—U.S.

Parameter	Range	Recommended
Silver Strip LR-525 Part A	8.0–12 oz./gal.	10 oz./gal.
Silver Strip LR-525 Part B	11.5–12.5% v/v	12% v/v
Temperature	86–120°F	104°F
pH	10.7–11.3	
Current Density	10–50 A/ft <sup>2</sup>	
Cathode	Stainless Steel (Plate or Mesh)	
Cathode: Anode Ratio	1:1 minimum	

## BATH MAINTENANCE

### Silver Strip LR-525 Part A

Replenish Silver Strip LR-525 Part A based on analysis results to maintain the recommended concentration.

## ANALYTICAL PROCEDURE FOR SILVER STRIP LR-525 PART A

### I. Equipment

- a) 10 ml Transfer Pipette
- b) 50 ml Burette
- c) 250 ml Erlenmeyer Flask
- d) 50 ml Graduated Cylinder

### II. Titrant

Silver Nitrate, 0.1N (0.1M)

## SILVER STRIP LR-525

### III. Procedure

- Pipette 10.0 ml sample of Silver Strip LR-525 working solution into an 250 ml Erlenmeyer flask.
- Add 50 ml deionized water.
- Titrate with 0.1N silver nitrate until the first appearance of a permanent white turbidity.

### IV. Calculation

Silver Strip LR-525 (g/l) = ml Titrant x N x 26.1

Silver Strip LR-525 (oz./gal.) =

ml Titrant x N x 3.5

### pH

Increase solution pH by using Silver Strip LR-525 Part B. 1.5 ml/l Silver Strip LR-525 Part B will raise solution pH by 0.1 units. Silver Strip LR-525 Part A should be used to lower solution pH. 1.1 g/l Silver Strip LR-525 Part A will lower solution pH 0.1 units.

### PRODUCT DATA (TYPICAL PROPERTIES)

#### Silver Strip LR-525 Part A

Appearance: White crystalline powder

#### Silver Strip LR-525 Part B

Appearance: Clear colorless liquid

Specific Gravity: 1.17–1.23

### EQUIPMENT

Tanks: PVC, stainless steel, rubber lined material

Cooling System: Titanium or stainless steel

Cathodes: Stainless steel plates or mesh

Agitation: Continuous

### HANDLING PRECAUTIONS

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

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

### STORAGE

Store all Silver Strip LR-525 products in tightly closed containers at temperatures above 10°C (50°F). For specific and complete recommendations involving precautionary handling procedures of Silver Strip LR-525 materials, please refer to the appropriate Hazardous Material Labels and Material Safety Data Sheets supplied with these products.

Electroplating chemicals and specialties can be corrosive, harmful and poisonous. Care should be taken with respect to appropriate storage, handling and utilization. When disposing such chemicals, the regulations regarding the treatment of waste water are to be strictly observed.

### WASTE TREATMENT

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

Due to the nature of Silver Strip LR-525 disposal of it, or residues therefrom, should be made in compliance with federal, state, and local environmental laws.

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