



System II Solder Stripper

Product Code: 2701005
Revised Date: 07/13/2006

System II Solder Stripper (Alpha And Delta)

System II Solder Stripper is a two step liquid acidic product developed for dissolving solder from circuit boards and contact fingers by immersion. Solder stripping occurs mainly in the Alpha component, while the Delta component removes the adhering tin compounds.

While **System II Solder Stripper** has been formulated to have a minimal attack on the underlying copper, care should be taken to minimize exposure time in the Delta component.

ADVANTAGES

- Fast stripping rate.
- Minimal attack on underlying copper.
- Both operate at room temperature.
- Exceptionally long life.
- No hydrogen peroxide in either component.

OPERATING CONDITIONS

Concentration:	Alpha - 100%, Delta - 50 to 100%
Temperature:	65 to 85 F -- do not heat above 100f.
Immersion time:	Alpha - 2 to 4 minutes. Delta - 1 minute.
Equipment:	PVC, polyethylene or koroseal - do not use glass or fibreglass containers with Alpha.
Control:	when the stripping rate becomes excessively long, discard the bath.

TYPICAL PROCESSING CYCLE

1. Immerse circuit boards into **System II Solder Stripper** Alpha, full strength, room temperature for enough time cut through the tin/lead down to a whitish smut.

Caution: As the stripper contains nitric acid, various oxide fumes of nitrogen may be generated in stripping. Be careful to avoid breathing the fumes as they may be toxic. Use ventilation if possible.



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2. Rinse in cold water rinse, 1-2 minutes.
3. Immerse in 50% to 100% **System II Solder Stripper** Delta, room temperature to 90 F. for no longer than 1 minute. Longer dwell times may cause attack on copper.
4. Rinse in cold water, 1-2 minutes.
5. Dry.

CONTROL

Alpha (by titration) when used at 100% concentration:

- A. Pipette a 5 ml sample of the operating solution into a 250 ml Erlenmeyer flask. Add 75 - 100 mls of water.
- B. Add 5 - 10 drops phenolphthalein indicator.
- C. Titrate with 1.0 N sodium hydroxide from a colorless to pink endpoint.
- D. Calculation:

$$(\text{Mls of 1.0 N NaOH})(3.73) = \% \text{ Activity}$$

Note: The solution should not be run below 75% concentration. Since it is replenished at 100%, large volume additions are required to bring the concentration up.

An alternative method of control is to measure the copper concentration by atomic absorption. When the copper content gets to 1000 ppm (1 gram/liter), the working solution should be discarded.

Delta can be controlled by copper content via atomic absorption as well. However, since the major component is ferric chloride, this would be more prone to attack copper and therefore 500 ppm of copper should be considered as spent. A titration of this is very difficult since ferric hydroxide would begin to precipitate immediately and distort any color change.

CAUTION

System II Solder Stripper components are strongly oxidizing acidic products. They should be handled accordingly. Avoid skin, eye and oral contact. Wear protective clothing, gloves and goggles when handling the product. Also avoid fume inhalation. Flush exposed areas immediately with clean, cold water. Contact a doctor immediately in case of injury.



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WASTE DISPOSAL

Neutralize **System II Solder Stripper** solutions to a pH of between 6.0 to 8.0 with soda ash or caustic soda. When adding either of the alkaline materials add slowly to avoid splashing. Do not use a glass pH electrode to check for the pH range.

Small quantities of sodium sulfate may have to be added to precipitate the remaining lead. After all of the metallics have been precipitated, the solution may be discharged to a settling tank.

Another option is to have the spent **System II Solder Stripper** solution taken away by a permitted waste hauler to an approved site for disposal.

In all cases, please check with the local authorities for the specific restrictions in your area.

WARRANTY

THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.