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Product Data Sheet

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PRODUCT #: N8360

NPS 3000

Single Step Tin Stripper

DESCRIPTION: A nitric acid based solution for stripping tin or tin/lead from printed circuit boards. *NPS 3000* strips quickly and effectively, maintains a high loading capacity and leaves a clean copper surface for subsequent processes. For use in spray or soak applications.

BENEFITS:

- **Consistent, fast stripping action**
- **Produces bright copper surface**
- **Highly effective over wide latitude of operating conditions**
- **Versatile – can be used for stripping whole panels or for tab plating**
- **Reduced fuming in spray applications**

SPECIFICATIONS:

Density: 1.18 gm/ml, 9.8 lbs./gal. @ 20°C
pH: < 1
Flash Point (TCC): None
Appearance: Clear yellow to green liquid

INSTRUCTIONS:

Concentration: Spray – use as supplied
Soak – dilute 10% - 15% with water
Temperature: 80° - 100°F
Strip Time: 10 - 45 seconds

Equipment must be free from metallic residues prior to installing this product. Residues may reduce bath life and decrease loading. To clean equipment, fill with 10 - 20% nitric acid solution and circulate for one hour at 100°F. Drain and rinse.

Maintain temperature between 80 and 100°F. Pumping the solution will generate some heat; use of heating and/or cooling coils may be necessary to maintain temperature within this range.

In spray applications, the conveyor speed should be set to maintain the break point at about 50% of the length of the chamber. If the break point is less than 50%, *NPS 3000* can be diluted with 10% water. This will insure that the tin or tin/lead is completely removed while minimizing the amount of copper dissolved into the solution. Adjust the spray pressure so that both sides of the panel are stripped in approximately the same dwell time.

NPS 3000 is controlled by specific gravity. The solution is considered spent when the specific gravity exceeds 1.35, at which point it will contain more than 16 ounces per gallon of tin. The use of a feed and bleed replenishment system will provide optimum process consistency. The specific gravity set point for replenishment is normally between 1.26 - 1.29, depending on desired line speed. Do not replenish with acid.

CAUTIONS: **DANGER! CAUSES BURNS.** Do not allow solution to contact eyes, skin or clothing. Wear protective clothing, face shield, goggles, and rubber gloves when handling this product. In case of contact with skin or eyes, flush immediately with water and obtain medical attention.

Use only with adequate ventilation. For further information, refer to material safety data sheet.

Store in original vented container, out of direct sunlight. Store at temperatures between 50 and 90° F. If crystals or precipitates form, allow to warm up and mix to re-dissolve precipitate.

NOTE: Equipment should be constructed of PVC, polypropylene or polyethylene. Heaters should be stainless steel, quartz, or Teflon.

DISPOSAL: Neutralize with caustic or lime to raise the pH to 7.0 - 8.0. It may be necessary to dilute the spent solution with water to reduce heat and fumes generated by addition of caustic, and to make it easier to mix. Allow the precipitate to settle, and analyze supernatant liquid for residual metals. If within local limits, the supernatant liquid may be discharged. Dispose of supernatant liquid and precipitated metal sludge in accordance with all local, state and federal regulations.

ANALYSIS: **Equipment required:** 5 ml pipet 250 ml beaker
50 ml buret pH meter

Reagents required: 1.0 N sodium hydroxide standard solution

Procedure:

1. Pipet a 5 ml sample of the solution into a 250 ml beaker. Add 100 - 150 ml distilled water.
2. Using a pH meter, titrate with 1.0 N sodium hydroxide solution to a pH of 8.0. Record the volume of sodium hydroxide used.

Calculation:

$$\frac{\text{mls of NaOH} \times \text{Normality of NaOH}}{\text{ml of sample}} = \text{Normality of NPS 3000}$$

The normality of a new solution of **NPS 3000** (at 100%) is between 4.50 - 5.10; the normality of a spent solution is between 3.50 - 3.70. If **NPS 3000** has been diluted, the normality and specific gravity will be correspondingly lower.

Charts illustrating specific gravity vs. loading and normality vs. loading are available from RBP Technical Service.

This product should be used only for its intended purpose. The information stated above is based on our laboratory tests and experience, and is accurate to the best of our knowledge. Since actual use is beyond our control, the recommendations or suggestions are made without warranty, expressed or implied.