Stripol™ R

Product Code: 2581001
Revised Date: 07/05/2006

Stripol™ R

Stripol™ R is a powdered product that is mixed with nitric acid and water to make a non-fuming, non-sludging solution for stripping nickel plate, electroless nickel, copper, zinc, brass, iron tin, tin lead alloys and cadmium from stainless steel, aluminum and titanium racks.

Stripol™ R was specifically developed to strip nickel and copper from plating racks with stainless steel tips in an immersion operation.

OPERATING CONDITIONS AND MAKEUP PROCEDURE

preparation of a 100 gallon solution

Concentration **Stripol™ R**	33 lbs
Nitric acid (42 be')	75 gallons
Water	25 gallons

Dissolve the **Stripol™ R** in the 25 gallons of water and then add the 75 gallons of nitric acid (42 be'). Mix solution to assure a uniform solution.

Where nitric acid other than 42 be' is used, the nitric acid/water ratio is changed. For example:

40 be' nitric will require 82 gallons, water 18 gallons.
38 be' nitric will require 92 gallons, water 8 gallons.
36 be' nitric will require 100 gallons, and no water.

Solution temperature: 70 - 100f (21 - 38c)

Stripping time: as required.

EQUIPMENT

tanks:

316 stainless steel, rigid polyvinyl chloride (pvc), steel tank lined with pvc.

heaters:

stainless steel (316) heat exchangers. The heater may be necesary to maintain a specific operating temperature.

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VENTILATION

required to remove nitric acid fumes and spray. The brown and red fumes are surpressed by the **Stripol™ R**.

STRIPPING RATE

average 1.5 mils of nickel plate/minute

SOLUTION CAPACITY

1.75 lbs of nickel per gallon
2.25 lbs of copper per gallon

SOLUTION IN OPERATION

After the racks have been stripped they should be thoroughly rinsed in water.

The tips of the racks to be stripped should be at least 6 to 8 inches below the solution surface for optimum fume suppression. For bulk treating of small parts, baskets should be completely submerged in the **Stripol™ R** solution to inhibit the release of brown or red nitrogen dioxide fumes. Fresh solutions are very active and initially only a small amount of work should be immersed at a time.

If the operating temperature goes below 70f the stripping rate will fall off rapidly. If it rises above 100f for a new bath or 120f for an old stripping solution, the bath will fume excessively and damage to rack coatings may occur.

REPLENISHMENT

As dissolved metals accumulate in the bath, the stripping rate will decrease. At this time the rate may be increased using one of three methods.

METHOD I

The most economical method of operation is to use the bath until the stripping rate decreases and then raise the operating temperature to 120f maximum. The bath may then be used to exhaustion, discarded, and a new bath made up.

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METHOD II

Replenish the bath by discarding a portion of the operating solution and replacing it with fresh solution. Usually 25% of the bath is discarded and replaced. For 100 gallons of operating solution, discard 25 gallons of the spent solution and add 11 1/4 lb of **Stripol™ R** and 25 gallons of 42 be' nitric acid to the processing tank and stir thoroughly. No water is required for replenishment.

METHOD III

This method utilizes the analysis for nitric acid content and replenishment procedure outlined under "control". For every 10 gallons of 42 be' nitric acid replenished, add 4 1/2 lb of **Stripol™ R.**

CONTROL PROCEDURE

Analysis For Nitric Acid

Apparatus Needed

2 ml pipette
50 ml burette
50 ml graduated cylinder
250 ml erlenmeyer flask

Reagents Needed

phenolphthalein indicator solution

1.0 n sodium hydroxide solution - dissolve 40.0 g of sodium hydroxide in deionized or distilled water and dilute to 1 liter in a volumetric flask.

PROCEDURE

1. Pipette a 2 ml sample of the stripper solution into a 250 ml erlenmeyer flask.
2. Add 50 ml of deionized or distilled water and a few drops of phenolphthalein indicator solution. Solution should be bluish green.
3. Titrate with 1.0 n naoh to a pink end-point.

CALCULATION

ML of 1.0 n NAOH Titrated x 4.57 = fl oz/gal (42 be' nitric acid)

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REPLENISHMENT

42 be' nitric acid concentration should be 3 qts/gal. Replenish as necessary with 42 be' nitric acid. For every 1 gal of 42 be' nitric acid replenished, add 7.2 oz of **Stripol™ R**. No water is required for replenishment.

CAUTION

Solutions of **Stripol™ R** and nitric acid are acidic and oxidizing in nature and safety precautions for handling such acids apply. Avoid skin, eye and oral contact. Wear protective clothing, gloves and goggles when handling the product. Flush exposed areas immediately with clean, cold water. Contact a doctor immediately in case of injury.

WASTE DISPOSAL

Spill, leak or release: clean up by vacuum or broom sweeping. Put into an approved dot container and dilute with water. Dispose via a treatment system.
Waste disposal: **Stripol™ R** contains a copper salt. Discharge to a disposal system. In order to be completely informed on the latest regulations for your area, please contact the local authorities. Consult federal, state and/or local regulations.

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.

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