Stripol® NSN

Product Code: 2582017
Revised Date: 3/12/2012

Stripol® NSN
Non Cyanide Stripping Process
Electroplated Nickel Off Steel & Brass

The **Stripol® NSN** system is composed of two additives: **Stripol® NSN** (liquid concentrate) & **Stripol ®** (powdered blend). The immersion stripping bath is prepared by combining both products in ratio with water.

SPECIAL FEATURES

- Cyanide Free System
- Rapid, Efficient, Complete Stripping Action
- Readily Maintained Bath, Long Service Life
- Mixed Loads of Steel & Brass Processed in Same Bath
- Immersion Process. Does Not Use Current
- Wide Operating Parameter Range
- Application in Barrel, Basket, & Rack

RECOMMENDED APPLICATION GENERAL STRIPPER BATH

	Range	**Optimum**
Stripol®	4-6 oz/gal (30-45 g/l)	5.4 oz/gal (40.5 g/l)
Stripol® NSN	15-25% v/v	20% v/v
Temperature	150-170 deg F (66-77 deg C)	160 deg F (71 deg C)
Time	See Operating Tips	As required
Agitation	Solution Movement	As required

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EQUIPMENT

Tank	Steel or stainless steel
Heater	Steel immersion type, steam fed, or gas fired
Ventilation	Mechanical to maintain levels below permissible exposure limits
Agitation	Stirrer, pump, work movement, or mild air

Note: Do not use baskets racks, or related equipment to be immersed in the bath that have brazed or soldered joints.

SOLUTION MAKE UP

General Stripper Bath

Caution!! Consult the MSDS's and product bulletins for Stripol® and Stripol® NSN before handling these products. Stripol® NSN is corrosive. Wear approved, protective clothing. Confirm that ventilation system is functioning properly.

Be sure the process tank has been drained and cleaned. Fill to within two thirds of final operating volume with clean, warm water (100-120 deg F, 38-49 deg C). With good solution mixing, gradually add the required volume of **Stripol® NSN.** Next, add with good mixing, the required weight of **Stripol ®**. Mix well until all dissolved. Adjust final solution operating volume and temperature.

MAINTENANCE ADDITIONS STRIPPING SOLUTION

Stripol® NSN and **Stripol®** are typically consumed in the immersion stripping processes. Drag out of the stripping bath and replenishment with water also dilutes the working solution. Regular maintenance additions of **Stripol® NSN** and **Stripol®** are recommended to replenish the bath. This can be accomplished by observing the quality of stripping & speed and making appropriate additions per requirements of the particular process. The following range of maintenance additions is recommended:

Stripol® Product	Replenishment Addition
Stripol®	7 – 10% v/v
Stripol® NSN	2 – 2.75 oz/gal (15 – 41.2 g/l)

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NOTE: Follow the same procedure as initial bath make up. Add **Stripol® NSN** first, followed by **Stripol®**.

PROCESS SUGGESTIONS

Under typical operating conditions, the bath is maintained with additions of **Stripol® NSN** and **Stripol®**, in the same ratio, as per initial bath make up (see Maintenance Additions Stripping Solution). As the bath ages, the stripping rate at constant operating temperature will decrease, while the soluble nickel concentration increases. Replenishment additions are therefore recommended, to maintain desired rate of stripping the nickel deposit. The actual stripping rate is a function of: nickel thickness, strip bath temperature, and maintenance additions of **Stripol® NSN** and **Stripol®.**

Additional process related operation and control tips include:

• The working pH range of the **Stripol® NSN** stripping solution is 10.5-11.5. Lower solution pH results in longer stripping times. Higher solution pH may contribute to etching steel and brass base metal. **Stripol® NSN** and **Stripol®** when added, neutralize one another, maintaining the desired bath pH range. Therefore maintenance additions of both products are important during the bath's service life.

• Heating the bath for prolonged periods above the recommended maximum temperature will hasten the thermal oxidation of the **Stripol® NSN** component.

• Do not use the bath to strip plated coatings off zinc base metals, aluminum alloys, lead, and tin base metals.

• Prepared as recommended and working within the operating range, a new **Stripol® NSN** process solution will strip 0.0002-0.0005 inch (5.1-12.7 micrometer) thick nickel deposit in 10-15 minutes.

• The working strip bath becomes saturated at a concentration of 3-4 oz/gal of dissolved nickel. At this point maintenance additions would be uneconomical. The bath should be replaced with a fresh make up.

• Agitation is recommended to prevent localized depletion of the solution. This helps maintain stripping rate and prevent etching of the base metal.

• Economical use of the stripping bath is achieved by processing parts in a rotating, enclosed barrel.

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• Stripped parts develop a light black smut on the surface. This smut, a protective coating which prevents etching of the base metal, is readily removed in the surface preparation cycle, before re-plating.

• Etching of the base metal at recommended operating temperature range, with lack of surface smut, may indicate low reserve concentration of **Stripol® NSN**.

• Slow strip rate at recommended operating temperature range, with formation of surface smut, may indicate low reserve concentration of **Stripol®**.

• Oily and greasy parts should first be soak cleaned in the appropriate Hubbard-Hall cleaner, before immersion in the **Stripol® NSN** stripping solution.

• Top coat deposits of chromium should first be anodically stripped in the appropriate Hubbard-Hall electro cleaner. Rinse well before transfer to the **Stripol® NSN** process bath.

• Organic coatings, such as lacquers, paints, and powder coatings, should first be stripped in the appropriate Hubbard-Hall stripping solution.

PHYSICAL CHARACTERISTICS - Stripol®

Appearance	Straw/ tan colored, clear solution
Odor	Slight ammonia
Solubility	Complete
Foaming Tendency	Low

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PRODUCT PROFILE - Stripol®

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Caustic	No
Phosphate	No
Silicate	No
Complexors (Gluconate type)	No
Chelates (EDTA, NTA types)	No

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Caustic	No
Phosphate	No
Silicate	No
Complexors (Gluconate type)	No
Amines	Yes
Chelates (EDTA, NTA types)	No

HAZARD CLASSIFICATION - Stripol®

DOT Hazard Class	Not D.O.T. Regulated
DOT Shipping Name	N/A
UN Number	N/A
Packing Group	N/A
Guide Number	N/A

HAZARD CLASSIFICATION - Stripol® NSN

DOT Hazard Class	Corrosive
DOT Shipping Name	Corrosive Liquid N.O.S.
UN Number	1760

WASTE TREATMENT & DISPOSAL

The **Stripol® NSN** process working solution is alkaline. Used and spent solutions contain dissolved nickel, and perhaps trace quantities of other metals. If the solution is to be treated, a general guide is:

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1. Dilute the solution with 10 to 15 parts of water. Mix well. Accurately determine the nickel concentration and other suspected metals.

2. Add 1-20 milliliters/gal of Enerox® Waste Treat 40. Mix well.

3. Add an appropriate cationic based coagulant. Mix well.

4. Add anionic polymer. Allow sludges to settle.

5. Filter and collect solids to be processed for appropriate disposal.

Accurately determine the nickel concentration and any other trace metals suspected in the treated water. Repeat treatment if required. Adjust pH to meet local POTW or municipal effluent discharge requirements. Sludges and oils should be separated out before discharge.

Appropriate lab evaluation of the treatment cycle should be conducted before implementation of a working process.

SAFETY INFORMATION

Please read and understand the Stripol®NSN and Stripol® Material Safety Data Sheets before handling and using these products.

Recommended safety procedures for the strip tank make up are described on page 2 of the Technical Data bulletin.

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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