



PRODUCT INFORMATION

MARTRON INC.® PO BOX 309; MONROE, NC 28111 PH: (704) 289-1934; FAX: (704) 283-7400

DATE: MAY 2, 2008

EMERGENCY - MARTRON 704-289-1934
CHEMTREC 800-424-9300

MFC-004006

MARTRON NI- STRIP

1 INTRODUCTION

Martron NI Strip is a powdered material that is dissolved in water along with acid to form a solution that will rapidly strip nickel, cadmium, zinc, tin and lead from brass, copper and copper base alloys by simple immersion. The stripping rate for nickel in a fresh **Martron NI Strip** solution with 10% by volume of 66° Be sulfuric acid is approximately 0.001" in 15 minutes at 160°F (71°C) or 0.0017" in 15 minutes at 180°F (82°C).

Martron NI Strip requires no electric current and will not attack copper or copper alloys. Parts can be re-plated without additional mechanical treatment. Any smut that is formed can be removed by a brief immersion in a post-dip prior to returning to the plating cycle.

2 OPERATING CONDITIONS

	Metal to be Stripped		
	<u>Nickel, Cadmium, Zinc</u>	<u>Tin</u>	<u>Tine, Tin-Lead Alloys</u>
Martron NI Strip	1 lb./gal (120 g/l)	1 lb./gal (120 g/l)	1 lb./gal (120 g/l)
Sulfuric Acid, 66° Be	5-25% by vol. (50-250 ml/l)		
Hydrochloric, sulfamic or Fluoboric acid	15% by wt.		
Sulfamic, acetic or Fluoboric acid	15% by wt.		
Temperature	160 - 200°F (71 - 93°C)	160 - 180°F (71 - 82°C)	160 - 180°F (71 - 82°C)

If faster stripping rates are desired, filtered air agitation can be used, or the concentration of **Martron NI Strip** can be increased up to 2 lbs/gal (240 g/l). Raising the concentration of the acid will produce slightly higher stripping rates, but the effect will not be as great as increasing the **Martron NI Strip** concentration. The recommended concentration of 10% by volume of sulfuric acid should be used when stripping nickel from brass and copper alloys, if satisfactory stripping rate can be achieved. However, if the nickel is passive and will not strip, the sulfuric acid should be raised up to 25% by volume.

To strip the parts, simply immerse them in the **Martron NI Strip** solution. Mechanical or filtered air agitation will greatly speed up the stripping operation. After the parts are completely stripped, they must be thoroughly rinsed. Any smut that remains after stripping and rinsing can be removed by dipping the parts for a few seconds in a solution of cleaner.

Parts to be stripped in the **Martron NI Strip** solution must be clean and free from dirt or oil. If parts are contaminated, they should first be soak cleaned in order to have uniform removal of the electrodeposit. Contact your Martron Inc. representative for recommendations on the proper cleaner to use. If the work has been chrome-plated, the chrome should be stripped before processing the **Martron NI Strip** bath. Chrome should not be stripped in a reverse current alkaline cleaner as it will severely passivate the nickel surface.

3 EQUIPMENT

For solutions of **Martron Ni Strip** and sulfuric acid, lead, rubber or plastic tank linings or ceramic tanks are satisfactory. Heating coils should be made of lead, carbon or PTFE. If acids other than sulfuric are used, lead tank linings and lead heating coils are not satisfactory and a lining suitable for the particular acid and temperature being used should be selected. Ventilation equipment is not required. Do not use nickel alloy steel baskets; polypropylene or polyethylene is acceptable. Do not exceed temperatures of 150°F (66°C) for PVC lined tanks.

4 SOLUTION MAKE UP

1. Fill the stripper tank about two-thirds full of cold water.
2. While stirring, carefully add the required amount of acid. CAUTION: Always add the acid slowly to water with adequate hand stirring. NEVER add water to acid! Do not exceed recommended temperatures for tank linings.
3. After the acid is mixed completely, add the required amount of **Martron Ni Strip**. Heating can be used to help dissolve the powder. Do not apply heat until after acid has been added and mixed with water.
4. After all of the salts have dissolved, fill the tank to final operating level.

5 SOLUTION CONTROL

There is no analytical control for the **Martron Ni Strip** component of the stripping solution. As the stripping rate slows down to the point of inconvenience, **Martron Ni Strip** should be added in increments of 4-8 oz/gal (30-60 g/l). Acid should be added when **Martron Ni Strip** additions are made in order to maintain the proper ratio of components in the operating bath. As the stripping solution is used, nickel sulfate is formed. If excessive amounts of nickel sulfate deposit in the tank, it may be necessary to discard the solution. Acid concentrations can be controlled by titration and **Martron Ni Strip** can be added in the same proportion as the original make up when acid additions are made to prolong bath life.

Higher solution operating temperature will give faster stripping rates. However, when stripping metal from brass or copper alloys, the operating temperature should be lowered if any possible etching of the basis metal occurs. The normal operating temperature for stripping from brass is 165 - 170°F (74 - 76°C).

6 WASTE DISPOSAL

This material must be disposed of in accordance with all applicable federal, state, and local regulations and permits. Consult the Safety Data Sheet (SDS) for additional regulatory information.

7 GENERAL SAFETY PRECAUTIONS

Avoid direct contact with this material. Do not inhale associated mist, vapors, and/or dust. As applicable, keep exposure below the limits recommended by OSHA, ACGIH, the manufacturer, and others. Wash contaminated clothing before reuse. Always comply with the Hazard Communication Standard, 29 CFR 1910. 1200. Emergency showers and eyewashes must be readily available.

It is recommended that the plating chemistry product (s) referred to in this Product Information sheet be used: (1) in accordance with the information provided in product specific SDS; and (2) in compliance with all appropriate requirements and guidelines established by OSHA, NIOSH, ACGIH, NFPA, and others.

NOTE: A Safety Data Sheet (SDS) for this product (s) is available upon request from **Martron Inc.**

Before using this product, review Safety Data Sheet (SDS) for specific information. A precautionary approach should be used when there is potential for chemical exposure – this includes minimizing exposure potential, rapid decontamination, and medical follow-up.