PRODUCT INFORMATION

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

DATE: MAY 29, 2012

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

REF. # MFC-002004

MARTRON NICKEL PURIFIER

A Purifying Material for Bright Nickel and Nickel-Iron Plating Baths

1. GENERAL DESCRIPTION

Martron Nickel Purifier is a concentrated solution of organic materials that can be used to improve the performance of bright nickel and nickel-iron plating solutions contaminated with many metallic impurities, and some organic compounds. Small additions are extremely effective in reducing, or eliminating, darkness or dullness in low current density areas caused by these contaminates.

Martron Nickel Purifier also frequently improves the chrome receptivity of deposits from contaminated nickel and nickel-iron plating solutions. The result is better chrome coverage in low current density areas.

Martron Nickel Purifier is a "conventional" purifier in the sense that it does not promote the deposition of impurities from the plating solution. Rather, it changes the deposition potential of various impurities to where they do not plate out during normal production. Thus, plating can be continued, even though the solution is contaminated, until such time as the bath can be electrolytically purified at low current densities to remove the interfering impurities.

2. SUGGESTED ADDITIONS

Initial Addition: The optimum addition depends upon the amount and type of contamination present. A good starting point is to add 0.025-0.05% vol., and observe its effect. If plating results indicate additional material is necessary, it should be added in 0.025% vol. increments.

Maintenance Additions: **Martron Nickel Purifier** is generally not needed on a regular basis, and should not be added routinely unless plating tests, or production experience, indicate that it is necessary. Excess **Martron Nickel Purifier** reduces leveling and brightness and should be avoided.

3. CONTROL

No analytical control is necessary. Visual inspection of plated work, or small-scale plating tests, are a sufficient indicator of when an addition is needed.

4. GENERAL NOTES

1. **Martron Nickel Purifier** should be diluted at least 3:1 with water before it is added to the plating solution. On a fixed cycle, automatic additions should be made away from the exit end of the machine. On horizontal hoist lines, or manually operated lines, additions should not be made within the last few minutes of the plating cycle.

2. An excess of **Martron Nickel Purifier** generally causes a reduction in deposit brilliance and leveling. In the event this occurs, an addition of 0.025-0.05% vol. Hydrogen Peroxide will destroy the excess **Martron Nickel Purifier** and eliminate the difficulty.

3. Regular additions of **Martron Nickel Purifier** are not normally required, unless the impurities it is being used to overcome are being introduced on a continuous basis. Good plating practice dictates the source of contamination be eliminated rather than continually adding **Martron Nickel Purifier.**

4. **Martron Nickel Purifier** inhibits the plating out of metallic impurities. Consequently, it must be oxidized to a harmless state prior to low current density electrolytic purification. This is done by adding 0.025- 0.05% vol. 35% Hydrogen Peroxide and agitating the nickel bath for approximately 30 minutes before dummying.

5. **Martron Nickel Purifier** introduces sulfur to a nickel deposit. Therefore, it is not recommended for use in semi-bright nickel-plating solutions.

5. SAFE HANDLING

Martron Nickel Purifier is a near neutral, clear liquid, and is itself not dangerous to handle. However, the solutions in which it is used are slightly acidic, and are operated at elevated temperatures, thus requiring careful handling. **Martron Nickel Purifier** is an industrial chemical, and should not be taken internally. Avoid prolonged contact with the skin. If contact occurs, flush affected area immediately with running water. Avoid contact with the eyes. If material or solution is splashed in the eyes, flush immediately with large quantities of running water, and rinse with a 5% boric acid solution. Obtain medical attention, if necessary.

6. STORAGE

Martron Nickel Purifier is stable upon standing and offers excellent shelf life. The material will freeze, however, and should not be stored in areas subject to extremely low temperatures. If it does freeze, it should be moved to a warm area and allowed to thaw. Additionally, it should be thoroughly mixed prior to use to ensure uniform composition of the solution. Spills of **Martron Nickel Purifier** or solutions containing it, should be flushed to a chemical sewer with water as soon as possible. Neither **Martron Nickel Purifier**, nor solutions containing it, are flammable.

7. WASTE TREATMENT

Martron Nickel Purifier itself does not require waste treatment, nor does it complicate waste treatment procedures of solutions containing it. Standard pH adjustment/precipitation methods of treating nickel and nickel-iron plating solutions are satisfactory, as are other proprietary treatment methods.

Martron Inc. has a complete line of wastewater treatment chemistry.

ISSUE DATE: 05/29/12