MATERIAL SAFETY DATA SHEET
SUPERIOR PREFLUX NICKEL CLEANER

DATE REVISED: January 1, 2011

Product Name: Superior Preflux Nickel Cleaner
Manufacturer: Superior Flux & Mfg. Co. 6615 Parkland Blvd. Cleveland, OH 44139
Emergency Phone Number: 1-800-424-9300 (CHEMTREC)
Other Information Calls: (440) 349-3000

To the Purchaser: This MSDS contains important environmental, health, and toxicology information for your employees who have ordered this product. Please be sure this information is given to them. If you resell this product, a copy of the MSDS should be given to the buyer.

H.M.I.S. INFORMATION: HEALTH = 3 FLAMMABILITY = 1 REACTIVITY = 1

SECTION I – IDENTIFICATION

Common Name: Superior Preflux Nickel Cleaner
Chemical Family: Nickel Cleaner
CAS Number: NA
Chemical Name: NA
Formula: See below

SECTION II - COMPOSITION INFORMATION

Components	CAS Number	%	OSHA PEL
Hydrochloric Acid	7647-01-0	30-40	5 mg/m^3
Cupric Chloride	7447-39-4	1-3	5 mg/m^3
Nitric Acid	7697-37-2	0.1 – 5%	5 mg/m^3

Unlisted percentages are non-hazardous stabilizers, activators, and water. None of the materials in this product are listed in NTP, IARC, or OSHA as carcinogens.

SECTION III - HEALTH HAZARDS

Primary Routes of Entry: Fume inhalation, ingestion, skin, and eyes.
Signs and Symptoms of Exposure:

1) **Acute Effects:** Reddening and stinging of eyes and skin; acid stomach if ingested.
2) **Chronic Effects:** No specific information available

Medical Conditions Generally Aggravated by Overexposure: None presently known.
Chemical Listed as a Carcinogen or Potential Carcinogen: None
OSHA Permissible Exposure Limit (PEL): 5 mg/m^3
ACGIH Threshold Limit Value (TLV): 5 mg/m^3

SECTION IV - EMERGENCY AND FIRST AID PROCEDURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention without delay, preferably an ophthalmologist.
Skin: Remove contaminated clothing and flush skin with plenty of water.
Inhalation: Remove to fresh air. Call physician if symptoms persist.
Ingestion: Give two glasses water or milk. Do not induce vomiting. Get medical attention.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flash Point: None
Flammable Limits: N/A
Extinguishing Media: N/A
Auto Ignition Temperature: N/A
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: Hydrogen chloride vapors.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is spilled: Personnel involved in clean up require protection for inhalation of vapors and contact with liquid. Neutralize spill with soda ash or baking soda.

SECTION VII - HANDLING AND STORAGE

Storage Requirements: Store in closed containers in well ventilated area, away from alkaline chemicals and materials, and any heat source.
Handling Precautions: Avoid excessive inhalation of vapors. Wash thoroughly after handling.

SECTION VIII - CONTROL MEASURES

Respiratory Protection (Type): NIOSH/MSHA approved acid vapor cartridge for excessive exposure limits.
Ventilation: Use of local or general dilution ventilation to maintain exposure limits (PEL).
Mechanical (General): N/A
Local Exhaust: N/A
Eye Protection: Chemical mono-goggles and/or full face shield in all possible splash situations.
Skin Protection: Chemical impervious rubber apron where potential splash exist.
Other Protective Clothing or Equipment: Avoid unprotected skin and eye contact and exposures. Use only with good ventilation.

SECTION IX - PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: 100°C/212°F
Specific Gravity: 1.16
Vapor Pressure (mm Hg): as Water~17
Percent Volatiles: 100
Vapor Density (Air = 1) : >2
Evaporation Rate (Butyl Acetate = 1): 1
Melting Point: N/A
Solubility in Water: Complete
Reactivity in Water: NA
Appearance and Odor: Clear green liquid, acidic

SECTION X - STABILITY AND REACTIVITY

Stability: Stable under normal use conditions.
(Conditions to Avoid): Contact with eyes and skin
Incompatibility: Strong alkaline materials.
Hazardous Decomposition Products: Hydrogen chloride vapors.
Hazardous Polymerization: Will not occur
(Conditions to Avoid): N/A

SECTION XI - TOXICOLOGICAL INFORMATION

Acute Toxicity Data

1) **Oral:** LD-50 (rat): Not available
2) **Inhalation:** LC-50 (rat): Not available
3) **Dermal:** LD-50 (rabbit): Not available
4) **Skin Irritation:** (rabbit): Not available

Chronic Toxicity Data

1) **Repeated Skin Application:** (rat): Not available
2) **Eye Irritation:** (rabbit): Not available

SECTION XII - ECOLOGICAL INFORMATION

This material has not been tested for environmental effects.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in accordance with EPA regulations

SECTION XIV- TRANSPORTATION

D.O.T. Proper Shipping Name: Hydrochloric acid solution
Identification Number: UN1789
Hazard Class: 8
Packing Group: II
Type D.O.T Label Required Information: Corrosive
Waste Disposal Method: Dispose in accordance with EPA regulations.

SECTION XV - REGULATORY INFORMATION

OSHA Hazardous Chemical According to 29 CFR 1910.1200: NA
Carcinogenicity Classification: (Components Present at 0.1% or More)
International Agency for Research on Cancer (IARC): NA
American Conference of Governmental Industrial Hygienists (ACGIH): NA
National Toxicology Program (NTP): NA
Occupational Safety and Health Administration (OSHA): NA
All Components of this Product are Listed on the U.S. Toxic Substances Control Act Inventory or Otherwise Comply with TSCA Pre-manufacture Notification Requirements.
This Product is RoHS Compliant.

SECTION XVI - OTHER INFORMATION

Disclaimer: Judgments as to the suitability of information herein or the purchaser's purposes are necessarily the purchaser's responsibility. Reasonable care has been taken in the preparation of this material, but there are NO WARRANTIES, NO REPRESENTATIONS AND NO RESPONSIBILITY AS TO THE ACCURACY OR THE SUITABILITY OF THIS INFORMATION FOR ANY PURCHASER'S USE OR FOR ANY CONSEQUENCE TO USE.