

Safety Data Sheet

115-3831/115-3834

CircuitMedic, 22 Parkridge Road, Haverhill, MA 01835 USA
 Phone: 978-373-1600 | Website: <http://www.circuitmedic.com>
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Revision Date: Jun 1, 2016

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Plating Solution, Nickel

Product Numbers: 1 oz: 115-3831, 4 oz: 115-3834

Distributor: CircuitMedic
 22 Parkridge Road, Haverhill, MA 01835 USA
 PHONE: 978-373-1600, FAX: 978-372-5700

Emergency Response: For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
 Call CHEMTREC Day or Night
 Within USA and Canada: 1-800-424-9300 CCN4877
 Outside USA and Canada: +1 703-527-3887 (collect calls accepted)



Section 2. HAZARD IDENTIFICATION

Classifications: Classification according to Regulation(EC)No1272/2008
 Classifications applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200)

Emergency Overview:

Potential Health Effects:

Inhalation: Vapor or mist may be harmful if inhaled. May cause sneezing, nasal discharge, coughing, headaches, dizziness, nausea, fatigue or difficulty in breathing. Irritating to the eyes, nose, throat and lungs.

Eyes: May cause eye irritation.

Skin: May cause skin irritation. May cause skin sensitization, and allergic reaction (Nickel rash).

Ingestion: Harmful if swallowed. Can irritate mouth, throat and stomach. May cause liver damage with jaundice, kidney and gastrointestinal damage.

Section 3. COMPOSITION, INFORMATION OR INGREDIENTS

Chemical Name	RTECS #	C.A.S. Number	Weight %
Nickel Sulfate	QR9600000	7786-81-4	7-13
Formic Acid	LQ4900000	64-18-6	5-10
Ammonium Hydroxide	BQ9625000	1336-21-6	1-5
Citric Acid	GE7350000	77-92-9	1-5

Water	ZC0110000	7732-18-5	67-86
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OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200): Exposure Limits 8 Hours TWA (PPM)

Chemical Name	OSHA PEL	ACGIH TLV	ACGIH STEL	NIOSH REL	NIOSH IDLH
Nickel Sulfate	1mg/M3	0.1mg/M3	N/A	0.015mg/M3	N/A
Formic Acid	9mg/M3 (5ppm)	9.4mg/M3 (5ppm)	19mg/M3 (10ppm)	9mg/M3 5ppm)	N/A
Ammonium Hydroxide	35mg/M3 (50ppm)	17mg/M3 (25ppm)	24mg/M3 (35ppm)	18mg/M3 (25ppm)	- (300ppm)
Citric Acid	N/A	N/A	N/A	N/A	N/A
Water	N/A	N/A	N/A	N/A	N/A

Section 4. FIRST AID MEASURES

Inhalation: Remove to fresh air. Lay victim down, legs raised. Loosen tight clothing, cover with a blanket. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Eye Hold eyelids apart and flush with plenty of water for at least 15 minutes.

Contact:

Skin Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated

Contact: clothing and shoes. Thoroughly decontaminate (or discard) clothing and shoes.

Ingestion: DO NOT induce vomiting, unless advised by EMS. Give victim large quantities of water or milk. Give emollients, such as cooking oil or fresh eggs. Never give anything by mouth to an unconscious person.

Section 5. FIRE-FIGHTING MEASURES

Flash Point & Method: None

Flammable Limits: LEL: none UEL: none

Autoignition Temperature: N/A

General Hazard: Containers can build up pressure and burst if exposed to heat (fire). Water runoff can cause environmental damage. Dike area for later disposal.

Fire Fighting Instructions: NIOSH/MSHA approved positive-pressure self-contained breathing apparatus. Structural fire fighters' protective clothing may not provide adequate protection.

Hazardous Combustion Prod. N/A

Flammable Properties: Material will not burn.

Extinguishing Media: All.

Section 6. ACCIDENTAL RELEASE MEASURES

Land Spill: Do not touch or walk through spilled material. Isolate hazard area and keep people away. Notify your facility emergency coordinator. Eliminate all sources of ignition. Provide maximum ventilation. Do not

release into soil, sewers or natural bodies of water. Wear proper personal protective equipment (PPE). Carefully mop up or vacuum spill and triple rinse with water into suitable plastic container. Release of a reportable quantity (RQ) requires notification of proper authorities. Dispose of according to local, state, and federal regulations.

Neutralizing Agent: N/A

Section 7. HANDLING AND STORAGE

Storage Temperature: 60-90 degrees F

Storage Pressure: Atmospheric

Shelf Life: Unlimited when properly stored away from light at room temperature 20-25 C / 68-77 F.

General: Use "buddy system" when working with chemicals. Do not get in eyes, on skin or clothing. Do not breathe vapor, mist or gas. Use with adequate ventilation. Wash thoroughly after handling. Triple rinse container clean before discarding. Put nothing else in this container. Keep container tightly closed in upright position. Store at 60-90 degrees F away from incompatible materials and physical hazards. Do not remove or deface container labels.

Section 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Local Exhaust ventilation is required. See section 2 for component exposure guidelines.

Personal Protection:

Respirator: If engineering controls are not feasible, the respiratory protection program must comply with OSHA's 29 CFR 1910.134, 30 CFR 11 and ANSI Z88.2 requirements.

Hand Protection: Protective Gloves Recommended (Nitrile, Neoprene, Vinyl or Latex).

Eye Protection: Use one of the following: Face Shield and Safety Glasses with Side Shields or Chemical Goggles (splash-proof).

Other Recommended: Use one of the following: Eye Bath, Safety Shower, Washing Station Nearby, Impervious Boots, Apron, Appropriate Protective Clothing.

Note 1: In accordance with good industrial hygiene, wash hands with soap and water after working with material.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Density: 1.122-1.126g/ml

pH: 7.5-7.9

Boiling Point: >100 degrees C, >212 degrees F

Freezing Point: <0 degrees C, <32 degrees F

Vapor Density (Air = 1): N/A

% Volatile By Weight: N/A

% Solids: N/A

Evaporation Rate (Butyl Acetate = 1): <1

Solubility in Water:	Complete
Viscosity:	N/A
Molecular Weight:	N/A
Physical State:	Liquid
Molecular Weight:	N/A
Appearance:	Blue-green liquid
Vapor Pressure(mmHg):	N/A

Section 10. STABILITY AND REACTIVITY

General:	Stable under normal ambient conditions
Incompatible materials and Conditions to Avoid:	Strong bases, strong acids, and oxidizers.
Hazardous Decomposition or Byproducts:	SO _x , Ni, CH ₂ O ₂ , NH ₃
Hazardous Polymerization:	Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

Results of Component Toxicity Test Performed:	Information not available.
Human Experience:	Information not available.

Section 12. ECOLOGICAL INFORMATION

Further Information: Information not available.

Section 13. DISPOSAL CONSIDERATIONS

RCRA 40 CFR 261 Classification: Federal, State, and Local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14. TRANSPORT INFORMATION

DOT, IATA, ICAO, and IMO Description:

Basic Description:	N/A
Proper Shipping Name:	Nickel (Neutral) Plating Solution Code SPS 5650
Hazard Class:	Not regulated by DOT
Packaging Group:	None
UN Number:	None
Label Requirements:	None
Max. Shippable Qty.:	1 liter, 4 liter Polyethylene Bottle
Packaging:	Meets Performance Oriented Packaging Requirements
Reportable Quantity (RQ):	N/A
1996 NAERG Guide#:	N/A
Limitations:	N/A

Do not transfer to unmarked containers. Non-Regulated under D.O.T.

Section 15. REGULATORY INFORMATION

United States Federal Regulations:

MSDS complies with OSHA's Hazard Communication Rule, 29 CFR 1910.1200.

CERCLA/SUPERFUND, 40 CFR 117, 302: None of the chemicals are Superfund hazards

SARA SUPERFUND AND REAUTHORIZATION ACT OF 1986 TITLE III Sections 302, 311, 312 and 313: Section 302 Extremely hazardous substances (40 CFR 355): None of the chemicals are Section 302 hazards.

Section 311/312 - Material Safety Data Sheet Requirements (40 CFR 370): By our hazard evaluation, this product is non-hazardous.

TOXIC SUBSTANCE CONTROL ACT (TSCA): All substances are TSCA Listed.

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International Regulations:

Canada Whims: NA

Europe EINECS Numbers: NA

Canadian Substance Inventory: One or more of the components of this product do not appear in the Canadian Substance Inventory.

Section 16. OTHER INFORMATION

Label Information:

European risk and Safety Phrases: N/A

European Symbols Needed: N/A

Canadian WHIMS Symbols: N/A

NFPA Hazard Rating: (1) Flammability (1) Health (0) Reactivity

Abbreviations Used in this Document: NE - Not Established, NA - Not Applicable/Not Available, NIF - No Information Found

References: Code of Federal Regulations (CFR)
The Sigma-Aldrich Library of Regulatory and Safety Data
Chemical Guide and OSHA Hazard Communication Standard
Various Federal, State & Local Regulations

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