

Material Safety Data Sheet

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For updates please download from www.mgchemicals.com or fax requests to 1-800-708-9888

Section 1: Product Identification

MSDS Code: 41609

Name: Plating Solution Part C

Related Part Numbers: 41609-250ML

Use: In tank # 5 in the MG Electroless Copper-Plating System.

Section 2: Hazardous Ingredients

| CAS# | Chemical Name | Percentage by weight | ACGIH TWA | Osha Pel | Osha Stel |
|-----------|------------------|----------------------|-----------|----------|-----------|
| 139-89-9 | Hydroxy EDTA | 1.9 – 2.1 | N/E | N/E | N/E |
| 1310-73-2 | Sodium Hydroxide | 4.5 - 4.9 | N/E | 2 mg/m3 | N/E |

Section 3: Hazards Identification

- Eyes:** Liquid in contact with eyes may cause (depending on duration) irritation, scarring, blistering, ulceration, disintegration and possible blindness.
- Skin:** Depending on duration of contact, may cause reddening, scarring, chemical burns, and ulceration. Burns may not be immediately painful. Repeated skin overexposure can result in dermatitis.
- Inhalation:** If vapors, mist or sprays of this product are inhaled, they may irritate and burn the nose, throat and lungs. Symptoms can include coughing, tightness of the chest, and difficulty breathing. Inhalation over-exposure can cause pulmonary edema (potentially life threatening condition) and symptoms may be delayed by hours or days.
- Ingestion:** Ingestion is not anticipated to be likely route of occupational exposure. If the product is swallowed, it will irritate and burn the mouth, throat, esophagus, and other tissues of the digestive system. Symptoms may include pain, vomiting, diarrhea, and collapse.
- Chronic:** Persistent irritation and dermatitis (drying, cracking, and inflammation of the skin) may result from repeated over-exposure to this product. Severe inhalation and ingestion over-exposure maybe fatal.

Section 4: First Aid Measure

- Eyes:** If this product's liquid or vapors enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Do not interrupt flushing.
- Skin:** If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Do not interrupt flushing. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek immediate medical attention.
- Inhalation:** If vapors, mist, or sprays of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.
- Ingestion:** If this product is swallowed, Call PHYSICIAN or POISON CONTROL center for most current information. If professional advice is not available, do not induce vomiting. Rinse mouth with water immediately. Victim should drink large quantities of water. If milk is available, victim should drink it after drinking water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

Section 5: Fire Fighting Measures



Autoignition Temperature: N/A **Flash Point:** N/A **LEL / UEL:** N/A
Extinguishing Media: Water spray, foam, halon, carbon dioxide, dry chemical
General Information: If product is involved in fire, fire run-off water should be contained to prevent possible environmental damage.

Section 6: Accidental Release Measures

Spill Procedure: Provide adequate ventilation. Wear appropriate personal protection. Sprinkle absorbent compound onto spill, then sweep into a plastic or metal container. Wipe up further residue with paper towel and place in container. Wash spill area with soap and water.

Section 7: Handling and Storage

Handling: Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Use in a well ventilated area. Do not eat or drink while handling this product.
Storage: Keep away from sources of heat. Store in a cool, dry, well-ventilated area, away from incompatible substances. Keep from freezing.

Section 8: Exposure Controls

Routes of entry: Eyes, ingestion, inhalation, and skin.
Ventilation: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.
Personal Protection: Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact. Use a NIOSH approved respirator when necessary.

Section 9: Physical and Chemical Properties

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| Physical State: Liquid | Odor: Odorless | Solubility in water: 100% | Evaporation Rate: Similar to water |
| Boiling Point: 93°C | Specific Gravity: 1.05°C @25 | Vapor Pressure: 18mm Hg @ 20 | Vapor Density: Equal to water PH: 11.0-12.0 |

Section 10: Stability and Reactivity

Stability: Stable at normal conditions and temperatures. Sodium Hydroxide reacts with carbon dioxide from the air to form sodium carbonate.
Conditions to avoid: Contact with incompatible materials.
Incompatibilities: Strong acids, metals, many organic and inorganic chemicals
Polymerization: Will not occur.
Decomposition: Sodium and carbon oxides.

Section 11: Toxicological Information

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| Sensitization: (effects of repeated exposure) | No |
| Carcinogenicity: (risk of cancer) | No |
| Teratogenicity: (risk of malformation in an unborn fetus) | No |
| Reproductive Toxicity: (risk of sterility) | No |
| Mutagenicity: (risk of inheritable genetic effects) | No |
| Lethal Exposure Concentrations: | Ingestion (LD50): Inhalation (LC50): Skin (LD50): Inhalation (TCLo): |
| Hydroxy EDTA | N/A N/A N/A N/A |



Sodium Hydroxide

N/A

N/A

N/A

N/A

Section 12: Ecological Information

General Information:

Avoid runoff into storms and sewers, which lead into waterways.
Water runoff can cause environmental damage

Volatile Organic Compounds, % by weight: 0%
Volatile Organic Compounds, grams per litre: 0 g/L

Section 13: Disposal Information

General Information: Dispose of in accordance with all local, provincial, state, and federal regulations. Water runoff can cause environmental damage.

Section 14: Transportation Information

Ground Canada: (1 Liter and smaller)

Classified as **LTD QTY**.

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations). **Recommend Shipper be trained and certified.**

Ground USA: (1 Liter and smaller)

Classified as **LTD QTY**.

Recommend Shipper be trained and certified.

Ground Canada and USA: (sizes over 1 L)

Shipper must be trained and certified. Refer to CFR 49 (USA), and TDG regulations (Canada).

Shipping Name: **Sodium Hydroxide Solution**, UN number: **1824**, Class: **8**, Packing Group: **II**.

Recommend using original MG Chemicals UN Certified outer cartons. Tape all seams on the carton. Hazard Label required – CORROSIVE. A double arrow orientation label is required and is already printed on the original outer carton.

Air: (all sizes 1L or smaller)

Shipper must be trained and certified. Refer to IATA Dangerous Goods Regulations.

Shipping Name: **Sodium Hydroxide Solution**, UN number: **1824**, Class: **8**, Packing Group: **II**.

Recommend: **DO NOT SHIP BY AIR.**

Sea:

Shipper must be trained and certified. Refer to IMDG regulations.

Shipping Name: **Sodium Hydroxide Solution**, UN number: **1824**, Class: **8**, Packing Group: **II**.

Section 15: Regulatory Information

CANADA

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

DSL

All ingredients in this product are listed on the Domestic Substances List

Health Canada

Products produced by MG Chemicals intended for retail display conform to the Canadian Consumer Labeling regulations.

Industry and Science Canada

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

WHMIS

This product belongs to the following categories: **D2B, E**

USA

CAA (Clean Air Act, USA)

This product does not contain any class 1-ozone depletors.

This product does not contain any class 2-ozone depletors.

This product does not contain any chemicals listed as hazardous air pollutants.

SARA (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain chemicals subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65 (Chemicals know to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

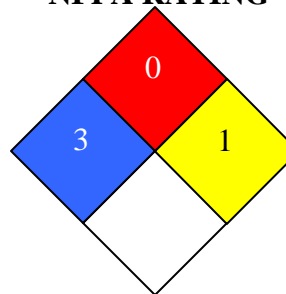
This product does not contain chemicals known to the state to cause reproductive toxicity or cancer.

HMIS RATING

| | |
|---------------------------------------|---|
| HEALTH: | 3 |
| FLAMMABILITY: | 0 |
| PHYSICAL HAZARD: | 1 |
| PERSONAL PROTECTION: (PPE) | H |

Protection=H (Splash goggles, gloves, protective apron and vapor respirator.)

NFPA RATING



EUROPE

RoHS

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, or PBDE's, and complies with European RoHS regulations.

WEEE

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

Section 16: Other Information

Definitions: N/A = not applicable, N/E = not established

Disclaimer: This material safety data sheet is provided as an information resource only. M.G. Chemicals believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.