Bright Acid Copper

Safety Data Sheet

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SECTION 1. IDENTIFICATION

Product Name: Bright Acid Copper
Recommended use: Electroplating bath
Supplier:
Gold Plating Services
378 North Main #112
Layton, Utah, 84041, USA

Current SDS preparation date: January 15, 2022
Original SDS preparation date: February 15, 2016

Telephone no: 801-546-6200
Emergency no: P.E.R.S. 800-633-8253, Outside the USA and Canada (00) 1 (801)-629-0667

SECTION 2. HAZARD IDENTIFICATION

Classification:
Skin Corrosion/Irritation, Category 1C
Eye Damage/Irritation, Category 1
Acute Toxicity - Oral, Category 4
Corrosive to metals
Acute Aquatic Toxicity, Category 1
Chronic Aquatic Toxicity, Category 1

Label elements and precautionary statements:

Signal word: Danger

Pictogram(s):

Hazards not otherwise classified: None

Hazard statement(s):

Causes severe skin burns and eye damage
Harmful if swallowed
May be corrosive to metals
Very toxic to aquatic life with long lasting effects

Precautionary statement(s):
Do not breathe dust, fume, gas, mist, vapors or spray.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves, clothing and eye and face protection.
If swallowed: Rinse mouth. DO NOT induce vomiting.
If swallowed: Immediately call a poison center or doctor/physician.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Take off immediately all contaminated clothing and wash it before reuse.
Keep only in original container.
Absorb spillage to prevent material damage.
Store in a corrosive resistant container with a resistant inner liner.
Avoid release to the environment.
Collect spillage.
Dispose of contents and container in accordance with local, state and federal regulations.

SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical name	CAS Number	EINECS Number	Concentration
Copper sulfate pentahydrate	7758-99-8*	231-847-6	19%
Sulfuric acid	7664-93-9	231-639-5	5%

*Under the Toxic Substance Control Act (TSCA), hydrates are considered as mixtures of their anhydrous form and water. Accordingly, for the purposes of TSCA, the CAS Number for the anhydrous form of this material is 7758-98-7.

SECTION 4. FIRST AID MEASURES

Inhalation:
Remove patient to fresh air. Support breathing if required. Obtain medical treatment for dizziness, unconsciousness or irritation or difficulty in breathing.

Skin contact:
Remove contaminated clothing and wash affected area thoroughly with soap and water. Launder clothing before re-wearing. Seek medical attention for prolonged skin irritation.

Eye contact:
Flush with water, including under lids, for fifteen minutes. Obtain immediate medical attention.

Ingestion:
If patient is conscious, rinse mouth and drink at least two large glasses of water. DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain immediate medical attention**.**

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use media appropriate for surrounding fire such as foam, extinguishing powder, carbon dioxide or water spray. In case of fire, cool endangered containers with water spray.

Unsuitable extinguishing media: High pressure water jet.

Specific hazards in case of fire: None reported.

Special protective equipment and precaution for fire fighters: For fires in enclosed areas, wear self-contained breathing apparatus and full protective gear. Do not inhale combustion gases.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Wear appropriate skin, eye and respiratory protection. Do not eat, drink or smoke while cleaning up. Ensure adequate ventilation.

Methods and materials for containment and cleaning up:
Wear appropriate personal protective gear including eye, skin and respiratory protection. Contain spilled material and collect by absorption or other suitable method. Flush spill area with water. Do not allow this material or its rinsing's to enter storm or sanitary sewers or other waterways. (See also Section 13).

Environmental precautions:
Prevent spills and rinsing's from entering storm or sanitary sewers or other waterways and contact with soil.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:
Avoid contact with eyes. Avoid prolonged repeated skin contact and breathing mists or vapors.
Use in well-ventilated area. Do not empty waste into sanitary drains.

Conditions for safe storage, including incompatibilities:
Store in a cool, dry area. Use with adequate ventilation. Keep container tightly closed when not in use. Store only in the original container.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

Ingredient	ACGIH TLV	OSHA PEL	Other Limits
Copper sulfate pentahydrate	1 mg/m^3 (Cu) TWA	1 mg/m^3 (Cu)	1 mg/m^3 (Cu) NIOSH REL
Sulfuric acid	0.2 mg/m^3 TWA	1 mg/m^3	1 mg/m^3 NIOSH REL

Appropriate engineering controls:
Use in well-ventilated area with local exhaust.

Respiratory protection: Wear appropriate, approved respiratory protection when ventilation is inadequate to meet exposure limits.

Eye protection:
Chemical splash goggles or safety glasses with side shields must be worn.

Skin protection:
Wear rubber or neoprene gloves. Wear rubber apron and long sleeves to prevent skin contact. Wash hands thoroughly with soap and water after handling and before eating or smoking.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Dark blue
Odor: Slightly sharp
Odor threshold: Not available
pH: <1.0
Melting/freezing point: Not determined
Initial boiling point: >100 °C (>212 °F)
Flash point: Not applicable
Evaporation rate: Not available
Flammability (solid, gas): Not applicable
Upper/lower explosion limits: Non-explosive
Vapor pressure: Not determined
Vapor density: Not determined
Relative density (H_2O = 1) @25 °C: 1.17 +/- 0.05
Solubility: Completely soluble in water at 20 °C
Partition coefficient octanol/water: Not determined
Auto-ignition temperature: Not applicable
Decomposition temperature: Not available
Viscosity: Similar to water

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Stable, non-reactive when stored and used according to recommendations.
Chemical stability: No decomposition if used according to specifications.
Possibility of hazardous reactions: None are known.
Conditions to avoid: None reported.
Incompatible materials: Alkaline materials and strong oxidizing agents. **Hazardous decomposition products:** Oxides of sulfur.

SECTION 11. TOXICOLOGICAL INFORMATION

Routes of Exposure and Symptoms

Inhalation: Causes irritation to nasal and respiratory passages.

Ingestion: Causes severe burns to mouth, throat and gastrointestinal tract.

Skin Contact: Causes severe skin burns.

Eye Contact: Causes severe eye damage.

Acute and Chronic Effects from Short- and Long-term Exposure: See Routes of Exposure and Symptoms above.

Acute Oral Toxicity: LD50: 300 mg/kg (rat, copper sulfate pentahydrate)

LD50: 2140 mg/kg (rat, sulfuric acid)

Acute Dermal Toxicity: No applicable information available.

Acute Inhalation Toxicity: LC50: 510 mg/m^3, 2 hours (rat, sulfuric acid)

Acute Eye Irritation: 1.38 mg, severe (rabbit, sulfuric acid)

Dermal Irritation: No applicable information available.

Carcinogen Listings:

IARC: No **NTP:** No **OSHA:** No

Reproductive Effects: No applicable information available.

Target Organ Effects: No applicable information available.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity: EC50: 0.024 mg/l (Daphnia magna, copper sulfate)
LC50: 42 mg/l, 96 hours (Mosquito fish, sulfuric acid)

Persistence and degradability: There are no data reported for this material; however, it would not be expected to be biodegradable.

Bio-accumulative potential: There are no data for this material.

Mobility in soil: Accidental spillage may lead to penetration in the soil and groundwater. Improper handling and disposal of this material may cause environmental damage.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal:

Disposal of this material is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

SECTION 14. TRANSPORT INFORMATION

Classification for shipment by road or rail, sea (IMDG) and air (IATA/ICAO):

UN proper shipping name: Corrosive Liquid, N.O.S. (Copper Sulphate, Sulphuric Acid Mixture)
UN number: UN1760
Transport hazard class: 8
Packing group: lll

Marine Pollutant: Yes, (Copper sulphate)

SECTION 15. REGULATORY INFORMATION

Inventory Status:
All components are on TSCA, EINECS/ELINCS, AICS, and DSL. **U.S. Regulations:**

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:

SARA (311/312) HAZARD CATEGORIES:

___None _X_Immediate ___Delayed ___Fire ___Reactive ___Pressure generating

SARA 313: This product contains the following SARA 313 Toxic Release Chemicals.

Chemical Name	CAS Number	Concentration
Copper sulfate pentahydrate	7758-99-8	19%

The following product components are cited on the lists below:

Chemical Name	CAS Number	List Citations
None		California Proposition 65 List

SECTION 16. OTHER INFORMATION

VOC (Volatile Organic Compounds): None

HMIS Ratings:

Health: 3 **Flammability:** 0 **Reactivity:** 0 **Personal Protection:** C **Prepared by:** Terry Darger

SDS Preparation date: February 15, 2016 **Supersedes previous version:** New SDS.

This SDS contains revisions in the following section(s): Not applicable. New SDS.

The information contained herein is accurate to the best of our knowledge. Gold Plating Services makes no warranty of any kind, express or implied, concerning the safe use of this material in any process or in combination with other substances.

End of Safety Data Sheet