



MARTRON INC. SAFETY DATA SHEET MARTRON COPPER SULFATE

SECTION 1. IDENTIFICATION

Product Name	MARTRON COPPER SULFATE
Product Code	MFC-006016
Recommended Use	Plating agents and metal surface treating agents Surface treatment
Restrictions on Use	For industrial use only.
Company Name of Supplier	Martron Inc. 1394-A Walkup Ave. Monroe, NC 28110 704-289-1934
Website	www.martroninc.com
Emergency Number	CHEMTREC 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification	
Corrosive to Metals	Category 1
Acute toxicity (Oral)	Category 4
Skin irritation	Category 2
Eye irritation	Category 2A

GHS Label Elements Hazard Pictograms



Signal Word **WARNING**

Hazard Statements

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary Statements

Prevention

P234 Keep only in original container.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/eye protection/face protection.

Response

P301+P312+P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

Other Hazards

None known.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture Mixture

Chemical Nature Aqueous solution

Hazardous Ingredients

Chemical Name	CAS #	Concentration (%)
Copper Sulfate	7758-98-7	>=10 - < 25

This product may contain component (s) that are not listed under disclosure. All components not listed, do not contain hazardous materials above de minimus disclosure limits as defined by OSHA, NIOSH, ACGIH or Canadian WHMIS regulations and or guidelines. Please refer to other sections of the SDS for information on safety, health and environmental guidelines and precautions.

SECTION 4. FIRST AID MEASURES**General Advice**

Get medical attention.

If Inhaled

Move to fresh air.

In Case of Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Get medical attention if irritation develops and persists.

In Case of Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.

If Swallowed

If swallowed, call a poison control center or doctor immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

Most Important Symptoms and Effects, Both Acute and Delayed

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

Protection of First Aiders

First Aid responders should pay attention to self-protection and use the recommended protective clothing

Notes to Physician

No information available.

SECTION 5. FIREFIGHTING MEASURES**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available.

Hazardous Combustion Products

Sulphur oxides Copper oxides

Specific Extinguishing Methods

Use a water spray to cool fully closed containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special Protective Equipment for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Use personal protective equipment.
Evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.

Environmental Precautions

Should not be released into the environment.
Local authorities should be advised if significant spillages cannot be contained.

Methods and Materials for Cleanup

Avoid formation of aerosol. containment and cleaning up.
Dam up.
Soak up with inert absorbent material.
Keep in suitable, closed containers for disposal.
Clean contaminated floors and objects thoroughly while observing environmental regulations.

SECTION 7. HANDLING and STORAGE

Advice on Safe Handling

For personal protection see Section 8.
Smoking, eating and drinking should be prohibited in the application area.
Handle in accordance with good industrial hygiene and safety practice.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid breathing mist or vapors.

Conditions for Safe Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

Recommended Storage Temperature

-5 - 40°C

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredients with Workplace Control Parameters

Ingredients	CAS #	Value Type (Form of Exposure)	Control Parameters / Permissible Concentration	Basis
Copper Sulfate	7758-98-7	TWA	1 mg/m ³ (Copper)	NIOSH REL
Sulfuric Acid	7664-93-9	TWA (Thoracic fraction)	0.2 mg/m ³	ACGIH
		TWA	1 mg/m ³	NIOSH REL
		TWA	1 mg/m ³	OSHA Z-1
		TWA	1 mg/m ³	OSHA P0

Personal Protective Equipment**Respiratory Protection**

In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. In case of insufficient ventilation, wear suitable respiratory equipment.

Hand Protection

Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Follow the instructions for use issued by the producer.

Eye Protection

Tightly fitting safety goggles

Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and Body Protection

Impervious clothing

Boots

Protective Measures/Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Hygiene Measures

Avoid contact with skin, eyes and clothing.

Wash hands before breaks and immediately after handling the product.

When using do not eat, drink or smoke.

SECTION 9. PHYSICAL and CHEMICAL PROPERTIES

Appearance	Liquid
Color	Blue
Odor	No information available.
Odor Threshold	No data available
pH	2.5 - 5
Melting Point/Freezing Point	Not determined
Initial Boiling Point/Boiling Range	Not determined
Flash Point	Not applicable
Evaporation Rate	No data available
Flammability (solid, gas)	Not applicable
Upper Explosion Limits	No data available
Lower Explosion Limits	No data available
Vapor Pressure	ca. 23 hPa (20°C)
Relative Vapor Density	No data available
Density	1.13 - 1.23 g/cm ³
Solubility(ies)	
Water Solubility	Completely miscible
Partition Coefficient	
N-Octanol/Water	No data available
Auto-Ignition Temperature	No data available
Thermal Decomposition	No data available
Viscosity	
Viscosity, Dynamic	No data available
Viscosity, Kinematic	No data available
Oxidizing Properties	Not applicable

SECTION 10. STABILITY and REACTIVITY

Reactivity

None under normal processing.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

No dangerous reaction known under conditions of normal use.

Conditions to Avoid

To avoid thermal decomposition, do not overheat.

Incompatible Materials

No data available

Hazardous Decomposition Products

No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on Likely Routes of Exposure**

Eye contact Skin Absorption

Acute Toxicity

Harmful if swallowed.

Product**Acute Oral Toxicity**

Acute toxicity estimate: 1,899 mg/kg

Method: Calculation method

Ingredients

Copper Sulfate

Acute Oral Toxicity

LD50 Oral (Rat): 300 mg/kg

Remarks

The acute toxicity estimate (ATE) of the ingredients are derived using the LD50/LC50 values where available.

Skin Corrosion/Irritation

Causes skin irritation.

Remarks

May cause skin irritation and/or dermatitis.

Serious Eye Damage/Eye Irritation

Causes serious eye irritation

Remarks

Vapors may cause irritation to the eyes, respiratory system and the skin.

Skin Sensitization

Not classified based on available information.

Respiratory Sensitization

Not classified based on available information.

Germ Cell Mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Remarks

The IARC has classified "Strong inorganic acid mists containing sulfuric acid" as a Category 1 carcinogen, a substance that is "carcinogenic to humans". This classification is for strong inorganic acid mists only and does not apply to sulfuric acid or sulfuric acid solutions.

IARC

Group 1: Carcinogenic to humans

Sulfuric acid 7664-93-9

ACGIH

Suspected human carcinogen

Sulfuric acid 7664-93-9

OSHA Specified

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

Known to be human carcinogen
Sulfuric acid 7664-93-9

Reproductive Toxicity

Not classified based on available information.

STOT - Single Exposure

Not classified based on available information.

STOT - Repeated Exposure

Not classified based on available information.

Aspiration Toxicity

Not classified based on available information.

Further Information –**Product Remarks**

No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients**

Copper Sulfate

Toxicity to Fish

LC50: 0.11 mg/l
Exposure time: 96 h

Toxicity to Daphnia and Other Aquatic Invertebrates

EC50: 0.02 mg/l
Exposure time: 48 hr

Persistence and Degradability

No data available

Bio-accumulative Potential**Ingredient****Copper Sulfate**

Partition coefficient n-octanol/water

Remarks

No data available

Mobility in Soil

No data available

Other Adverse Effects

No data available

Product

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal Methods****Waste from Residues**

Dispose of in accordance with local regulations. Dispose of wastes in an approved waste disposal facility.

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

UN Number UN 1760
Proper Shipping Name CORROSIVE LIQUID, N.O.S.
Technical Name(s) (Copper Sulfate)
Class 8
Packing Group III
Labels 8

IATA-DGR

UN/ID Number UN 1760
Proper Shipping Name Corrosive liquid, N.O.S.
Technical Name(s) (Copper Sulfate)
Class 8
Packing Group III
Labels Corrosive
Packing Instruction 856 (cargo aircraft)
Packing Instruction 852 (passenger aircraft)

IMDG-Code

UN Number UN 1760
Proper Shipping Name CORROSIVE LIQUID, N.O.S.
Technical Name(s) (Copper Sulfate)
Class 8
Packing Group III
Labels 8
EmS Code F-A, S-B
Marine Pollutant Yes

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code
 Not applicable for product as supplied.

Domestic Regulation

DOT/49 CFR

UN/ID/NA Number UN 1760
Proper Shipping Name Corrosive liquids, N.O.S.
Technical Name(s) (Copper Sulfate)
Class 8
Packing Group III
Labels CORROSIVE
ERG Code 154
Marine Pollutant Yes (Copper Sulfate)

SECTION 15. REGULATORY INFORMATION

TSCA 5a

Not relevant

TSCA 12b

Not relevant

DEA

Not applicable

**EPCRA - Emergency Planning and Community Right-to-Know
 CERCLA Reportable Quantity**

Ingredients	CAS #	Component RQ (lbs.)	Calculated Product RQ (lbs.)
Copper Sulfate	7758-98-7	10	63
Sulfuric Acid	7664-93-9	1000	*

*Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Ingredients	CAS #	Component RQ (lbs.)	Calculated Product RQ (lbs.)
Sulfuric Acid	7664-93-9	1000	*

*Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards:

Acute Health Hazard

SARA 302:

The following components are subject to reporting levels established by SARA Title III, Section 302:

Sulfuric acid 7664-93-9

SARA 313:

The following components are subject to reporting levels established by SARA Title III, Section 313:

Copper Sulfate 7758-98-7

Massachusetts Right to Know

Copper Sulfate 7758-98-7 10 - 25 %
Sulfuric acid 7664-93-9 0.1 - 1 %

Pennsylvania Right to Know

Copper Sulfate 7758-98-7 10 - 25 %

New Jersey Right to Know

Copper Sulfate 7758-98-7 10 - 25 %
Sulfuric acid 7664-93-9 0.1 - 1 %

California Prop 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

Sulfuric acid 7664-93-9

Remarks

Components which are only displayed in Section 15 are being reported for local regulatory purposes. These components are not displayed in Section 3 due to one or more of the following conditions being met: being present in the product at concentration(s) below threshold limit values for reporting, not considered hazardous materials, health hazards or because they do not contribute to the overall GHS Classification of the final product as required by OSHA HazCom 2012 final rule (29 CFR 1910.1200).

Substances Currently Restricted by WEEE/RoHS (European Directive 2002/96/EC, 2002/95/EC) or ELV (European Directive 2000/53/EC):

PBDE	PBB	CrVI	Hg	Pb	Cd
-	-	-	-	-	-

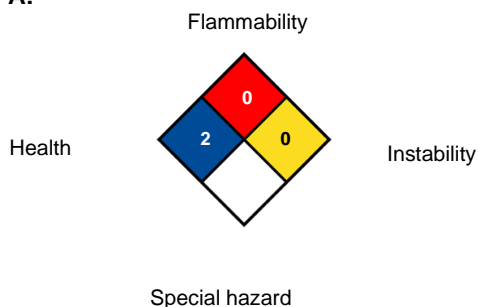
Please Note

Current legislation restricting the use of certain substances applies to "homogeneous material" in finished articles being supplied to the market. Substances deposited during surface finishing may have a composition (weight percent) higher than the weight percent of the substance in the operating solution from which the deposit is made. **Martron Inc.** encourages its customers to implement systems to ensure their finished products comply with the regulations in force.

SECTION 16. OTHER INFORMATION

Further Information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = Not significant,
 1 = Slight,
 2 = Moderate,
 3 = High
 4 = Extreme,
 * = Chronic

The information provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.