

## Safety data sheet according to U.S.A. Federal Hazcom 2012

### SECTION 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Code:	SC0914
Product name	Copper(II) Sulfate Pentahydrate ACS
INDEX number	029-004-00-0
EC number	231-847-6
CAS number	7758-99-8

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use For Laboratory Use Only

#### 1.3. Details of the supplier of the safety data sheet

Name	EXAXOL CHEMICAL CORPORATION
Full address	14325 60 TH ST N
District and Country	33760 CLEARWATER - FLORIDA
	US

Tel. 1-727-524-7732

Fax 1-727-532-8221

e-mail address

info@exaxol.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to

1-800-255-3924  
ChemTel Inc.

### SECTION 2. Hazards identification.

#### 2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). The product thus requires a safety datasheet.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Classification and Hazard Statement.

Acute toxicity, category 4

Eye irritation, category 2

Skin irritation, category 2

Harmful if swallowed.

Causes serious eye irritation.

Causes skin irritation.



Signal words:

Warning

Hazard statements:

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**H302** Harmful if swallowed.  
**H319** Causes serious eye irritation.  
**H315** Causes skin irritation.

## Precautionary statements:

## Prevention:

**P264** Wash skin thoroughly after handling.  
**P270** Do not eat, drink or smoke when using this product.  
**P280** Wear protective gloves / eye protection / face protection.

## Response:

**P301+P312** IF SWALLOWED: call a POISON CENTER / doctor if you feel unwell.  
**P302+P352** IF ON SKIN: wash with plenty of 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.  
**P321** Specific treatment (see label).  
**P330** Rinse mouth.  
**P332+P313** If skin irritation occurs: get medical advice.  
**P337+P313** If eye irritation persists: get medical advice / attention.  
**P362+P364** Take off contaminated clothing and wash it before reuse.

## Storage:

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## Disposal:

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

## 2.2. Other hazards.

Environmental classification as for Reg. (EU) 1272/2008 (CLP):

The product is classified as hazardous for environment pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP).

## Classification and Hazard Statement.

Hazardous to the aquatic environment, acute toxicity, category 1      Very toxic to aquatic life.  
Hazardous to the aquatic environment, chronic toxicity, category 1      Very toxic to aquatic life with long lasting effects.



Signal words:      Warning

## Hazard statements:

**H400** Very toxic to aquatic life.  
**H410** Very toxic to aquatic life with long lasting effects.

## Precautionary statements:

## Prevention:

**P273** Avoid release to the environment.

## Response:

**P391** Collect spillage.

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## Storage:

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## Disposal:

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

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Additional hazards.

### SECTION 3. Composition/information on ingredients.

#### 3.1. Substances.

Contains:

The full wording of hazard (H) phrases is given in section 16 of the sheet.

Identification.	Conc. %.	Classification:
COPPER(II) SULFATE ( 25.45% - metallic element )		
CAS. 7758-99-8	100	Acute toxicity, category 4 H302, Eye irritation, category 2 H319, Skin irritation, category 2 H315, Hazardous to the aquatic environment, acute toxicity, category 1 H400 M=100, Hazardous to the aquatic environment, chronic toxicity, category 1 H410 M=100

#### 3.2. Mixtures.

##### 3.2. Mixtures.

Information not relevant.

### SECTION 4. First aid measures.

#### 4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

#### 4.2. Most important symptoms and effects, both acute and delayed.

For symptoms and effects caused by the contained substances, see chap. 11.

#### 4.3. Indication of any immediate medical attention and special treatment needed.

Information not available.

## SECTION 5. Firefighting measures.

### 5.1. Extinguishing media.

#### SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

#### UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

### 5.2. Special hazards arising from the substance or mixture.

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

### 5.3. Advice for firefighters.

#### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## SECTION 6. Accidental release measures.

### 6.1. Personal precautions, protective equipment and emergency procedures.

If there are no contraindications, spray powder with water to prevent the formation of dust. Avoid breathing vapours/mists/gases.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

### 6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

### 6.3. Methods and material for containment and cleaning up.

Use spark-proof mechanical equipment to collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage.

### 7.1. Precautions for safe handling.

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

### 7.2. Conditions for safe storage, including any incompatibilities.

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

### 7.3. Specific end use(s).

Information not available.

## SECTION 8. Exposure controls/personal protection.

### 8.1. Control parameters.

Information not available.

### 8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must comply with current regulations.

#### HAND PROTECTION

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (OSHA 29 CFR 1910.138).

Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

#### SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

#### EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133).

#### RESPIRATORY PROTECTION

None required, unless indicated otherwise in the chemical risk assessment.

#### ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

## SECTION 9. Physical and chemical properties.

**9.1. Information on basic physical and chemical properties.**

Appearance	Not available.
Colour	Not available.
Odour	Not available.
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	Not applicable.
Boiling range.	Not available.
Flash point.	Not applicable.
Evaporation Rate	Not available.
Flammability of solids and gases	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	2.300 Kg/l
Solubility	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

**9.2. Other information.**

Information not available.

**SECTION 10. Stability and reactivity.****10.1. Reactivity.**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability.**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions.**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid.**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials.**

Information not available.

#### 10.6. Hazardous decomposition products.

Information not available.

### SECTION 11. Toxicological information.

#### 11.1. Information on toxicological effects.

Acute effects: ingestion of this product is harmful. Even small amounts of product may cause serious health problems (stomach pain, nausea, sickness, diarrhoea).

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation.

Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin.

Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, and OSHA.

### SECTION 12. Ecological information.

This product is dangerous for the environment and highly toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

#### 12.1. Toxicity.

##### COPPER(II) SULFATE

LC50 - for Fish. 0.016 mg/l/96h *Oncorhynchus mykiss*

EC50 - for Crustacea. 0.18 mg/l/48h *Daphnia magna*

EC50 - for Algae / Aquatic Plants. 0.003 mg/l/72h *Pseudokirchneriella subcapitata*

#### 12.2. Persistence and degradability.

##### COPPER(II) SULFATE

Solubility in water. mg/l 100 - 1000

Biodegradability: Information not available.

#### 12.3. Bioaccumulative potential.

Information not available.

#### 12.4. Mobility in soil.

Information not available.

#### 12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

#### 12.6. Other adverse effects.

Information not available.

### SECTION 13. Disposal considerations.

#### 13.1. Waste treatment methods.

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to dangerous goods transport regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

### SECTION 14. Transport information.

#### 14.1. UN number.

ADR / RID, IMDG,  
IATA:

UN: 3077

#### 14.2. UN proper shipping name.

ADR / RID:	ENVIRONMENT ALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER(II) SULFATE)
IMDG:	ENVIRONMENT ALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER(II) SULFATE)
IATA:	

#### 14.3. Transport hazard class(es).

ADR / RID:	Class: 9	Label: 9
IMDG:	Class: 9	Label: 9
IATA:	Class: 9	Label: 9



#### 14.4. Packing group.

ADR / RID, IMDG,  
IATA:

III



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**14.5. Environmental hazards.**

ADR / RID: Environmentally Hazardous.

IMDG: Marine Pollutant.

IATA: Environmentally Hazardous.

**14.6. Special precautions for user.**

ADR / RID:	Nr. Kemler: 90	Limited Quantity 5 kg	Tunnel restriction code (E)
	Special Provision: -		
IMDG:	EMS: F-A, S-F	Limited Quantity 5 kg	
IATA:	Cargo:	Maximum quantity: 400 Kg	Packaging instructions: 956
	Pass.:	Maximum quantity: 400 Kg	Packaging instructions: 956
	Special Instructions:	A97, A158, A179, A197	

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code.**

Information not relevant.

**SECTION 15. Regulatory information.****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.**U.S. Federal Regulations.Clean Air Act Section 112(b):

No component(s) listed.

Clean Air Act Section 602 Class I Substances:

No component(s) listed.

Clean Air Act Section 602 Class II Substances:

No component(s) listed.

Clean Water Act –  
Priority Pollutants:

No component(s) listed.

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Clean Water Act –  
Toxic Pollutants:

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COPPER(II) SULFATE (Copper  
compounds)

DEA List I Chemicals (Precursor Chemicals):

No component(s) listed.

DEA List II Chemicals (Essential Chemicals):

No component(s) listed.

EPA List of Lists:

313 Category Code:

7758-99-8

COPPER(II) SULFATE (Copper  
compounds)

EPCRA 302 EHS TPQ:

No component(s) listed.

EPCRA 304 EHS RQ:

No component(s) listed.

CERCLA RQ:

No component(s) listed.

EPCRA 313 TRI:

7758-99-8

COPPER(II) SULFATE (Copper  
compounds)

RCRA Code:

No component(s) listed.

CAA 112 (r) RMP TQ:

No component(s) listed.

State Regulations.

Massachusetts:

No component(s) listed.

Minnesota:

No component(s) listed.

New Jersey:

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COPPER(II) SULFATE (Copper  
compounds)New York:

No component(s) listed.

Pennsylvania:

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COPPER(II) SULFATE (Copper  
compounds)California:

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COPPER(II) SULFATE (Copper  
compounds)Proposition 65:International Regulations.Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Canadian WHMIS.

Information not available.

**SECTION 16. Other information.**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>Aquatic Acute 1</b>	Hazardous to the aquatic environment, acute toxicity, category 1
<b>Aquatic Chronic 1</b>	Hazardous to the aquatic environment, chronic toxicity, category 1
<b>Aquatic Chronic 2</b>	Hazardous to the aquatic environment, chronic toxicity, category 2
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>Aquatic Chronic 4</b>	Hazardous to the aquatic environment, chronic toxicity, category 4
<b>H302</b>	Harmful if swallowed.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H400</b>	Very toxic to aquatic life.
<b>H410</b>	Very toxic to aquatic life with long lasting effects.

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<b>H411</b>	Toxic to aquatic life with long lasting effects.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>H413</b>	May cause long lasting harmful effects to aquatic life.

## LEGEND:

- 313 CATEGORY CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAA 112 @ RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112@)
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CERCLA RQ: Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
- CLP: EC Regulation 1272/2008
- DEA: Drug Enforcement Administration
- EmS: Emergency Schedule
- EPA: US Environmental Protection Agency
- EPCRA: Emergency Planning and Community Right-to Know Act
- EPCRA 302 EHS TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
- EPCRA 304 EHS RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
- EPCRA 313 TRI: Toxics Release Inventory (Section 313 Category Code)
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RCRA Code: Resource Conservation and Recovery Act Code
- REL: Recommended exposure limit
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TSCA: Toxic Substances Control Act
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

## GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- 6 NYCRR part 597
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Communication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112@ of the Clean Air Act
- Massachusetts 105 CMR Department of public health 670.000: "Right to Know"
- Minnesota Chapter 5206 Department Of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

## Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety

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laws and regulations. The producer is relieved from any liability arising from improper uses.  
Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 06 / 08 / 09 / 10 / 14.