

# Safety Data Sheet

## COPPER SULFATE 10%

Safety Data Sheet dated 6/11/2015, version 1

### 1. IDENTIFICATION

#### Product identifier

Mixture identification:

Trade name: COPPER SULFATE 10%

Other means of identification:

Synonyms: Copper (II) Sulfate Pentahydrate (1:1:5); blue vitriol; Sulfuric acid copper (2+) salt (1:1), Pentahydrate

Product codes:

10-055-0118, 10-055-0237, 10-055-0473, 10-055-0946

#### Recommended use of the chemical and restrictions on use

Recommended use:

FOR PROFESSIONAL USE

Restrictions on use:

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company:

Enartis USA Inc.

7795 Bell Road

Windsor

CA 95492

Competent person responsible for the safety data sheet:

compliance@enartis.com

Emergency phone number

Phone: +1 (707) 838 6312

Fax: +1 (707) 838 1765

### 2. HAZARD(S) IDENTIFICATION

#### Classification of the chemical

⚠ Warning, Skin Irrit. 2, Causes skin irritation.

⚠ Warning, Eye Irrit. 2A, Causes serious eye irritation.

Aquatic Acute 2, Toxic to aquatic life.

⚠ Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

#### Label elements

##### Symbols:



#### Warning

##### Hazard statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H401 Toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

##### Precautionary statements:

P264 Wash hands thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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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.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Hazards not otherwise classified identified during the classification process:

None

Ingredient(s) with unknown acute toxicity:

None.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

>= 10% - < 12.5% Copper Sulphate pentahydrate

REACH No.: 01-2119520566-40-XXXX, Index number: 029-004-00-0, CAS: 7758-98-7, EC: 231-847-6

⚠ A.3/2A Eye Irrit. 2A H319

⚠ A.2/2 Skin Irrit. 2 H315

⚠ US-HAE/A1 Aquatic Acute 1 H400

⚠ US-HAE/C1 Aquatic Chronic 1 H410

⚠ A.1/4/Oral Acute Tox. 4 H302

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### 4. FIRST-AID MEASURES

Description of necessary measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Induce vomiting. SEEK A MEDICAL EXAMINATION IMMEDIATELY and present the safety-data sheet.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

Most important symptoms/effects, acute and delayed

None

Indication of immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

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### 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Unsuitable extinguishing media:

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None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Hazardous combustion products:

None

Explosive properties: N.A.

Oxidizing properties: N.A.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

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## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Remove persons to safety.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

Methods and materials for containment and cleaning up

Wash with plenty of water.

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## 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not use on extensive surface areas in premises where there are occupants.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

Storage temperature:

Store at ambient temperature.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Copper Sulphate pentahydrate - CAS: 7758-98-7

OSHA - LTE: 1 mg/m<sup>3</sup>

ACGIH - LTE: 1 mg/m<sup>3</sup>

Appropriate engineering controls:

None

Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or

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Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour:	Liquid
Odour:	None
Odour threshold:	N.A.
pH:	4.0 (0.2M)
Melting point / freezing point:	110°C (230F)
Initial boiling point and boiling range:	>150°C (>302F)
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	N.A. ° F
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Relative density:	N.A.
Solubility in water:	31.6g/100cc at 0°C (32F)
Solubility in oil:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	N.A.
Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

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## 10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions

Chemical stability

Stable under normal conditions

Possibility of hazardous reactions

None

Conditions to avoid

Stable under normal conditions.

Incompatible materials

Powdered metals, hydroxylamine, Magnesium, Strong reducing agents

Hazardous decomposition products

None.

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## 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the mixture:

Copper Sulphate pentahydrate - CAS: 7758-98-7

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 482 mg/kg

Test: LD50 - Route: Intraperitoneal - Species: Rat = 20 mg/kg

Test: LD50 - Route: Intravenous - Species: Rat = 48.9 mg/kg

Substance(s) listed on the NTP report on Carcinogens:

None.

Substance(s) listed on the IARC Monographs:

None.

Substance(s) listed as OSHA Carcinogen(s):

None.

Substance(s) listed as NIOSH Carcinogen(s):

None.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

Copper Sulphate pentahydrate - CAS: 7758-98-7

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 1 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 1 mg/l - Duration h: 72

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

None

## 13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

## 14. TRANSPORT INFORMATION



UN number

ADR-UN Number: 3077

DOT number: UN3077

IATA-UN Number: 3077

IMDG-UN Number: 3077

UN proper shipping name

ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper (II) Sulphate)

DOT-Shipping Name: Environmentally hazardous substance, solid, n.o.s

IATA-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper (II) Sulphate)

IMDG-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper (II) Sulphate)

Transport hazard class(es)

ADR-Class: 9

DOT Hazard Class: 9

ADR - Hazard identification number: 90

IATA-Class: 9

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IATA-Label:	9
IMDG-Class:	9
Packing group	
ADR-Packing Group:	III
DOT Packing group:	III
IATA-Packing group:	III
IMDG-Packing group:	III
Environmental hazards	
ADR-Environmental Pollutant:	No
IMDG-Marine pollutant:	No
Most important toxic component:	COPPER SULFATE 10%
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	
N.A.	
Special precautions	
DOT Special provisions:	8, 146, 335, A112, B54, B120,
DOT Labels:	9
ADR-Subsidiary risks:	-
ADR-S.P.:	274 335 601
ADR-Tunnel Restriction Code:	(E)
IATA-Passenger Aircraft:	956
IATA-Subsidiary risks:	-
IATA-Cargo Aircraft:	956
IATA-S.P.:	A97 A158 A179
IATA-ERG:	9L
IMDG-EmS:	F-A , S-F
IMDG-Subsidiary risks:	-
IMDG-Storage category:	Category A
IMDG-Storage notes:	When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

## 15. REGULATORY INFORMATION

### USA - Federal regulations

#### TSCA - Toxic Substances Control Act

TSCA inventory: all the components are listed on the TSCA inventory.

TSCA listed substances:

None.

#### SARA - Superfund Amendments and Reauthorization Act

Section 302 – Extremely Hazardous Substances: no substances listed.

Section 304 – Hazardous substances: no substances listed.

Section 313 – Toxic chemical list: Copper (II) Sulphate.

#### CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA: Copper (II) Sulphate - Reportable quantity: 10 pounds.

Reportable quantity for mixture: 100 pounds.

#### CAA - Clean Air Act

CAA listed substances:

None.

#### CWA - Clean Water Act

CWA listed substances:

None.

### USA - State specific regulations

#### California Proposition 65

Substance(s) listed under California Proposition 65:

None.

#### Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

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Copper (II) Sulphate.  
New Jersey Right to know  
Substance(s) listed under New Jersey Right to know:  
Copper (II) Sulphate.  
Pennsylvania Right to know  
Substance(s) listed under Pennsylvania Right to know:  
Copper (II) Sulphate.

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## 16. OTHER INFORMATION

Full text of phrases referred to in Section 3:

H319 Causes serious eye irritation.  
H315 Causes skin irritation.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H302 Harmful if swallowed.

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Disclaimer:

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

This Safety Data Sheet cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
CAS: Chemical Abstracts Service (division of the American Chemical Society).  
CLP: Classification, Labeling, Packaging.  
DNEL: Derived No Effect Level.  
EINECS: European Inventory of Existing Commercial Chemical Substances.  
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.  
HMIS: Hazardous Materials Identification System  
IARC: International Agency for Research on Cancer  
IATA: International Air Transport Association.  
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  
ICAO: International Civil Aviation Organization.  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).  
IMDG: International Maritime Code for Dangerous Goods.  
INCI: International Nomenclature of Cosmetic Ingredients.  
KSt: Explosion coefficient.  
LC50: Lethal concentration, for 50 percent of test population.  
LD50: Lethal dose, for 50 percent of test population.  
LTE: Long-term exposure.  
NFPA: National Fire Protection Association  
NIOSH: National Institute for Occupational Safety and Health  
NTP: National Toxicology Program  
OSHA: Occupational Safety and Health Administration  
PNEC: Predicted No Effect Concentration.  
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.  
STE: Short-term exposure.  
STEL: Short Term Exposure limit.



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STOT: Specific Target Organ Toxicity.  
TLV: Threshold Limiting Value.  
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day.  
(ACGIH Standard).