

# SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2019  
Date Updated: July 24, 2019

## SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION-----

**Product Name** Copper (II) sulfate pentahydrate  
**Product Code(s)** CDB0063  
**Recommended Use** For Laboratory Research Use Only  
 Not for Human or Animal Drug Use

**Supplier** Bio Basic Inc.  
**Address** 20 Konrad Crescent, Markham, Ontario,  
 Canada, L3R 8T4  
**Telephone** (905) 474 4493  
**Fax** (905) 474 5794  
**For Chemical Emergency Phone#** (416) 995 9730

## SECTION 2. ----- HAZARDS IDENTIFICATION -----

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Acute toxicity, Oral (Category 4), H302  
 Skin irritation (Category 2), H315  
 Eye irritation (Category 2A), H319  
 Acute aquatic toxicity (Category 1), H400  
 Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

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

Precautionary statement(s)

P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
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.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none****SECTION 3. - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -**

<b>Chemical Name</b>	<b>EC No.</b>	<b>CAS-No</b>	<b>Weight %</b>
Copper sulphate pentahydrate	231-847-6	7758-99-8	<100

**SECTION 4. - - - - - FIRST-AID MEASURES- - - - -****Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

**Indication of any immediate medical attention and special treatment needed**

No data available

**SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -****Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**

No data available

**Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Further information**

No data available

**SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES- - - - -****Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.



b) Odour	No data available
c) Odour Threshold	No data available
d) pH	3.7 - 4.5 at 50 g/l at 25 °C (77 °F)
e) Melting point/freezing point	Melting point/range: 110 °C (230 °F) - dec.
f) Initial boiling point and boiling range	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	9.7 hPa (7.3 mmHg) at 25 °C (77 °F)
l) Vapour density	No data available
m) Relative density	2.284 g/cm <sup>3</sup>
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

**Other safety information**

No data available

**SECTION 10. -----STABILITY AND REACTIVITY -----**

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

No data available

**Conditions to avoid**

Exposure to moisture

**Incompatible materials**

Powdered metals, Anhydrous copper(II) sulfate, reacts violently with: , hydroxylamine, Magnesium

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Copper oxides Other decomposition products - No data available  
In the event of fire: see section 5

## SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

### Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 482 mg/kg (OECD Test Guideline 401) Remarks: anhydrous

Inhalation: No data available

LD50 Dermal - Rat - > 2,000 mg/kg

Remarks: anhydrous

No data available

#### Skin corrosion/irritation

Irritating to skin.

#### Serious eye damage/eye irritation

Irritating to eyes.

#### Respiratory or skin sensitisation

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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

#### Reproductive toxicity

No data available

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

#### Additional Information

RTECS: GL8900000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence

## SECTION 12. ----- ECOLOGICAL INFORMATION -----

### Toxicity

Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 0.024 mg/l - 48 h other aquatic invertebrates

### Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

**Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

**SECTION 13. ----- DISPOSAL CONSIDERATIONS -----**

**Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14. ----- TRANSPORT INFORMATION -----**

**TDG (Canada)**

UN number: 3077      Class: 9      Packing group: III  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
yes  
Poison Inhalation Hazard: No

**IMDG**

UN number: 3077      Class: 9      Packing group: III      EMS-No: F-A, S-F  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper sulphate pentahydrate)  
Marine pollutant:yes

**IATA**

UN number: 3077      Class: 9      Packing group: III  
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Copper sulphate pentahydrate)

**SECTION 15. ----- REGULATORY INFORMATION -----**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

**SECTION 16. ----- OTHER INFORMATION -----**

**Full text of H-Statements referred to under sections 2 and 3.**

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Irrit.	Eye irritation
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.

Further information: no limited for paper copy, just for internal uses.  
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

**Disclaimer**

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**Issuing Date:** 24-Jul-2019

**End of SDS**