

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

EN

FORM-06-14-01 (V00)

Page 1/10

CUPRI SULFAS PENTAHYDRICUS

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: Copper sulfate pentahydrate
Cupri sulfas pentahydricus
Kopersulfaat pentahydraat
Cuivre (sulfate de) pentahydraté
Kupfer(II)-sulfat-Pentahydrat

N° CAS: 7758-99-8

N° EC: 231-847-6

1.2 Relevant identified uses of the substance/mixture and uses advised against

Identified uses: Active Pharmaceutical Ingredient or Excipient.

1.3 Details of the supplier of the safety data sheet

Company: Magis-Pharma NV
Neerlandweg 24
2610 Wilrijk
Belgium

Telephone: (+32) (0)3 457 11 76

Email: info@magis-pharma.be

Web page: www.magis-pharma.be

1.4 Emergency telephone number

Public utility foundation:	Belgisch Antigifcentrum	Centre Antipoisons Belge
Telephone:	(+32) (0)70 245 245	(Service 24/7)
Web page:	www.antigifcentrum.be	www.centreantipoisons.be

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance/mixture

Classification according to (EC) n° 1272/2008

Acute Tox. 4	H302
Eye Dam. 1	H318
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

2.2 Label elements

Labelling according to (EC) n° 1272/2008

Hazard pictogram(s):



Signal word(s): Danger

Hazard statements:

H302	Harmful if swallowed.
H318	Causes serious eye damage.

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

EN

FORM-06-14-01 (V00)

Page 2/10

CUPRI SULFAS PENTAHYDRICUS

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statements:	
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P330	Rinse mouth.
P391	Collect spillage.
P501	Dispose of contents/container to ... (see section 13).
Additional applicable label elements:	Not applicable.

2.3 Other hazards

None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product name:	Copper sulfate pentahydrate
IUPAC name:	Copper sulfate pentahydrate
Synonyms:	Blue vitriol Sulfuric acid, copper (2+) salt (1:1), pentahydrate
N° CAS:	7758-99-8
N° EC:	231-847-6
Molecular Formula:	$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$
Content:	99.0 per cent to 101.0 per cent

3.2 Mixtures

It contains no other components or impurities that may influence the classification of the product.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes:	Consult a doctor. Show the safety data sheet to the doctor on duty.
After inhalation:	Remove to fresh air. If breathing is irregular, call a doctor immediately. Only give artificial respiration if breathing stops or under medical supervision.
After skin contact:	Wash immediately with plenty of soap and water for at least 15 minutes. Remove all contaminated clothing immediately. Get medical attention if irritation develops and persists.

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

EN

FORM-06-14-01 (V00)

Page 3/10

CUPRI SULFAS PENTAHYDRICUS

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



After eye contact:	Remove contact lenses and rinse immediately with plenty of water, including under eyelids, for at least 15 minutes. Get medical attention.
After ingestion:	If conscious, give victim plenty of water to drink. Never give anything by mouth to an unconscious person. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Not available.

4.3 Indication of any immediate medical attention and special treatment needed

Not available.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:	Foam, dry powder, carbon dioxide, sand, water mist. Nearby fires (containers exposed to fire): Water spray or water fog.
Unsuitable extinguishing media:	Direct water jet.

5.2 Special hazards arising from the substance/mixture

Vapours emitted during combustion are heavier than air. Possible formation of explosive mixtures with air. Risk of dust explosion. Possibility of formation of dangerous vapours due to fire in the environment.

5.3 Advice for firefighters

Surrounding fires:	Cool tanks, cisterns or containers near the source of heat or fire with water. Take wind direction into account. Prevent products used in firefighting from entering drains, sewers or watercourses.
Protection against fire:	Depending on the size of the fire, heat protection suits, self-contained breathing apparatus, gloves, goggles or face masks and boots may be required.
Hazardous combustion products:	Not available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Avoid formation of dust. Avoid contact with the substance Proceed with ventilation in enclosed areas.

Wear appropriate protective equipment (including personal protective equipment detailed under section 8) to avoid contamination of skin, eyes and persons.

Do not handle damaged containers or product before putting on appropriate protective equipment. For information on environmental and health hazards, respiratory protection, ventilation and personal protective equipment refer to other sections of this data sheet.

For emergency responders

Avoid formation of dust. Avoid contact with the substance Proceed with ventilation in enclosed areas.

Wear appropriate protective equipment (including personal protective equipment detailed under section 8) to avoid contamination of skin, eyes and persons.

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

EN

FORM-06-14-01 (V00)

Page 4/10

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



CUPRI SULFAS PENTAHYDRICUS

Do not handle damaged containers or product before putting on appropriate protective equipment. For information on environmental and health hazards, respiratory protection, ventilation and personal protective equipment refer to other sections of this data sheet.

6.2 Environmental precautions

In case of large spills or if the product contaminates lakes, rivers or sewers, inform the competent authorities according to local legislation. Avoid contamination of drains, surface or ground water and soil.

6.3 Methods and material for containment and cleaning up

Absorb spillage with inert absorbent material (sand, vermiculite, diatomaceous earth, Kieselguhr, etc.). Collect most of the resulting material and place in containers for disposal. Remove the residue with water jets if there are no contraindications. Ensure adequate ventilation of the area affected by the leak.

6.4 Reference to other sections

For exposure control and personal protective measures, see section 8.

For waste disposal, follow the recommendations in section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for safe handling:	Protect from light and do not inhale the substance.
Personal protection:	For personal protection see section 8.
Technical protective measures:	Work under a fume cupboard.
Handling:	Not available.

7.2 Conditions for safe storage, including any incompatibilities

Storage:	Not available.
Conditions for safe storage, including any incompatibilities:	Keep container tightly closed, protected from light and in a cool, dry place.
Storage – away from:	Not available.

7.3 Specific end use(s)

Active Pharmaceutical Ingredient or Excipient

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Not available.

8.2 Exposure controls

Appropriate engineering control

Since the use of appropriate technical measures should always take precedence over personal protective equipment, ensure good ventilation at the workplace by effective local suction. When choosing personal protective equipment, ask your chemical suppliers if this is necessary. Personal protective equipment must be CE-marked for compliance with applicable regulations. Provide an emergency shower with a visco-elastic tray.

Individual protection measures

Eye/face protection: Protective face shields and safety goggles according to EN166.

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

CUPRI SULFAS PENTAHYDRICUS

EN

FORM-06-14-01 (V00)

Page 5/10

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



Skin protection:	Choose body protection according to the quantity and concentration of the hazardous substance in the workplace.
Hand protection:	Handle with gloves. The selected protective gloves must comply with the specifications of EU Directive 89/686/EEC and the derived EN 374 standard.
Respiratory protection:	We recommend the use of a P-type filter mask (EN 149) or equivalent device, whose class (1, 2 or 3) and actual need will be determined by the outcome of the risk assessment.
Thermal hazards:	Not determined.

Environmental exposure control

Emissions from production processes, including those from ventilation equipment, should be monitored for compliance with environmental protection standards. Product residues should not be discharged uncontrolled into drains or waterways. For information on environmental exposure control, refer to the exposure scenarios attached to this Safety Data Sheet.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Blue, crystalline powder or transparent, blue crystals.
Odour:	Not available.
Odour threshold:	Not available.
pH:	~ 3.75 (7 %)
Melting/freezing point:	Not available.
Initial boiling point:	Not available.
Boiling range:	Not available.
Flash point:	990 °C
Evaporation rate:	Not available.
Flammability (solid/gas):	Not available.
Upper/lower flammability or explosive limits:	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	Not available.
Solubility:	Soluble in methanol, practically insoluble in ethanol (96 per cent).
Solubility in water:	Freely soluble in water.
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.

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

CUPRI SULFAS PENTAHYDRICUS

EN

FORM-06-14-01 (V00)

Page 6/10

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



9.2 Other information

Molecular weight: 158.88 g/mol

Dry residue: 100.00 %.

VOC (directive 1999/13/EC): 0

VOC (volatile carbon): 0

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No special conditions. Stable under recommended handling and storage conditions (see section 7).

10.2 Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3 Possibility of hazardous reactions

Dust explosion possible. In case of strong heating, explosive mixtures with air may occur. Sublimable. Energy reducing.

10.4 Conditions to avoid

Avoid heating. Sensitive to light.

10.5 Incompatible materials

Strong oxidizing agents. Alkaline hydroxides. Aluminium. Oxygen. Sodium hydroxide.

10.6 Hazardous decomposition products

Not available.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: Not available.

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes eye irritation.

Respiratory/skin sensitisation: Risk of skin sensitization.

Germ cell mutagenicity: Not available.

Carcinogenicity: Not available.

Reproductive toxicity: Not available.

Summary of evaluation of the CMR properties: Not available.

STOT-single exposure: Not available.

STOT-repeated exposure: Not available.

Aspiration Hazard: Not available.

Other: There are no known health related events due to exposure to the product. In any case, it is recommended to comply with the rules of good industrial hygiene.
Signs and Symptoms of Exposure: Burning sensation, coughing, asthma, laryngitis, shortness of breath, headache, nausea and vomiting.

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

CUPRI SULFAS PENTAHYDRICUS

EN

FORM-06-14-01 (V00)

Page 7/10

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



11.2 Additional information on potential adverse human health effects and symptoms

Eye contact:	May cause eye irritation.
Skin contact:	Harmful if absorbed through skin. May cause skin irritation.
Inhalation:	Harmful if inhaled. May cause respiratory tract irritation.
Ingestion:	Harmful if swallowed.
Aspiration:	Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

LC ₅₀ (fish):	0.08 mg/L/96 hours (<i>Oncorhynchus mykiss</i>)
EC ₅₀ (crustaceans):	0.021 mg/L/48 hours (<i>Daphnia magna</i>)
EC ₅₀ (algae):	0.026 mg/L/72 hours (<i>Synechococcus leopoliensis</i>)

12.2 Persistence and degradability

Medium biodegradability.

12.3 Bioaccumulative potential

Bioaccumulation of the product is not expected.

12.4 Mobility in soil

Not available.

12.5 Results of PBT and vPvB assessment

Not available.

12.6 Other adverse effects

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Consider all federal, state and local environmental regulations. Contact a licensed professional waste disposal service for disposal of this material. Dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated container: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

Transport information according to ADR/RID/IMDG/ICAO/IATA

14.1 UN Number

ADR/ RID(Land),IMDG(Sea), IATA/ICAO (Air) :	3077
--	------

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

EN

FORM-06-14-01 (V00)

Page 8/10

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



CUPRI SULFAS PENTAHYDRICUS

14.2 UN proper shipping name

ADR/ RID(Land),IMDG(Sea), ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (COPPER SULFATE)
IATA/ICAO (Air) :

14.3 Transport hazard class(es)

ADR/ RID(Land),IMDG(Sea), 9
IATA/ICAO (Air) :

14.4 Packing group

ADR/ RID(Land),IMDG(Sea), III
IATA/ICAO (Air) :

14.5 Environmental hazards

ADR/ RID(Land),IMDG(Sea), ADR / RID: Dangerous for the Environment
IATA/ICAO (Air) : IMDG: Marine Pollutant
IATA: Dangerous for the environment

14.6 Special precautions for user

ADR/RID:	HIN - Kemler: 90	Limit Quantity: 5 Kg	Restriction code: (E)
IMDG:	EMS: F-A, S-F		
IATA:	Cargo.:	Maximum Quantity: 400 kg	Packaging instructions: 956
	Pass.:	Maximum Quantity: 400 kg	Packaging instructions: 956
	Special instructions:	A97, A158, A179	

14.7 Transport in bulk according to annex II of Marpol and the IBC Code

Not available.

14.8 Additional transport information

The product is classified according to the hazardous materials conventions.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance/mixture

Hazard symbol:



Risk phrases:

R22 Harmful if swallowed.
R41 Risk of serious damage to eyes.
R50 Very toxic to aquatic organisms.
R53 May cause long-term adverse effects in the aquatic environment.

Safety phrases:

S20/21 When using do not eat, drink or smoke.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).
S61 Avoid release to the environment. Refer to special instructions/safety data sheet.
S64 If swallowed, rinse mouth with water (only if the person is conscious).

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

CUPRI SULFAS PENTAHYDRICUS

EN

FORM-06-14-01 (V00)

Page 9/10

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



15.2 Chemical safety assessment

A chemical safety assessment of the product has not been carried out.

SECTION 16: OTHER INFORMATION

16.1 Changes since the previous version

Not applicable.

16.2 Abbreviations and acronyms used

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
EC (number):	European Community (number)
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Code for Dangerous Goods
IUPAC:	International Union of Pure and Applied Chemistry
PBT:	Persistent, Bioaccumulative and Toxic substance
RID:	Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT:	Specific Target Organ Toxicity
UN (number):	United Nations (number)
vPvB:	very Persistent and very Bioaccumulative

16.3 Key literature references/sources for data

European Chemicals Agency.

<https://www.echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database/>

16.4 Method of classification in case of mixture

Not applicable.

16.5 Relevant Hazard statements and/or precautionary statements

For information on hazard and/or precautionary statements refer to section 2 up to and including section 15.

16.6 Training advisement

Not available

16.7 Notice for user(s)

The information provided in this MSDS has been established in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015, amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council, on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94, as well as Council Directive 76/769/EEC and Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC of the Commission.

This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information has been compiled from sources considered to be dependable and is accurate to the best of the FSA NV's knowledge. However, the information is provided without any representation or warranty, expressed or implied

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

CUPRI SULFAS PENTAHYDRICUS

EN

FORM-06-14-01 (V00)

Page 10/10

Publication: 26/08/2022

Revision: 24/07/2024

Version: 01



regarding its accuracy or correctness. FSA NV cannot assume responsibility for adverse events which may occur in the use and/or misuse of this product and expressly disclaims liability for loss, damage and/or expense arising out of or in any way connected with the handling, storage, use and/or disposal of this product.

16.8 Department issuing MSDS

Quality Department

FAC SECUNDUM ARTEM NV

info@magis-pharma.be