

**SULFATE DE CUIVRE**



**SAFETY DATA SHEET**  
(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

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

**1.1. Product identifier**

CAS: 7758-99-8

Product name : SULFATE DE CUIVRE

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

Animal feed.

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

Registered company name : OLMIX GROUP.

Address : ZA du Haut du bois.56580.BREHAN.France.

Telephone : +33 (0)2 97 38 81 03. Fax : +33 (0)2 97 38 86 58.

Email : contact@olmix.com

<http://www.olmix.com>

**1.4. Emergency telephone number : +33 (0)1 45 42 59 59.**

Association/Organisation : INRS / ORFILA <http://www.centres-antipoison.net>.

**SECTION 2 : HAZARDS IDENTIFICATION**

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

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Acute oral toxicity, Category 4 (Acute Tox. 4, H302).

Skin irritation, Category 2 (Skin Irrit. 2, H315).

Serious eye damage, Category 1 (Eye Dam. 1, H318).

Hazardous to the aquatic environment - Acute hazard, Category 1 (Aquatic Acute 1, H400).

Hazardous to the aquatic environment - Chronic hazard, Category 1 (Aquatic Chronic 1, H410).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

**2.2. Label elements**

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Hazard pictograms :



GHS07



GHS05



GHS09

Signal Word :

DANGER

Product identifiers :

EC 231-847-6 COPPER SULPHATE (PENTAHYDRATE)

Hazard statements :

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements - Prevention :

P273 Avoid release to the environment.

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

Precautionary statements - 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.

Precautionary statements - Disposal :

P501 Dispose of contents/container at a disposal facility in accordance with local regulations.

**SULFATE DE CUIVRE****2.3. Other hazards**

In use, may form flammable/explosive dust-air mixture.

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC)  $\geq 0.1\%$  published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

**SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures****Composition :**

Identification	(EC) 1272/2008	Note	%
CAS: 7758-98-7 EC: 231-847-6 REACH: 01-2119520566-40 COPPER SULPHATE (PENTAHYDRATE)	GHS07, GHS05, GHS09 Dgr Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		50 $\leq$ x % < 97
CAS: 7631-86-9 EC: 231-545-4 REACH: 01-2119379499-16 SILICON DIOXIDE		[1]	2.5 $\leq$ x % < 3

(Full text of H-phrases: see section 16)

**Information on ingredients :**

[1] Substance for which maximum workplace exposure limits are available.

**SECTION 4 : FIRST AID MEASURES**

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

**4.1. Description of first aid measures****In the event of exposure by inhalation :**

If inhaled, move the patient into the fresh air and keep warm and at rest.

If breathing is irregular or has stopped, proceed with artificial respiration and seek medical attention.

**In the event of splashes or contact with eyes :**

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

Regardless of the initial state, refer the patient to an ophthalmologist and show him the label.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

**In the event of splashes or contact with skin :**

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

**In the event of swallowing :**

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water, administer activated medical charcoal and consult a doctor.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

No data available.

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**SECTION 5 : FIREFIGHTING MEASURES**

Non-flammable.

**5.1. Extinguishing media**

**Suitable methods of extinction**

In the event of a fire, use :

- sprayed water or water mist
- carbon dioxide (CO<sub>2</sub>)
- foam

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

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- sulphur dioxide (SO<sub>2</sub>)
- copper oxides

**5.3. Advice for firefighters**

Due to the toxicity of the gas emitted on thermal decomposition of the products, fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

**SECTION 6 : ACCIDENTAL RELEASE MEASURES**

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

Consult the safety measures listed under headings 7 and 8.

**For non first aid worker**

Avoid any contact with the skin and eyes.

**For first aid worker**

First aid workers will be equipped with suitable personal protective equipment (See section 8).

**6.2. Environmental precautions**

Prevent any material from entering drains or waterways.

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

Retrieve the product by mechanical means (sweeping/vacuuming) : do not generate dust.

**6.4. Reference to other sections**

No data available.

**SECTION 7 : HANDLING AND STORAGE**

Requirements relating to storage premises apply to all facilities where the mixture is handled.

**7.1. Precautions for safe handling**

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Emergency showers and eye wash stations will be required in facilities where the mixture is handled constantly.

**Fire prevention :**

Prevent access by unauthorised personnel.

**Recommended equipment and procedures :**

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid eye contact with this mixture at all times.

**Prohibited equipment and procedures :**

No smoking, eating or drinking in areas where the mixture is used.

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

No data available.

**Storage**

Keep away from food and drink, including those for animals.

**Packaging**

Always keep in packaging made of an identical material to the original.

**SULFATE DE CUIVRE****7.3. Specific end use(s)**

No data available.

**SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Occupational exposure limits :**

- Germany - AGW (BAuA - TRGS 900, 29/01/2018) :

CAS	VME :	VME :	Excess	Notes
7631-86-9		4 E mg/m <sup>3</sup>		

- Switzerland (SUVAPRO 2017) :

CAS	VME	VLE	Valeur plafond	Notations
7631-86-9				SSC

N/A

**Predicted no effect concentration (PNEC):**

COPPER SULPHATE (PENTAHYDRATE) (CAS: 7758-98-7)

Environmental compartment: Fresh water.  
PNEC : 7.8 µg/lEnvironmental compartment: Sea water.  
PNEC : 5.2 µg/lEnvironmental compartment: Fresh water sediment.  
PNEC : 87 mg/kgEnvironmental compartment: Marine sediment.  
PNEC : 676 mg/kg**8.2. Exposure controls****Personal protection measures, such as personal protective equipment**

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

**- Eye / face protection**

Avoid contact with eyes.

Before handling powders or dust emission, wear mask goggles in accordance with standard EN166.

Prescription glasses are not considered as protection.

Provide eyewash stations in facilities where the product is handled constantly.

**- Hand protection**

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Recommended properties :

- Impervious gloves in accordance with standard EN374

**- Body protection**

Avoid skin contact.

Wear suitable protective clothing.

These clothes shall be chosen to ensure there is no inflammation or irritation of the skin at the neck and wrist by contact with the powder

Suitable type of protective clothing :

Wear protective clothing against solid chemicals and particles suspended in the air (type 5) in accordance with standard EN13982-1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

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After contact with the product, all parts of the body that have been soiled must be washed.

**- Respiratory protection**

Avoid breathing dust.

Type of FFP mask :

Wear a disposable half-mask dust filter in accordance with standard EN149.

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**SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**

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

**General information :**

Physical state :	Powder or dust.
-	Hygroscopic.
Empirical formula :	CUSO4.5H2O
Colour:	Blue.
Odour:	Odourless.

**Important health, safety and environmental information**

pH :	Not relevant.
Boiling point/boiling range :	110 °C.
Flash point interval :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	2.286
Water solubility :	Soluble. 22 g / 100 ml
Melting point/melting range :	110 °C.

**9.2. Other information**

No data available.

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**SECTION 10 : STABILITY AND REACTIVITY**

**10.1. Reactivity**

No data available.

**10.2. Chemical stability**

This mixture is stable under the recommended handling and storage conditions in section 7.

**10.3. Possibility of hazardous reactions**

No data available.

**10.4. Conditions to avoid**

Avoid :

- formation of dusts

**10.5. Incompatible materials**

Keep away from :

- acids
- alkalis
- organic material
- metals

**10.6. Hazardous decomposition products**

The thermal decomposition may release/form :

- sulphur dioxide (SO2)
- copper oxides

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**SECTION 11 : TOXICOLOGICAL INFORMATION**

**11.1. Information on toxicological effects**

Harmful if swallowed.

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.

May have irreversible effects on the eyes, such as tissue damage in the eye, or serious physical decay of sight, which is not fully reversible by the end of observation at 21 days.

Serious eye damage is typified by the destruction of cornea, persistent corneal opacity and iritis.

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**11.1.1. Substances**

**Acute toxicity :**

COPPER SULPHATE (PENTAHYDRATE) (CAS: 7758-98-7)  
Oral route : 300 < LD50 <= 2000 mg/kg

**11.1.2. Mixture**

No toxicological data available for the mixture.

**Monograph(s) from the IARC (International Agency for Research on Cancer) :**

CAS 7631-86-9 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

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**SECTION 12 : ECOLOGICAL INFORMATION**

Very toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

**12.1. Toxicity**

**12.1.1. Substances**

COPPER SULPHATE (PENTAHYDRATE) (CAS: 7758-98-7)  
Fish toxicity : 0.1 < LC50 <= 1 mg/l  
Factor M = 1  
Duration of exposure : 96 h

**12.1.2. Mixtures**

No aquatic toxicity data available for the mixture.

**12.2. Persistence and degradability**

**12.2.1. Substances**

COPPER SULPHATE (PENTAHYDRATE) (CAS: 7758-98-7)  
Biodegradability : Non-rapidly degradable.

**12.3. Bioaccumulative potential**

No data available.

**12.4. Mobility in soil**

No data available.

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

No data available.

**12.6. Other adverse effects**

No data available.

**German regulations concerning the classification of hazards for water (WGK) :**

WGK 3 (VwVwS vom 27/07/2005, KBws) : Extremely hazardous for water.

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**SECTION 13 : DISPOSAL CONSIDERATIONS**

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

**13.1. Waste treatment methods**

Do not pour into drains or waterways.

**Waste :**

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

**Soiled packaging :**

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

**SULFATE DE CUIVRE****SECTION 14 : TRANSPORT INFORMATION**

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2017 - IMDG 2016 - ICAO/IATA 2017).

**14.1. UN number**

3077

**14.2. UN proper shipping name**

UN3077=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(copper sulphate (pentahydrate))

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

- Classification :



9

**14.4. Packing group**

III

**14.5. Environmental hazards**

- Environmentally hazardous material :

**14.6. Special precautions for user**

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	9	M7	III	9	90	5 kg	274 335 375 601	E1	3	-

Not subject to this regulation if Q ≤ 5 l / 5 kg (ADR 3.3.1 - DS 375)

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ
	9	-	III	5 kg	F-A,S-F	274 335 969	E1

Not subject to this regulation if Q ≤ 5 l / 5 kg (IMDG 3.3.1 - 2.10.2.7)

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	9	-	III	956	400 kg	956	400 kg	A97 A158 A179 A197	E1
	9	-	III	Y956	30 kg G	-	-	A97 A158 A179 A197	E1

Not subject to this regulation if Q ≤ 5 l / 5 kg (IATA 4.4.4 - DS A197)

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

No data available.

**SECTION 15 : REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****- Classification and labelling information included in section 2:**

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2017/776 (ATP 10)

**- Container information:**

No data available.

**- Particular provisions :**

No data available.

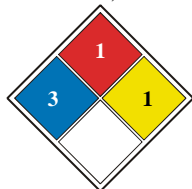
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**- German regulations concerning the classification of hazards for water (WGK) :**

WGK 3 (VwVwS vom 27/07/2005, KBws) : Extremely hazardous for water.

**- Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :**

NFPA 704, Labelling: Health=3 Inflammability=1 Instability/Reactivity=1 Specific Risk=none



**15.2. Chemical safety assessment**

No data available.

**SECTION 16 : OTHER INFORMATION**

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

**Wording of the phrases mentioned in section 3 :**

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**Abbreviations :**

PNEC : Predicted No-Effect Concentration

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

GHS05 : Corrosion

GHS07 : Exclamation mark

GHS09 : Environment

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.