

SAFETY DATA SHEET

Copper Sulphate Pentahydrate

Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Copper Sulphate Pentahydrate

CAS number 7758-99-8

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

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier LAPISCHEM KİMYA SAN. ve TİC. A.Ş.

Yeni Mh. Aliağa Sk. Bmerang Kartal

No:8 K:2 D:4 Pk:34880 Kartal- İstanbul - Türkiye + 90 216 599 07 53 + 90 216 599 07 54

info@lapischem.com www.lapischem.com

1.4. Emergency telephone number

National emergency telephone

number

Health Service: 112 Email: director.birmingham.unit@npis.org

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H302 Eye Dam. 1 - H318

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

2.2. Label elements

Hazard pictograms







Danger

Signal word
Hazard statements

H400 Very toxic to aquatic life.

H302 Harmful if swallowed. H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Revision date: 13/10/2021 Revision: 1 Supersedes date: 13/10/2021



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Precautionary statements P264 Wash contaminated 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/ protective clothing/ eye protection/ face protection. P301+P312 IF SWALLOWED: Call a POISON CENTRE/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.

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

Contains Copper sulphate pentahydrate

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Copper sulphate pentahydrate

100%

CAS number: 7758-99-8 EC number: 616-477-9

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm

and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure

breathing can take place.

Ingestion Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to

drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway.

Loosen tight clothing such as collar, tie or belt.

Skin contact Rinse with water.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart.

Continue to rinse for at least 10 minutes.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated

clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be

dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

General information See Section 11 for additional information on health hazards. The severity of the symptoms described will

vary dependent on the concentration and the length of exposure.

Inhalation No specific symptoms known.

Ingestion May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.



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Skin contact Prolonged contact may cause dryness of the skin.

Eye contact Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse

watering of the eyes. Redness.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water

fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards This product is toxic.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Toxic gases or

vapours.

5.3. Advice for firefighters

Protective actions during

firefighting

Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for

firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and

gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material.



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6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic

environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers,

waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately

and dispose of waste safely. Provide adequate ventilation. Approach the spillage from upwind. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Neutralise with alkali. Caution. May generate heat. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance

with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See

Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of

this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective

equipment. Do not reuse empty containers.

Advice on general occupational

hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work

shift and before eating, smoking and using the toilet. Change work clothing daily before leaving

workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in accordance with local regulations. Store away from the following materials: Alkalis. Keep only in

the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the

event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class Toxic storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

There is no current information on occupational exposure limit values of the product and its components.



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8.2. Exposure controls

Protective equipment







Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Store in a demarcated bunded area to prevent release to drains and/or watercourses.



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Solid.

Colour Blue.

Odour No characteristic odour.

Odour threshold Inconclusive data.

pH (diluted solution): 50 g/l 20 °C 3,5 - 4,5

Melting point 650°C

Initial boiling point and range No specific test data are available.

Flash point No information available.

Evaporation rate No information required.

Evaporation factor Inconclusive data.

Flammability (solid, gas)

Not relevant.

Upper/lower flammability or

explosive limits

Not relevant.

Relative density 2,284 gr/cm3
Solubility(ies) Soluble in water.

Viscosity No information required.

Explosive properties No specific test data are available.

9.2. Other information

Other information No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed

storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid Alkalis. Amines.

10.6. Hazardous decomposition products



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Hazardous decomposition products

Does not decompose when used and stored as recommended. Thermal decomposition or combustion

products may include the following substances: Toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD50) Acute Tox. 4 - H302 Harmful if swallowed.

ATE oral (mg/kg) 482 0

Acute toxicity - dermal

Notes (dermal LD50) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC50) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Eye Dam. 1 - H318 Causes serious eye damage.

Respiratory sensitisation

Based on available data the classification criteria are not met. Respiratory sensitisation

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Based on available data the classification criteria are not met. Genotoxicity - in vitro

Carcinogenicity

Based on available data the classification criteria are not met. Carcinogenicity

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Based on available data the classification criteria are not met. Reproductive toxicity - fertility Based on available data the classification criteria are not met.

development

Reproductive toxicity -

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Not relevant. Solid.

General information The severity of the symptoms described will vary dependent on the concentration and the length of

exposure.



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Inhalation No specific symptoms known.

Ingestion May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse

watering of the eyes. Redness.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target organs No specific target organs known.

Toxicological information on ingredients.

Copper sulphate pentahydrate

Acute toxicity - oral

Acute toxicity oral (LD50

mg/kg)

482.0

Species Rat

ATE oral (mg/kg) 482.0

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with

long lasting effects.

Ecological information on ingredients.

Copper sulphate pentahydrate

Acute aquatic toxicity

LE(C)₅₀ $0.01 < L(E)C50 \le 0.1$

M factor (Acute) 10

Acute toxicity - fish LC₅₀, 96 hour: 38.4 μg/l, Pimephales promelas (Fat-head Minnow)

LC₅₀, 96 hour: 1 - 2,5 mg/l,

Acute toxicity - aquatic

invertebrates

EC₅₀, 48 hour: 0,024 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic) 10

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility The product is water-soluble and may spread in water systems.



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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB

This substance is not classified as PBT or vPvB according to current EU criteria.

assessment

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products

wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out.

Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor.

Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be

considered when recycling is not feasible.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using

the data shown in this section.

14.1. UN number

UN No. (ADR/RID) 3077

UN No. (IMDG) 3077

UN No. (ICAO) 3077

UN No. (ADN) 3077

14.2. UN proper shipping name

 $Proper\ shipping\ name\ (ADR/RID)\ ENVIRONMENTALLY\ HAZARDOUS\ SUBSTANCE,\ SOLID,\ N.O.S.\ (CONTAiNS\ Copper\ sulphate)$

pentahydrate)

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAİNS Copper sulphate

pentahydrate)

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAİNS Copper sulphate

pentahydrate)

Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAİNS Copper sulphate

pentahydrate)

14.3. Transport hazard class(es)

ADR/RID class 9

ADR/RID classification code M7

ADR/RID label 9



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IMDG class 9

ICAO class/division 9

ADN class 9

Transport labels



14.4. Packing group

ADR/RID packing group III
IMDG packing group III
ICAO packing group III
ADN packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS F-A, S-F

ADR transport category 3
Emergency Action Code 2Z

5 ,

Hazard Identification Number (ADR/RID)

90

Tunnel restriction code (-)

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

Transport in bulk according to Annex II of MARPOL 73/78 and

Not applicable.

the IBC Code

SECTION 15: Regulatory information

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

National regulations Health and Safety at Work etc. Act 1974 (as amended).

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI

2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006

concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as

amended).

Commission Regulation (EU) No 453/2010 of 20 May 2010.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on

classification, labelling and packaging of substances and mixtures (as amended).

Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Classification procedures

according to Regulation (EC)

1272/2008

Acute Tox. 4 - H302: Eye Dam. 1 - H318: : Calculation method. Aquatic Acute 1 - H400: Aquatic Chronic

1 - H410: : Calculation method.

Training advice Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Issued by Chemical Assessment Specialist: Bora Şen

Effective Date: November 25, 2025

Certificate No & Date: TÜV / 11.49.03 & 2 November 2020

Mobil: +90 533 622 57 99 Email: bora@vegatmgd.com

Revision date 13/10/2021

Revision

Supersedes date 13/10/2021

SDS number 6056

SDS status Approved.

Hazard statements in full H302 Harmful if swallowed.

H318 Causes serious eye damage. H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.