

1.) Identification of the substance/mixture and of the company/undertaking

Trade name

Copper sulfate pentahydrate

Product identifier

Substance name copper sulphate, 5-hydrate

REACH registration no. 01-21195-20566-40-0014

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

Relevant identified uses of the substance or mixture

Feed additive, technical use; water treatment(algaecide)

Details of the supplier of the safety data sheet

Address

Timna Copper Mine Ltd

DOAR NA

EILOT ISRAEL 88000

Telephone no. 972-8-6374171

Fax no. 972-8-6374174

Information provided by / telephone

972-8-6374171

Emergency telephone

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

Advice on Safety Data Sheet

timna@timna.co.il

2.) Hazards identification

Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Acute Tox. 4*; H302

Aquatic Acute 1; H400

Aquatic Chronic 1; H410

Eye Irrit. 2; H319

Skin Irrit. 2; H315

Classification in accordance with Directive 67/548/EEC or 1999/45/EC

N; R50/53

Xi; R36/38

Xn; R22

Classification information

*detailed explanation pls. refer to CLP regulation No. 1272/2008, annex VI, 1.2 .

Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

Product identifier

029-004-00-0 (copper sulphate, 5-hydrate)

Hazard pictograms



GHS07



GHS09

Signal word

Warning

Hazard statements

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

Precautionary statements

P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P501	Dispose of contents/container to hazardous or special waste collection point.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P273	Avoid release to the environment.
P391	Collect spillage.

3.) Composition / information on ingredients

Chemical characterization

copper sulphate, 5-hydrate

Substance / product identification

Index no.	029-004-00-0
CAS no.	7758-99-8
EC no.	231-847-6
Molecular weight	249,68
Formula	Cu SO ₄ x 5 H ₂ O

4.) First aid measures

General information

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air. Keep breathing passages free. Seek medical advice immediately.

After skin contact

Wash immediately with plenty of water for several minutes.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.).

After ingestion

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. If individual is drowsy or unconscious, place in recovery position (on left side, with head down). Do not induce vomiting. Summon a doctor immediately.

Advice to doctor

Symptoms

Shortness of breath; muscular pain; Coughing

5.) Fire-fighting measures

Suitable extinguishing media

Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

None known

Special protective equipment for fire-fighters

Use self-contained breathing apparatus. Wear protective clothing.

Other information

Cool endangered containers with water spray jet.

6.) **Accidental release measures**

Personal precautions

Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Avoid dust formation. Keep away sources of ignition. Ensure adequate ventilation.

Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

Methods for cleaning up/taking up

Scoop-up mechanically. Send in suitable containers for recovery or disposal.

7.) **Handling and storage**

Handling**Advice on safe handling**

Provide good ventilation of working area (local exhaust ventilation, if necessary). If workplace exposure limits are exceeded, respiratory protection approved for this particular job must be worn. Avoid the formation and deposition of dust. Avoid contact with skin and eyes.

Advice on protection against fire and explosion

Keep away from sources of heat and ignition. Avoid formation of dust.

Storage**Requirements for storage rooms and vessels**

Always keep in containers of same material as the original one. Store product in closed containers.
Inappropriate material iron; steel

Advice on storage assembly

Bases; Hydrazine; nitromethane; Protect against humidity

Further information on storage conditions

Keep container tightly closed in a cool, well-ventilated place. Protect from heat and direct sunlight.

8.) **Exposure controls / personal protection**

Exposure limit values

N O N E

Exposure controls**Personal protective equipment****Respiratory protection**

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective glove should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Eye protection

Safety glasses (EN 166)

Skin protection

Normal chemical work clothing.

General protective and hygiene measures

Avoid contact with eyes and skin. Do not inhale dust. At work do not eat, drink, smoke or take drugs. Keep away from foodstuffs and beverages. Remove soiled or soaked clothing immediately. Store work clothing separately.

9.) Physical and chemical properties

General information

Form	crystalline
Colour	blue
Odour	odourless

Important health, safety and environmental information

Changes in physical state

Type	Melting point	
Remarks	not determined	
Type	Decomposition temperature	
Value	> 150	° C

Flash point

Remarks	not applicable
---------	----------------

Density

Value	2,286		g/cm ³
Reference temperature	15,6	°C	

Solubility in water

Value	317		g/l
Reference temperature	20	°C	

pH value

Value	4	
Concentration	0,2	mol/l

10.) Stability and reactivity

Conditions to avoid

air humidity; Stable under recommended storage and handling conditions(See section 7).

Materials to avoid

Bases; Hydrazine; Nitromethane

Hazardous decomposition products

Sulphurous oxides (SOx); Copper oxides; hydrogen sulphide (H₂S)

Thermal decomposition

Remarks	No decomposition if used as prescribed.
---------	---

11.) Toxicological information

Acute toxicity

Acute oral toxicity

LD50	300	mg/kg
Species	rat	

Irritant/corrosive effects

Irritant effect on skin

Evaluation	irritant
------------	----------

Irritant effect on eyes

Evaluation	irritant
------------	----------

Experience in practice

Inhalation may lead to irritation of the respiratory tract.

12.) Ecological information

Ecotoxicity

Fish toxicity

LC50 < 1 mg/l
Duration of exposure 96 h

Bioaccumulative potential

Remarks Potentially bioaccumulative

Other information

Do not discharge into the drains or waters and do not store on public depositories.

13.) Disposal considerations

Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.

14.) Transport information

Transport ADR/RID/ADN

Class 9
Classification code M7
Packing group III
Hazard identification no. 90
UN number 3077
Technical name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Danger releasing substance copper sulphate, 5-hydrate
Tunnel restriction code E
Label 9
Environmentally hazardous substance mark Symbol "fish and tree"

Transport IMDG

Class 9
Packing group III
UN number 3077
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Danger releasing substance copper sulphate, 5-hydrate
EmS F-A+S-F
Label 9
Marine pollutant mark Symbol "fish and tree"

Transport ICAO/IATA

Class 9
Packing group III
UN number 3077
Proper shipping name Environmentally hazardous substance, solid, n.o.s.
Danger releasing substance copper sulphate, 5-hydrate
Label 9
Environmentally hazardous substance mark Symbol "fish and tree"

15.) Regulatory information

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

EU regulations

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks

Annex I, part 2, category 9 a

16.) Other information

Sources of key data used to compile the data sheet:

EC Directive 67/548/EC resp. 99/45/EC as amended in each case.

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EC

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Relevant R-phrases (chapter 3):

Department issuing safety data sheet

UMCO Umwelt Consult GmbH

Georg-Wilhelm-Str. 183 b, D-21107 Hamburg

Tel.: +49 40 / 41 92 13 00 Fax: +49 40 / 41 92 13 57 e-mail: umco@umco.de

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.