

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

CuSO₄ - click chemistry grade

(Copper(II)-Sulphate)

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name: CuSO₄ - click chemistry grade
Catalog Number: CLK-MI004-50
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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

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

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn Harmful, R22
Xi Irritant, R36/38
N Dangerous for the environment, R50/53

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008



Pictogram

Signal word Warning

Hazard statement(s)

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

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H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273 Avoid release to the environment.

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 to an approved waste disposal plant.

Supplemental Hazard State- none
ments

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:

Formula: CuSO₄

Molecular Weight: 159.61 g/mol

CAS-No.: 7758-98-7

EC number: 231-847-6

Classification: -

Concentration:

4. FIRST AID MEASURES

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

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Personal precautions

Avoid dust formation.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: store at ambient temperature

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

For prolonged or repeated contact use protective gloves.

Eye protection

Safety glasses

Hygiene measures

General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form: solid

Safety data

pH:
Melting point: 200 °C
Boiling point: no data available
Flash point: no data available

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Ignition temperature: no data available
Lower explosion limit: no data available
Upper explosion limit: no data available
Water solubility: no data available

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO_x), Oxides of phosphorus, Lithium oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 482 mg/kg
LD50 Intraperitoneal - rat - 20 mg/kg
LD50 Subcutaneous - rat - 43 mg/kg
LD50 Intravenous - rat - 48,9 mg/kg

Irritation and corrosion

no data available

Sensitisation

Respiratory or skin sensitisation Germ cell mutagenicity

Liver	DNA damage
DNA	damage

Carcinogenicity

Carcinogenicity - Chicken - Parenteral

Tumorigenic: E equivocal tumorigenic agent by RTECS criteria. Endocrine: Tumors.

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.

Reproductive toxicity

Reproductive toxicity - mouse - Intravenous

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Developmental Toxicity - mouse - Intravenous

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

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Specific Developmental Abnormalities: Central nervous system.

Specific developmental Abnormalities: Cardiovascular (circulatory) system.

Signs and Symptoms of Exposure

Dermatitis

Potential Health Effects

Inhalation:	May be harmful if inhaled. May cause respiratory tract irritation.
Skin:	May be harmful if absorbed through skin. May cause skin irritation.
Eyes:	May cause eye irritation.
Ingestion:	May be harmful if swallowed.
Target Organs:	Liver, Kidney

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish mortality LC50 - other fish - 1 - 2,5 mg/l - 96,0 h

Toxicity to daphnia and other aquatic invertebrates Immobilization EC50 - Daphnia magna (Water flea) - 0,024 mg/l - 48 h

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

3077

14.2 UN proper shipping name

ADR/RID: UN 3077 Umweltgefährdender Stoff, fest, n.a.g. (Kupfer(II)sulfate)

IMDG: UN 3077 Environmental hazardous substance, solid, n.o.s. (Copper(II) sulfate)

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IATA: UN 3077 Environmental hazardous substance, solid, n.o.s. (Copper(II) sulfate)

14.3 Transport hazard class(es)

ADR/RID/IMDG/IATA: 9

14.4 Packaging group

ADR/RID/IMDG/IATA: III

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: yes

14.6 Special precautions for user

see chapter 6 - 8

15. REGULATORY INFORMATION

Labelling according to EC Directives

The product does not need to be labelled in accordance with EC directives or respective national laws.

16. OTHER INFORMATION

Further information

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