

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

1.1. GHS product identifier

Product form	: Substance
Trade name	: Copper sulphate
EC-No.	: 231-847-6
EC Index-No.	: 029-004-00-0
CAS-No.	: 7758-98-7
Formula	: CuO4S

1.2. Other means of identification

Other means of identification	: Cupric Sulphate Anhydrous, Cupic Sulfate, Copper monosulfate
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1.3. Recommended use of the chemical and restrictions on use

Recommended use	: Laboratory chemicals
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1.4. Supplier's details

Distributor

Rolfes Chemicals (Pty) Ltd.
Cnr Brammer and Strachan Street,
P.O. Box P.O. Box 14075, Wadeville
1422 Germiston – South Africa Gauteng
T 011 873 0157

1.5. Emergency phone number

Emergency number	: 086 111 4753
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SECTION 2: Hazard identification

2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 3	H311
Full text of H-statements: see section 16	
Adverse physicochemical, human health and environmental effects	: Toxic in contact with skin, Harmful if swallowed.

2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)



Signal word (GHS-ZA)

: Danger

Hazard statements (GHS ZA)

: H302 - Harmful if swallowed
H311 - Toxic in contact with skin

Precautionary statements (GHS ZA)

: P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear eye protection, protective clothing, protective gloves.
P301+P317 - IF SWALLOWED: Get medical help.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P316 - Get emergency medical help immediately.
P321 - Specific treatment (see supplemental first aid instruction on this label).

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P-statements for label (GHS-ZA)

P330 - Rinse mouth.
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.
P405 - Store locked up.
P501 - Dispose of contents and container to an approved waste disposal plant.
: P264 - Wash hands, forearms and face thoroughly after handling.; P270 - Do not eat, drink or smoke when using this product.; P280 - Wear eye protection, protective clothing, protective gloves.; P301+P317 - IF SWALLOWED: Get medical help.; P302+P352 - IF ON SKIN: Wash with plenty of soap and water; P316 - Get emergency medical help immediately.; P321 - Specific treatment (see supplemental first aid instruction on this label).; P330 - Rinse mouth.; P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.; P405 - Store locked up.; P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards which do not result in classification or are not covered by the GHS

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : Copper sulphate
CAS-No. : 7758-98-7
EC-No. : 231-847-6
EC Index-No. : 029-004-00-0
Product identifiers: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
Copper sulphate	CAS-No.: 7758-98-7	≤ 98	Not classified

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off immediately all contaminated clothing.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effect, acute and delayed

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after excessive inhalation exposure. Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Store locked up.
Packaging materials : Store always product in container of same material as original container.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Solid
Appearance : Powder.
Molecular mass : 159.6 g/mol
Colour : Grey
Odour : odourless
Odour threshold : No data available
pH : No data available
pH solution : No data available
Relative evaporation rate (butylacetate=1) : No data available
Relative evaporation rate (ether=1) : No data available
Melting point : 3.5 – 4.5 °C
Freezing point : Not applicable
Boiling point : 200 °C
Flash point : Not applicable
Auto-ignition temperature : Not applicable
Decomposition temperature : No data available
Flammability : Non flammable.
Vapour pressure : No data available
Vapour pressure at 50°C : No data available
Relative vapour density at 20°C : No data available
Relative density : No data available
Relative density of saturated gas/air mixture : No data available
Density : 3.6
Relative gas density : No data available
Solubility : No data available
Partition coefficient n-octanol/water (Log Pow) : No data available
Partition coefficient n-octanol/water (Log Kow) : No data available
Viscosity, kinematic : Not applicable
Viscosity, dynamic : No data available
Explosive properties : No data available

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Oxidising properties	: No data available
Explosive limits	: Not applicable
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Physical state	: Solid
Appearance	: Powder.

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical Stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Toxic in contact with skin.
Acute toxicity (inhalation)	: Not classified

Copper sulphate (7758-98-7)	
LD50 oral rat	481 mg/kg
LD50 dermal rat	1000 mg/kg

Copper sulphate (7758-98-7)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity), Guideline: other:

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: CAUSES EYE IRRITATION
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Copper sulphate (7758-98-7)

Viscosity, kinematic	Not applicable
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

Copper sulphate (7758-98-7)

Persistence and degradability	Not rapidly degradable
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Copper sulphate (7758-98-7)

Persistence and degradability	
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12.3. Bioaccumulative potential

Copper sulphate (7758-98-7)

Bioaccumulative potential	No additional information available
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12.4. Mobility in soil

Copper sulphate (7758-98-7)

Mobility in soil	No additional information available
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12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal Considerations

13.1. Disposal methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

SECTION 14: Transport information




In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
3077	3077	3077

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SANS	IMDG	IATA
14.2. UN Proper Shipping Name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	Environmentally hazardous substance, solid, n.o.s.
14.3. Transport hazard class(es)		
9	9	9
		
14.4. Packing group, if applicable		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

SANS

Special provisions (SANS)	: 179, 274, 331, 335
Limited quantities (SANS)	: 5 kg
Limited quantities (SANS)	: 5 kg
Packagings, large packagings and IBCs Packing instructions (SANS)	: P002, IBC08, LP02
Packagings, large packagings and IBCs Special packing instructions (SANS)	: PP12, B3
Portable tank and bulk containers instructions (SANS)	: T1, BK2
Portable tank and bulk container special provisions (SANS)	: TP33

IMDG

Special provisions (IMDG)	: 274, 335, 966, 967, 969
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP02, P002
Special packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: BK1, BK2, BK3, T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
Special provisions (IATA)	: A97, A158, A179, A197, A215
ERG code (IATA)	: 9L

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14.7. Transport in bulk according to IMO instructions

Not applicable

SECTION 15: Regulatory information

15.1. National regulations

15.1.1. OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

Prohibited Hazardous Chemical Agents

Not regulated

15.2. Safety, health, and environmental national regulations specific for the product

No additional information available

SECTION 16: Other information

Issue date : 09/04/2010
Revision date : 18/10/2024
Supersedes : 17/10/2024

Full text of H-statements:

H302	Harmful if swallowed
H311	Toxic in contact with skin

Safety Data Sheet (SDS), South Africa (HCA)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.