



SAFETY DATA SHEET

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Catalogue No. : C 13829
Product Name : COPPER SULPHATE ANHYDROUS

Manufacturer/supplier identification

Company : NICE Chemicals (P) Ltd., Cochin, India
Tel - 0484 2800212, 2802755

Contact for information : Tel. No.- 0484 2802536 Fax : 0484 2802483

Emergency Telephone No. : 0484 2801583 Tele fax No. : 0484 2802483

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Copper Mono sulphate Anhydrous, Copper Viriol Anhydrous
CAS-No : 7758-98-7
Ec-Index No. : 029-004-00-0
Molar Mass : 159.61
EC-No. : 231-847-6
Molecular Formula : CuSO_4

3. HAZARDS IDENTIFICATION : Harmful if swallowed. Irritating to eyes and skin.

4. FIRST AID MEASURES

After inhalation : fresh air.

After skin contact : Wash off with plenty of water. Remove contaminated clothing.

After eye contact : Rinse out with plenty of water with the eyelid held wide open.

After swallowing : Make victim drink plenty of water, induce vomiting.

Summon doctor if feeling unwell.



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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : In adaption to materials stored in the immediate neighbourhood.

Special risks : Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.

The following may develop in event of fire : Sulphur Oxides

Special protective equipment for fire fighting : Do not stay in dangerous zone
without self-contained breathing apparatus.

Other information : Non-combustible.

6. ACCIDENTAL RELEASE MEASURES

Person-related precautionary measures : Avoid generation of dusts; do not inhale dusts. Avoid substance contact.

Procedures for cleaning/absorption : Take up dry. Forward for disposal.
Clean up affected area.

Environmental-protection measures : Do not allow to enter sewerage system.

7. HANDLING AND STORAGE

Handling : No further requirements.

Storage : Tightly closed. Dry.

Storage temperature : No restrictions.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection : Required when vapours/ aerosols are generated.

Eye Protection : Required

Hand Protection : Required

Protective clothing should be selected specifically for the working place, depending on concentration & quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Industrial hygiene : Change contaminated clothing. Wash hands after working with substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Solid
Colour	:	White to grey
Odour	:	Odourless
pH value at 50 gm/lt. H ₂ O (20° C)	:	3.5 - 4.5
Melting temperature	:	Not available
Boiling temperature	:	Not available
Ignition temperature	:	Not available
Flash Point	:	Not available
Explosion limit lower	:	Not available
upper	:	Not available
Relative vapour density	:	Not available
Density (20° C)	:	3.61 gm/cm ³
Bulk Density	:	~800 kg/m ³
Solubility in Water (20° C)	:	203 gm/lt.
Thermal decomposition	:	~650° C



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10. STABILITY & REACTIVITY

Conditions to be avoided : No information available

Substances to be avoided : Hydroxylamine

Hazardous decomposition products : In the event of fire : Sulphur Oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity : LC₅₀ (oral, rat) : 300 mg/kg
LD₅₀ (oral, human) : 50 mg/kg.

Further toxicological information :

After inhalation : Irritations of the mucous membranes, coughing, dyspnoea. Metal fume fever after inhalation of large quantities.

After skin contact : Irritant effect.

After eye contact : Irritant effect. Risk of corneal clouding.

When dusts are generated : conjunctivities.

After swallowing : gastric pain, vomiting, diarrhoea, drop in blood pressure, tachycardia, collapse, acidosis.

After a latency period : Death.

Further data : Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

12. ECOLOGICAL INFORMATION

Ecotoxic effects : Biological effects : Toxic for aquatic organisms. High aquatic toxicity :

Fungicidal effect. Fish toxicity : *L. idus* LC₅₀ : 0.8 mg/l. *S. gairdnerii* LC₅₀ : 0.1 - 2.5

mg/l./96 h; *Daphnia* toxicity: *Daphnia magna* EC₅₀ ; 0.024 mg/l/48 h; Algal toxicity :

Sc. quadricauda EC₅₀ : 0.1 mg/l/4 h



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Further ecologic data : The following applies to copper compounds: biological effects: toxic for aquatic organisms: copper ions toxic for fish, algae, protozoa and bacteria at concentrations below 1mg/lt. Fish: C.auratus toxic 0,01mg/lt.;mussels : 0.55 mg/lt. lethal in 12 h; oysters : 0,1 mg/lt. toxic
Do not allow to enter waters, waste water or soil!

13. DISPOSAL METHOD

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws & regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. TRANSPORT INFORMATION

Transport over land

ADR/RID and GGVS/GGVE : GGVS/GGVE class : 6.1 Number and letter : 65c

ADR/RID class : 6.1 Number and letter : 65c

Name of material : COPPER SULPHATE

Sea Transport IMDG : IMDG class : 6.1 UN No. : 3288 Packing group : III

Ems : 6.1-04 MFAG : 4.2



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Correct Technical Name : COPPER SULPHATE

Air Transport ICAO-TI

and IATA-DGR : ICAO/IATA class : 6.1 UN No. : 3288

Packaging group : III

Correct Technical Name : COPPER SULPHATE

15. REGULATORY INFORMATION

Labeling according to EC Directives

Symbol : ---

R-phrases : ---

S-phrases : ---

Water pollution class : 1 (slightly polluting substance)
(own classification)

16. OTHER INFORMATION

Reason for alteration

Specific control parameter

Change in the chapter on toxicology

Change in the chapter on ecology.

The information contained herein is based on the present state of our knowledge.

It characterises the product with regard to the appropriate safety precautions. It

does not represent a guarantee of the properties of the product.
