

SAFETY DATA SHEET COPPER SULPHATE

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Revision 0
Revision date March 2010

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product code 1768
Product name COPPER SULPHATE
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2 HAZARDS IDENTIFICATION.

Main hazards Harmful if swallowed. Irritating to eyes and skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3 . COMPOSITION / INFORMATION ON INGREDIENTS.

Hazardous ingredients pentahydrate CAS 7758-99-8 and anhydrous CAS 7758-98-7.

	Conc.	CAS	EINECS	Symbols/Risk phrases
Copper sulphate	90 - 100%	7758-98-7	231-847-6	Xn; R22 Xi; R36/38 N; R50/53

4. FIRST AID MEASURES

Eye contact May cause irritation to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

Skin contact May cause irritation to skin. May cause dermatitis. Remove contaminated clothing. Wash off immediately with plenty of soap and water. Seek medical attention if irritation or symptoms persist.

Ingestion Harmful if swallowed. Ingestion may cause nausea and vomiting. Ingestion is irritating to the respiratory tract and may cause damage to the central nervous system. Drink 1 to 2 glasses of water. DO NOT INDUCE VOMITING. If swallowed, seek medical advice immediately and show this container or label.

Inhalation Harmful by inhalation. Inhalation may cause nausea and vomiting. May cause dizziness and headache. Move the exposed person to fresh air. Seek medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing media Use as appropriate: carbon dioxide (CO2). Water spray, dry chemical, foam.

Fire hazards Burning produces irritating, toxic and obnoxious fumes. Not combustible.

Protective equipment Self-contained breathing apparatus. Wear protective clothing.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation of the working area. Wear suitable protective equipment. Avoid raising dust.
Environmental precautions	Do not allow product to enter drains. Prevent further spillage if safe.
Clean up methods	Avoid raising dust. Clean spillage area thoroughly with plenty of water. Sweep up. Transfer to suitable, labelled containers for disposal.

7. HANDLING AND STORAGE

Handling	Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and dispensing. Avoid formation of dust. Wear suitable protective equipment.
Storage	Keep in a cool, dry, well ventilated area. Keep containers tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits	copper dusts and mists (as CU).
Engineering measures	Ensure adequate ventilation of the working area.
Occupational exposure controls	COSHH - Due consideration should be given to your control systems and the need for assessment.
Protective equipment	Wear chemical protective clothing. Protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Self-contained breathing apparatus.
Hand protection	Chemical resistant gloves (PVC)
Eye protection	Approved safety goggles.
Protective clothing.	Protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Description	Solid.
Colour	Blue.
Odour	Odourless.
pH	3 - 4
Boiling point	29 °C
Relative density	1.2 g/cm ³ (bulk)
Water solubility	soluble in water. 317 g/l @ 20 C. Soluble in organic solvents.
Melting point	560°C

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to avoid	Direct sunlight. Heat. Moisture.
Materials to avoid	Humidity. Reducing agents. Acetylene, hydroxylamine, magnesium, hydrazine and nitromethane.
Hazardous decomposition products	Burning produces irritating, toxic and obnoxious fumes. Sulphur oxides.

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11. TOXICOLOGICAL INFORMATION

Toxicological information

Copper sulphate

Oral Rat LD50 = 100

Eye contact	Burning, redness. Causes severe inflammation and may damage the cornea. May cause irritation to eyes.
Skin contact	Burning, redness. Eczema. Irritating to skin.
Ingestion	Abdominal pain, nausea, vomiting. May cause irritation to mucous membranes.
Inhalation	Burning, redness. Coughing, difficulty in breathing.
Repeated or prolonged exposure	Possible systemic effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fish LC50/96h = 0.1 - 2.5 mg/l (anhydrous). Daphnia EC50/48h = 0.024 mg/l (anhydrous). Green Algae EC50/48h = 0.1 mg/l (anhydrous).
Further information	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. WGK 2

13. DISPOSAL CONSIDERATIONS

General information	Dispose of in compliance with all local and national regulations.
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14. TRANSPORT INFORMATION

ADR/RID

UN	3077	Packing group	III
Class	9	Hazard ID	90
Proper Shipping	ENVIRONMENTALLY		
Name	HAZARDOUS SUBSTANCE, SOLID, N.O.S., (Copper Sulphate).		

IMDG

UN	3077	Packing group	III
Class	9	Marine pollutant	.
EmS Code	F-A S-F		


IATA

UN	3077	Packing group	III
Class	9	Subsidiary risk	-
Packing Instruction	911	Maximum quantity	400 kg
	(Cargo)		
Packing Instruction	911	Maximum quantity	400 kg
	(Passenger)		

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15. REGULATORY INFORMATION

Labelling	The product is classified in accordance with 67/548/EEC.
Symbols	Xn - Harmful; N - Dangerous for the environment
	
Risk phrases	<p>R22 - Harmful if swallowed.</p> <p>R36/38 - Irritating to eyes and skin.</p> <p>R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p>
Safety phrases	<p>S22 - Do not breathe dust.</p> <p>S60 - This material and its container must be disposed of as hazardous waste.</p> <p>S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.</p>

16. OTHER INFORMATION

Text of risk phrases in Section 3.	<p>R22 - Harmful if swallowed.</p> <p>R36/38 - Irritating to eyes and skin.</p> <p>R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p>
General information	<p>The following information is provided to conform with article 13 of the EC Directive on Packaging and Packaging Waste 94/62/EC:</p> <ul style="list-style-type: none"> * Wherever possible we use returnable packaging and pallets. Details of these are on our Sales Contracts * For any non-returnable packaging the cost of disposal is at your expense, but we do have a list of reprocessors available * In most cases, but not all, we are able to supply products in returnable packaging but the additional cost of this will be for the customers expense. Please ask for details with your specific requirements * Any products supplied in returnable packaging is clearly marked to this effect.
Further information	<p>The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. 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 other process.</p>