


MSDS	Material Safety Data Sheet
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COPPER(II) CHLORIDE DIHYDRATE

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

PRODUCT NAME	Copper(II) chloride dihydrate
RECOMMENDED USE & RESTRICTIONS ON USE	Research use only
INFORMATION OF MANUFACTURER/IMPORTER/SUPPLIER	
COMPANY	Eurolab [®]
ADDRESS	54-58 High Street Edgware, Middlesex, HA8 7EJ, UK
EMERGENCY PHONE	
E-MAIL ADDRESS	

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION	Acute toxicity(Oral) : Category 3 Skin corrosion/irritation : Category 2 Serious eye damage/Eye irritation : Category 2 Skin sensitization : Category 1 Reproductive toxicity : Category 2 Acute aquatic toxicity : Category 1 Chronic aquatic toxicity : Category 1	
LABEL ELEMENTS	PICTOGRAM	
	HAZARD SYMBOL	DANGER
	HAZARD STATEMENTS	Toxic if swallowed. Causes skin irritation. May cause an allergic skin reaction Causes serious eye irritation. Suspected of damaging fertility or the unborn child Very toxic to aquatic life

	<p>PRECAUTIONARY STATEMENTS</p>	<p>Very toxic to aquatic life with long lasting effects</p> <p>Obtain special instructions before use.</p> <p>Do not handle until all safety precautions have been read and understood.</p> <p>Avoid breathing dust/fume/gas/mist/vapours/spray.</p> <p>Wash thoroughly after handling.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Contaminated work clothing should not be allowed out of the workplace.</p> <p>Avoid release to the environment.</p> <p>Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Use personal protective equipment as required.</p> <p>IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>IF ON SKIN: Gently wash with plenty of soap and water.</p> <p>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>IF exposed or concerned: Get medical advice/attention. Specific treatment (see ... on this label).</p> <p>Rinse mouth.</p> <p>If skin irritation occurs: Get medical advice/attention.</p> <p>If skin irritation or rash occurs: Get medical advice/attention.</p> <p>If eye irritation persists: Get medical advice/attention.</p> <p>Take off contaminated clothing and wash before reuse.</p> <p>Wash contaminated clothing before reuse.</p> <p>Collect spillage.</p> <p>Store locked up.</p> <p>Dispose of this material and its container in accordance with local/regional/national/international regulation.</p>
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OTHER HAZARDS (NFPA)	Health	3
	Fire	0
	Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY	SYNONYMS	CAS NUMBER	ASSAY
Copper(II) chloride dihydrate	Cupric chloride dihydrate	10125-13-0	Above 97%(EP)

4. FIRST AID MEASURES

GENERAL ADVICE	Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.
IN CASE OF EYE CONTACT	Remove any contact lenses at once. Flush eyes well with flooding amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. Transport to a hospital immediately.
IN CASE OF SKIN CONTACT	Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, transport to a hospital immediately.
IF INHALED	Move victim to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, administer artificial respiration. Maintain normal body temperature with a blanket. If irritation persists, transport to a hospital immediately.
IF SWALLOWED	Rinse mouth, give plenty of water to dilute the substance and induce vomiting(only in conscious persons !). Never give anything by mouth to an unconscious person. Transport to a hospital immediately.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	Carbon dioxide, dry chemical powder, foam, water
SPECIFIC HAZARDS ARISING FROM THE CHEMICAL	Carbon dioxide, dry chemical powder, foam, water
SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS:	Firemen should wear normal protective equipment(full bunker gear)and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Remove ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.
ENVIRONMENTAL PRECAUTIONS	Prevent spills from entering sewers, watercourses or low areas.
METHODS FOR CLEANING UP	Do not touch spilled material without suitable protection. After material is completely picked up, wash the spill site with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose of contaminated clothing.

7. HANDLING AND STORAGE

PRECAUTION FOR SAFE HANDLING	Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Handle material with suitable protection.
CONDITIONS FOR SAFE STORAGE	Store away from sunlight in well-ventilated dry place at room temperature (preferably cool place). Keep container tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE STANDARDS	ACGIH	No data
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APPROPRIATE ENGINEERING CONTROLS:		Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
INDIVIDUAL PROTECTION MEASURES	RESPIRATORY PROTECTION	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup Sigma-Aldrich - 270997 Page 4 of 7 to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
	EYE PROTECTION	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
	SKIN PROTECTION	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique(without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
	BODY PROTECTION	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES		
APPEARANCE	FORM	Solid
	COLOR	Green ~ Blue
ODOUR		Odorless
ODORODOUR THRESHOLD VALUE		No data
pH		3.0-3.8 (50g/l at 20 °C)
FREEZING POINT :		100 °C

INITIAL BOILING POINT		992.77 °C
FLASH POINT		-11 °C (c.c.)
EVAPORATING RATE		No data
FLAMMABILITY(solid, gas)		No data
EXPLOSIVE LIMITS		No data
VAPOR PRESSURE		No data
SOLUBILITY IN	WATER	110% (0 °C)
VAPOR DENSITY		No data
RELATIVE DENSITY		2.54
PARTITION COEFFICIENT: N-OCTANOL/WATER		No data
AUTOIGNITION TEMPERATURE		No data
DECOMPOSITION TEMPERATURE		No data
VISCOSITY		No data
MOLECULAR WEIGHT		170.48

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY & POSSIBILITY OF HAZARDOUS REACTIONS	Stable under recommended storage conditions.
CONDITIONS TO AVOID	Sunlight, heat
INCOMPATIBLE MATERIALS	Oxidizers and strong alkalis
HAZARDOUS DECOMPOSITION PRODUCTS	Hydrogen chloride, chlorine gas and Copper compounds may be formed.

11. TOXICOLOGICAL INFORMATION

INFORMATION ON THE LIKELY ROUTES OF EXPOSURES:	No data	
HEALTH HAZARD INFORMATION	ACUTE TOXICITY	LD50(oral,rat): 140mg/kg(VCVN1*, -, 67, 1998) LD50(oral,rat): 584mg/kg(INJPD2,23,153,1991) LD50(oral,mouse): 233mg/kg(INJPD2,23,153,1991)

	SKIN CORROSION/ SKIN IRRITATION	No data
	EYE DAMAGE/ EYE IRRITATION	No data
	RESPIRATORY SENSITIZATION	No data
	SKIN SENSITIZATION	No data
	CARCINOGENICITY	IARC: No data OSHA: No data ACGIH: No data NTP: No data EU CLP: No data
	GERM CELL MUTAGENICITY	DNA damage; E.coli; 50µmol/L/2D(EMMUEG,36,5,2000) Morphological transformation; mouse; fibroblast; 0.5µmol/L/21D(EMMUEG,37,231,2001)
	TOXIC TO REPRODUCTION	TCLo(ihl,rat): 8µg/m ³ (1-21 D preg)(GISAAA,51(8),38,1986) TDLo(ipr,rat): 52mg/kg(26 D male)(JTSCDR,24,393,1999)
	SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE	No data
	SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE	No data
	ASPIRATION HAZARD	No data

12. ECOLOGICAL INFORMATION

ECOTOXICITY	TO FISH	No data
	TO CRUSTACEA	No data
	TO OTHER AQUATIC LIFE	No data

PERSISTENCE/ DEGRADABILITY	PERSISTENCE	No data
	DEGRADABILITY	No data
BIOACCUMULATION POTENTIAL	ACCUMULATION	No data
	BIODEGRADABILITY	No data
MOBILITY IN SOIL		No data
OTHER ADVERSE EFFECTS		No data

13. DISPOSAL CONSIDERATION	
DISPOSAL METHODS	Use only licensed transporters and permitted facilities for waste disposal.
DISPOSAL CONSIDERATIONS	Dispose of this material and its container in accordance with local/regional/national/international regulation.

14. TRANSPORT INFORMATION	
IATA	
UN NUMBER	2802
UN PROPER SHIPPING NAME	Copper chloride
TRANSPORT HAZARD CLASS	8
PACKING GROUP	III
MARINE POLLUTANT	No data
SPECIAL PRECAUTIONS FOR USER	
IN CASE OF FIRE	F – A
IN CASE OF LEAK	S - B

15. REGULATORY INFORMATION	
Occupational Safety and Health Act	Substance Requiring Working Environment Measurement (period : 6 month) Hazardous Substance Requiring Management Substance Requiring Exposure Standards
Toxic Chemicals Control Act	No data

Safety Control of Dangerous Substance Act		No data
Wastes Control Act		No data
Persistent Organic Pollutants Control Act		No data
US REGULATIONS	OSHA	No data
	CERCLA	No data
	EPCRA302	No data
	EPCRA304	No data
	EPCRA313	No data
	ROTTERDAM CONVENTION	No data
	STOCKHOLM CONVENTION	No data
	MONTREAL PROTOCOL	No data
EU CLASSIFICATION INFORMATION	CLASSIFICATION	No data
	RISK PHRASES	No data
	SAFETY PHRASES	No data

16 OTHER INFORMATION	
ORIGINATED DATE	2012.01.01
REVISION NUMBER AND DATE	Revision number: 0 Final revision data: 2012.01.01
OTHER	The information in this MSDS is based on several references and the present state of our knowledge. However, the MSDS dose not always cover all information about product. The information in this MSDS is only provision of information, and It does not represent any guarantee of the properties of the product.