| Infosafe No™ | 1CHQZ | Issue Date :January 2019 | RE-ISSUED by CHEMSUPP |
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Product Name : **COPPER (I) CHLORIDE**

Classified as hazardous

## 1. Identification

**GHS Product Identifier** COPPER (I) CHLORIDE

**Company Name** CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

**Address** 38 - 50 Bedford Street GILLMAN
SA 5013 Australia

**Telephone/Fax Number** Tel: (08) 8440-2000
Fax: (08) 8440-2001

**Emergency phone number** CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

**Recommended use of the chemical and restrictions on use** Catalyst, preservative and fungicide, desulfurizing and decolourizing agent in petroleum industry, absorbent for carbon monoxide and laboratory reagent.

**Other Names**

| Name | Product Code |
|---|---|
| COPPER (I) CHLORIDE LR | CL092 |
| COPPER (I) CHLORIDE AR | CA092 |
| Cuprous chloride | |

**Other Information**

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

## 2. Hazard Identification

**GHS classification of the substance/mixture** Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1
Acute Toxicity - Oral: Category 4

**Signal Word (s)** WARNING

**Hazard Statement (s)** H302 Harmful if swallowed.
H410 Very toxic to aquatic life with long lasting effects.

**Pictogram (s)** Exclamation mark, Environment

**Precautionary statement – Prevention** P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.

**Precautionary statement – Response** P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P391 Collect spillage.

**Precautionary statement – Disposal** P501 Dispose of contents/container to an approved waste disposal plant.

## 3. Composition/information on ingredients

**Chemical Characterization** Solid

**Ingredients**

| Name | CAS | Proportion | Hazard Symbol | Risk Phrase |
|---|---|---|---|---|
| Cuprous Chloride | 7758-89-6 | 90-100 % | | |

## 4. First-aid measures

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| **Inhalation** | If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear. |
| **Ingestion** | Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist. |
| **Skin** | Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. If rapid recovery does not occur, obtain medical attention |
| **Eye contact** | Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. If rapid recovery does not occur, obtain medical attention |
| **First Aid Facilities** | Maintain eyewash fountain and drench facilities in work area. |
| **Advice to Doctor** | Treat symptomatically based on judgement of doctor and individual reactions of the patient. |
| **Other Information** | For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. |

## 5. Fire-fighting measures

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| **Suitable extinguishing media** | Use appropriate fire extinguisher for surrounding environment. |
| **Hazards from Combustion Products** | Irritating, toxic and corrosive fumes and vapours, including hydrogen chloride gas, copper fumes, chlorinated compounds, oxides of copper and chloride and chlorine gas or ionic chloride, Cl-. Contact with acids or acid fumes may release highly toxic hydrogen chloride fumes. Contact with metals may evolve flammable hydrogen gas. |
| **Specific Methods** | Use extinguishing media most appropriate for the surrounding fire.<br>Small fire: Use dry chemical, $CO_2$ or water spray.<br>Large fire: Use dry chemical, water spray, fog or foam - Do NOT use water jets. |
| **Specific hazards arising from the chemical** | Material does not burn. |
| **Hazchem Code** | 2X |
| **Precautions in connection with Fire** | Wear SCBA and chemical splash suit. Fully encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials. |

## 6. Accidental release measures

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| **Personal Precautions** | Avoid inhalation, contact with skin, eyes and clothing. |
| **Personal Protection** | Use personal protective equipment listed in Section 8. |
| **Clean-up Methods - Small Spillages** | Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations. |
| **Environmental Precautions** | Prevent from entering into drains, ditches, rivers or the sea. |

## 7. Handling and storage

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| **Precautions for Safe Handling** | Avoid generation or accumulation of dusts. When using do not eat, drink or smoke. Avoid prolonged or repeated contact with skin, eyes and clothing . Wash hands and face thoroughly after working with material. Keep away from incompatibles. Only use in well-ventilated areas. |
| **Conditions for safe storage, including any incompatabilities** | Store in a cool,dry place. Keep containers securely sealed and protected against physical damage. Store in well ventilated area.<br>Store away from imcompatibles such as oxidizing agents, alkali metals, potassium and lithium nitride; air sensitive; light sensitive and moisture sensitive. |
| **Storage Regulations** | Refer Australian Standard AS 3780 - 1994 'The storage and handling of corrosive substances'. |

## 8. Exposure controls/personal protection

**Occupational exposure limit values**

| Name | STEL | | TWA | | |
|---|---|---|---|---|---|
| | mg/m3 | ppm | mg/m3 | ppm | Footnote |

| | | | |
|---|---|---|---|
| | Cuprous Chloride | 1 | Copper, dust & mist (as Cu) |

**Other Exposure Information** These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
A time weighted average (TWA) has been established for Copper, dusts and mists (as Cu) (Safe Work Australia) of 1 mg/m³. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.

**Appropriate engineering controls** In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment.

**Respiratory Protection** Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

**Eye Protection** The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

**Hand Protection** Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.

**Personal Protective Equipment** Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

**Body Protection** Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

**Hygiene Measures** Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

## 9. Physical and chemical properties

**Form** Solid

**Appearance** White, cubic crystals.
Exposed to light, turns brown; Exposed to air, turns blue-green.

**Odour** Odourless.

**Melting Point** 430 °C

**Boiling Point** 1490 °C

**Solubility in Water** Practically insoluble in water.

**Solubility in Organic Solvents** Soluble in acids, ammonia and ether. Insoluble in alcohol and acetone.

**Specific Gravity** 4.14

**pH** ~ 5 (slurry, 50 g/l, H2O, 20 °C)

**Flammability** Non combustible material.

**Molecular Weight** 98.99

## 10. Stability and reactivity

**Chemical Stability** Stable under normal use conditons. Hygroscopic
Exposed to light turns brown; Exposed to air turns blue-green.

**Conditions to Avoid** Dust generation, excess heat, exposure to moist air/moisture or water, light and incompatible materials.

**Incompatible Materials** Oxidizing agents, alkali metals, potassium, acetylene, hydrazine, lithium nitride and nitromethane. Water, moisture and air.

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| **Hazardous Decomposition Products** | Irritating, toxic and corrosive fumes and vapours, including hydrogen chloride gas, copper fumes, chlorinated compounds, oxides of copper and chloride and chlorine gas or ionic chloride, Cl-. Contact with acids or acid fumes may release highly toxic hydrogen chloride fumes. Contact with metals may evolve flammable hydrogen gas. |
| **Possibility of hazardous reactions** | Copper chloride reacts violently with lithium nitride. |
| **Hazardous Polymerization** | Will not occur. |

## 11. Toxicological Information

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| **Acute Toxicity - Oral** | LD50 (rat): 140 mg/kg |
| **Ingestion** | Harmful if swallowed. Ingestion of dust causes irritation of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Symptoms may include of burning pain in the mouth, esophagus, and stomach. Hemorrhagic gastritis, nausea, vomiting, abdominal pain, metallic taste, and diarrhea may occur. If vomiting does not occur immediately systemic copper poisoning may occur, symptoms may include capillary damage, headache, cold sweat, weak pulse, kidney and liver damage, central nervous excitation followed by depression, jaundice, convulsions, blood effects, paralysis and coma. Death may occur from shock or renal failure. Toxic effect on the liver! |
| **Inhalation** | Inhalation of dust causes irritation to the mucous membranes of the respiratory tract (nose, throat, lungs), symptoms may include sore throat, coughing, burning of the throat, and shortness of breath. May result in ulceration and perforation of respiratory tract. When heated, this compound may give off copper fume, which can cause symptoms similar to the common cold, including chills and stuffiness of the head. |
| **Skin** | May causes skin irritation with symptoms of redness, inflammation, stinging and pain. |
| **Eye** | May causes irritation, redness, pain, discolouration and damage. May cause corneal damage, conjunctivitis, ulceration, clouding of the cornea, or blindness. |
| **Carcinogenicity** | No evidence of carcinogenic properties. |
| **Chronic Effects** | Prolonged or repeated skin exposure may cause dermatitis. Prolonged or repeated exposure to dusts of copper salts may cause discolouration of the skin or hair, blood and liver damage, ulceration and perforation of the nasal septum, runny nose, metallic taste, atrophic changes and irritation of the mucous membranes, unconsciousness or death. Chronic copper poisoning is characterised by hepatic cirrhosis, brain damage and demyelination, kidney defects and copper deposition in the cornea as demonstrated via Wilson's disease. |
| **Mutagenicity** | No evidence of mutagenic properties. |

## 12. Ecological information

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| **Ecotoxicity** | Quantitative data on the ecological effect of this product are not available. Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. |
| **Persistence and degradability** | Methods for the determination of biodegradability are not applicable to inorganic substances. |
| **Information on Ecological Effects** | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| **Environmental Protection** | Do not allow to enter waters, waste water, or soil! |

## 13. Disposal considerations

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| **Disposal Considerations** | Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations. |

## 14. Transport information

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| **Transport Information** | Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following: Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids, Class 7; and are incompatible with food and food packaging in any quantity. |
| **U.N. Number** | 2802 |
| **UN proper shipping name** | COPPER CHLORIDE |
| **Transport hazard class(es)** | 8 |
| **Hazchem Code** | 2X |

Classified as hazardous

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| **Packing Group** | III |
| **EPG Number** | 8A1 |
| **IERG Number** | 37 |

## 15. Regulatory information

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| **Regulatory Information** | Listed in the Australian Inventory of Chemical Substances (AICS). |
| **Poisons Schedule** | S6 |

## 16. Other Information

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|---|---|
| **Literature References** | 'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.<br>Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.<br>National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.<br>Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.<br>Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.<br>Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.<br>Safe Work Australia, 'Hazardous Chemical Information System, 2005'.<br>Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.<br>Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'. |
| **Contact Person/Point** | Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:<br>All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives. |
| **Empirical Formula & Structural Formula** | CuCl |

...End Of MSDS...