



Product Specification

Product Name: AMMONIUM COPPER(II) CHLORIDE Dihydrate LR

Alternate Name(s) Copper (II) ammonium chloride; ammonium cupric chloride; ammonium chlorocuprate(II); Ammonium tetrachlorocuprate (II) dihydrate.
Description
Blue to bluish green tetragonal, rhombododecahedral crystals.

Properties

Chemical Formula: $(\text{NH}_4\text{Cl})_2 \cdot \text{CuCl}_2 \cdot 2\text{H}_2\text{O}$

Molecular Weight: 277.46

Product Code: AL140

CAS No. 10060-13-6

General Information:

Soluble in alcohol and liquid NH_3 . Incompatible with oxidizing agents and metal powders.

Quality Specification

Assay: 98.0%

Specific Properties and Impurities [Typical levels]:

Loses all water at temp.	110 - 120 °C
Alkalis and other metals (as SO_4)	$\leq 0.2\%$
Iron (Fe)	$\leq 0.02\%$
Sulfate (SO_4)	$\leq 0.01\%$
Insoluble matter	$\leq 0.01\%$

Hazard and Safety Data

UN Group:	None Allocated
Class:	None Allocated
UN Number:	None Allocated
Hazchem code:	None Allocated
CS MSDS Code:	1CHQ4
Poison schedule:	S6
Emergency Procedure Guide No.:	N/A

Chem-Supply Pty Ltd - An ISO 9001:2008 Accredited Company

38 - 50 Bedford Street, Gillman SA 5013, Australia ABN 19 008 264 211 PO Box 201, Port Adelaide SA 5015, Australia
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Infosafe No™ 1CHQ4 Issue Date : February 2009 RE-ISSUED by CHEMSUPP

Product Name **AMMONIUM COPPER(II) CHLORIDE LR**

Classified as hazardous according to criteria of NOHSC.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING**Product Name** AMMONIUM COPPER(II) CHLORIDE LR**Product Code** AL140**Product Use** Analytical reagent, determination of carbon in iron and steel, etching, pyrotechnics and laboratory reagent.**Company Name** CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)**Address** 50 Bedford Street GILLMAN
SA 5013 Australia**Telephone** Tel: (08) 8440-2000**Number/Fax** Fax: (08) 8440-2001**Other Names** NameProduct Code

AMMONIUM CUPRIC CHLORIDE Dihydrate

Ammonium tetrachlorocuprate (II)
dihydrate

Ammonium copper chloride

Ammonium chlorocuprate(II)

Other Information EMERGENCY CONTACT NUMBER: +61 08 8440 2000

Business hours: 8:30am to 5:00pm, Monday to Friday.

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. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical** Solid**Characterization**

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
	Ammonium Copper(II) chloride	10060-13-6	100 %		

3. HAZARDS IDENTIFICATION

Irritating to eyes, respiratory system and skin.

Teratogenicity No evidence of teratogenic effects.**Mutagenicity** Evidence of mutagenic effects.**Carcinogenicity** Not classified as a human carcinogen.**Inhalation** Irritating to the respiratory system and mucous membranes.**Ingestion** May be harmful by ingestion. May cause vomiting, gastric pain, dizziness, anemia, cramps, convulsions, shock, coma and death.**Skin** Irritating to skin. May be harmful by skin absorption.**Eye** Irritating to eyes.**4. FIRST AID MEASURES****Inhalation** Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Supply fresh air. seek medical advice.**Ingestion** Rinse mouth thoroughly with water immediately. Give plenty of water to drink. Do not induce vomiting. Seek immediate medical assistance.



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Product Name **AMMONIUM COPPER(II) CHLORIDE LR**

Classified as hazardous according to criteria of NOHSC.

Skin	Wash affected areas with copious quantities of water immediately. Seek medical advice if effects persist.
Eye	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical advice if effects persist.
Advice to Doctor	Consult Poisons Information Centre.
Other Information	If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 13 1126 from anywhere in Australia.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Use extinguishing media suitable for surrounding environment
Specific Methods	Use measures suitable for extinguishing surrounding fire.
Hazardous Combustion Products	Material does not burn. Fire or heat may produce irritating, poisonous and/or corrosive gases. Containers may explode when heated. Runoff may pollute waterways.
Precautions in connection with Fire	Use suitable protective equipment for surrounding fire.
Flammability	Non combustible material.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal	Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal.
Personal Precautions	Avoid dust formation and avoid breathing dust.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)

7. HANDLING AND STORAGE

Storage	Avoid contact with skin and eyes. Avoid dust generation, use in a well ventilated area if dust generated. Store in a cool, dry place. Store in well ventilated area. Keep containers securely sealed and protected against physical damage.
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Other Exposure Information	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by NOHSC Australia for this product. There is a blanket limit of 10 mg/m3 for dusts or mists when limits have not otherwise been established.
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.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Wear suitable protective clothing to prevent skin contact. 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.
Eng. 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.



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Product Name **AMMONIUM COPPER(II) CHLORIDE LR**

Classified as hazardous according to criteria of NOHSC.

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**Appearance** Blue to bluish green tetragonal, rhombododecahedral crystals.**Solubility in Water** 338 g/L**Solubility in Organic Solvents** Soluble in alcohol and liquid NH₃.**Flammability** Non combustible material.**Molecular Weight** 277.46**Other Information** Becomes anhydrous at 110 - 120 °C**10. STABILITY AND REACTIVITY****Materials to Avoid** Oxidizing agents and metal powders.**Hazardous Decomposition Products** Hydrogen chloride, nitrogen oxides and ammonia.**11. TOXICOLOGICAL INFORMATION****Inhalation** Irritating to the respiratory system and mucous membranes.**Ingestion** May be harmful by ingestion. May cause vomiting, gastric pain, dizziness, anemia, cramps, convulsions, shock, coma and death.**Skin** Irritating to skin. May be harmful by skin absorption.**Eye** Irritating to eyes.**Mutagenicity** Evidence of mutagenic effects.**Carcinogenicity** Not classified as a human carcinogen.**12. ECOLOGICAL INFORMATION**

No information available.

13. DISPOSAL CONSIDERATIONS

Dispose of according to relevant local, state and federal government regulations.

14. TRANSPORT INFORMATION**15. REGULATORY INFORMATION**

Listed in the Australian Inventory of Chemical Substances (AICS).

Risk Phrase R36/37/38 Irritating to eyes, respiratory system and skin.**Safety Phrase** S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36 Wear suitable protective clothing.**Poisons Schedule** S6**Hazard Category** Irritant**16. OTHER INFORMATION**

Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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



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**Empirical Formula
& Structural
Formula
References**

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.

(NH₄Cl)₂.CuCl₂.2H₂O

Australian Government Department of Health and Ageing, 'Standard for the Uniform Scheduling of Medicines and Poisons No. 2', Commonwealth of Australia, August 2011.

Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.

South Australia Government, 'Approved Code of Practice for the Labelling of Workplace Substances', 1995.

Standards Australia 'AS 1940-2004 The Storage and Handling of Flammable and Combustible Liquids.

Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.

Worksafe Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)]'.

Worksafe Australia, 'Hazardous Substances Information System, 2005'.

Worksafe Australia, 'National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]'.

Worksafe Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]'.

User Codes**User Field Title****User Code**

CAS No.

10060-13-6

Risk Phrases

36/37/38

Safety Phrases

26-36

Poisons Schedule

S6

Hazard Category

Irritant

Molecular Weight

277.46

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