



SAFETY DATA SHEET
ALUMINIUM CHLOROHYDRATE LIQUID
REVISION 5, DATE 30 MAR 2025

1. IDENTIFICATION

Product Name	Aluminium Chlorohydrate Liquid
Other Names	Dialuminium chloride pentahydroxide
Uses	Cosmetic ingredient; Water treatment chemical; Water clarification; Cationic coagulant. Restriction on use: No information available.
Chemical Family	No Data Available
Chemical Formula	Al ₂ Cl(OH) ₅
Chemical Name	Aluminium chloride hydroxide
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Suite 13A.03, Menara Summit Persiaran Kewajipan USJ1 47600 UEP Subang Jaya Selangor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Australia – Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
National Poison Centre	Malaysia	+60-4-6536-999

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled



Globally Harmonised System

Hazard Classification NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Signal Word None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification NOT hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients**

Chemical Entity	Formula	CAS Number	Proportion
Dialuminium chloride, pentahydroxide	Al ₂ Cl(OH) ₅	12042-91-0	10 - 60 %
Water	H ₂ O	7732-18-5	Balance %

4. FIRST AID MEASURES**Description of necessary measures according to routes of exposure**

Swallowed	IF SWALLOWED: Rinse mouth with water, then give small quantities of water to drink. Do not induce vomiting. Get immediate medical advice/attention. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention. *Suitable emergency eye wash facility should be immediately available.
Skin	IF ON SKIN: Remove contaminated clothing and shoes immediately. Flush skin with running water for at least 15 minutes. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse. *Suitable emergency safety shower facility should be immediately available.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing - Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. *Most important symptoms and effects, both acute and delayed: No information available. *Indication of any immediate medical attention and special treatment needed: No information available.
Medical Conditions Aggravated by Exposure	Inhalation may result in an adverse reaction to persons previously sensitised to the material.



5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Non-combustible; Material itself does not burn.
Extinguishing Media	If material is involved in a fire, use extinguishing agent suitable for the surrounding fire.
Fire and Explosion Hazard	Containers may explode when heated.
Hazardous Products of Combustion	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides, Hydrogen chloride; Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material - Spills produce extremely slippery surfaces. Clear spills immediately. Avoid breathing vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Remove large spills using a vacuum truck. Do not flush with water. Absorb small spills with earth, sand or other non-combustible material and transfer to a suitable, labelled container for disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.
Decontamination	After cleaning, flush away traces with water.
Environmental Precautionary Measures	Prevent entry into drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Wear protective gloves/protective clothing protective clothing, gloves, eye/face protection and suitable respirator. Avoid inhalation. Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with industrial hygiene and safety practice. Avoid breathing mist/vapours/spray and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed when not in use. Avoid freezing or excessive heat and sources of ignition. – No smoking. Keep away from incompatible materials. Keep only in the original container or product compatible material, i.e. PVC, PP, PE, PTFE. (Incompatible material(s): Steel, brass alloys.
Container	Keep only in the original container or product compatible material, i.e. PVC, PP, PE, PTFE. *Incompatible material(s): Steel, brass alloys.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

SAFETY DATA SHEET ALUMINIUM CHLOROHYDRATE LIQUID REVISION 5, DATE 30 MAR 2025

General	No specific exposure standards are available for this product. For Aluminium, soluble salts (as Al): - Safe Work Australia Exposure Standard: TWA = 2 mg/m ³ . - ACGIH: TLV-TWA = 1 mg/m ³ (Respirable Particulate Matter). COMPONENT: Aluminium oxide (Al ₂ O ₃): - Safe Work Australia Exposure Standard: TWA = 10 mg/m ³ ; This value is for inhalable dust containing no asbestos and < 1% crystalline silica (a).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Full-face piece or airline respirator/organic vapor/mist respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses or chemical goggles. - Hand protection: Handle with gloves. Recommended: PVC or other plastic material. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Wear coveralls and/or chemical apron and rubber footwear.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands and face before breaks and immediately after handling the product. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear liquid
Odour	None
Colour	Colourless to slightly yellow
pH	4.0 - 4.4 (30% w/w)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	>100 °C
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Completely miscible with water
Specific Gravity	1.3 - 1.4
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available



Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material itself does not burn.
Reactions That Release Gases or Vapours	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides, Hydrogen chloride; Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under recommend handling & storage conditions.
Conditions to Avoid	Avoid freezing and excessive heat.
Materials to Avoid	Incompatible/reactive with bases, oxidising agents, Steel and brass alloys.
Hazardous Decomposition Products	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides, Hydrogen chloride; Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.
Hazardous Polymerisation	Hazardous polymerization reaction will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on toxicological effects:</p> <ul style="list-style-type: none"> - Acute toxicity: No information available. - Skin corrosion/irritation: Not considered to be a skin irritant. - Serious eye damage/irritation: Not considered to be an eye irritant. - Respiratory/skin sensitisation: Not sensitising to skin. No respiratory sensitisation has been observed in the workplace. - Germ cell mutagenicity: By analogy with similar products, this product is not expected to be mutagenic. - Carcinogenicity: By analogy with similar substances, this substance is not expected to be carcinogenic. - Reproductive toxicity: No information available. - STOT (single exposure): No information available. - STOT (repeated exposure): No information available. - Aspiration toxicity: No information available. <p>Information on possible routes of exposure:</p> <ul style="list-style-type: none"> - Ingestion: May cause burning in mouth and throat. - Eye contact: May cause redness, conjunctivitis and short term mild irritation. - Skin contact: May cause mild irritation to skin. Skin may dry or crack due to astringent nature of material.
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- Inhalation: May irritate the respiratory tract. The product has no vapour pressure and there is practically no exposure to inhalable aerosols.

Chronic effects: No information available.

Acute**Ingestion**

Acute toxicity (Oral):
- LD50, Rat: > 5,000 [Estimated].

Other

Acute toxicity (Dermal):
- LD50, Rat: > 5,000 [Estimated].

Carcinogen Category

None

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Aquatic toxicity:
- LC50, Danio rerio: > 100 mg/L (96 h) [OECD 203].
- EC50, Daphnia magna: > 100 mg/l (48 h) [OECD 202].
- IC50, Pseudokirchneriella subcapitata: 0.644 mg/L (72 h) [OECD 201].

Persistence/Degradability

Inorganic salts are basically not biodegradable.

Mobility

No information available.

Environmental Fate

Do not allow product to be released into the environment. Dispose of rinse water in accordance with local and national regulations.

Bioaccumulation Potential

No information available.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of contents/container in accordance with local/regional/national regulations.

Special Precautions for Land Fill

Packaging that cannot be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name

Aluminium Chlorohydrate Liquid

Class

No Data Available

Subsidiary Risk(s)

No Data Available

No Data Available

UN Number

No Data Available

Hazchem

No Data Available

Pack Group

No Data Available

Special Provision

No Data Available

Comments

NON-DANGEROUS GOODS: Not regulated for LAND transport.



Sea Transport

IMDG Code

Proper Shipping Name	Aluminium Chlorohydrate Liquid
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Aluminium Chlorohydrate Liquid
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

National/Regional Inventories

Australia (AIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	234-933-1
Europe (REACH)	Not Determined



Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (List of Classified Substances)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Taiwan (TCSI)	Not Determined
USA (TSCA)	Not Determined
Mexico (INSQ)	Not Determined

16. OTHER INFORMATION

Related Product Codes	ALCHHY2100, ALCHHY2200, ALCHHY2400, ALCHHY3100, ALCHHY3110, ALCHHY3111, ALCHHY3112, ALCHHY3113, ALCHHY3114, ALCHHY3115, ALCHHY3116, ALCHHY3117, ALCHHY3130, ALCHHY3200, ALCHHY3400, ALCHHY3500, ALCHHY3510, ALCHHY3600, ALCHHY3610, ALCHHY3700, ALCHHY4110, ALCHHY4111, ALCHHY4112, ALCHHY4115, ALCHHY4130, ALCHHY4182, ALCHHY4199, ALCHHY4211, ALCHHY4221, ALCHHY5110, ALCHHY6100, ALCHHY7500, ALCHHY7501, ALCHHY7504, ALCHHY7505, ALCHHY7506, ALCHHY7512, ALCHHY7520, ALCHHY7546, ALCHHY8000, ALCHHY8115, ALCHHY9000, PODADM2344
Revision	5
Revision Date	30 Mar 2025
Key/Legend	<p>< Less Than > Greater Than</p> <p>AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Fahrenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram</p>



mg/m³ Milligrams per Cubic Metre

Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH₂O Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight

