



PRICE CHEMICALS PTY LIMITED

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MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Revision Date JUNE 2009

Product Name POLYALUMINIUM CHLORIDE LIQUID

Other Names ALUMINIUM HYDROXIDE CHLORIDE POLYMERIC SOLUTION;
ALUMINIUM CHLORIDE HYDROXIDE (Al₂Cl(OH)₅);

Uses Used as a cationic coagulant in waste water treatment.

Contact Information

Organisation	Location	Telephone	Ask For
Redox Pty Ltd	10 Pile Rd Somersby NSW 2250 Australia	+61 2 43400088	Technical Officer
Poison Information Centre	Westmead NSW Australia	131126	
Chemcall 24 Hour Emergency Number	Australia New Zealand	1800-127406 0800-243622	
National Poisons Centre	New Zealand	0800-764766	

2. HAZARD IDENTIFICATION

Hazardous according to criteria of NOHSC/ASCC. IRRITANT

Risk Phrases

- R36/37/38 Irritating to eyes, respiratory system and skin.
R41 Risk of serious eye damage.
R52 Harmful to aquatic organisms.

Safety Phrases

- S24 Avoid contact with skin.
S25 Avoid contact with eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S46 If swallowed, seek medical advice immediately and show this container or label.

Avoid release to the environment. Refer to special instructions/Material Safety
S61 Data Sheets.

ERMA New Zealand Approval Code HSNO Hazard Classification No data available.

This Material Safety Data Sheet may not provide exhaustive guidance for all HSNO Controls assigned to this substance. The ERMA Web Site should be consulted for a full list of triggered controls and cited regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	CAS Number	Proportions (%)
ALUMINIUM HYDROXIDE CHLORIDE POLYMERIC SOLUTION	[12042-91-0]	10.0-30.0
WATER	[7732-18-5]	BALANCE

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure.

Swallowed Rinse mouth with water. Give water to drink provided person is conscious. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Seek medical attention immediately.

Eye Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Take care not to rinse contaminated water into the non-affected eye. Seek immediate medical attention.

Skin Remove contaminated clothing. Wash affected area with plenty of soap and water. If irritation persists, seek medical attention. Wash clothing before reuse. Do NOT take clothing home to be laundered.

Inhaled Remove victim from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth to mouth method. Induce artificial respiration with the aid of a pocket mask equipped with a one way valve or other proper respiratory medical device. Seek medical attention immediately.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of patient.

Aggravated medical conditions caused by exposure No information available on medical conditions which are aggravated from exposure to this product.

5. FIRE FIGHTING MEASURES

Extinguishing Media In case of fire, appropriate extinguishing media include carbon dioxide or dry chemical. Do NOT use water as material will become slippery and increases in volume, making cleanup difficult.

Hazards from Combustion Products Non-combustible liquid. Incompatible with oxidizing agents and sources of ignition. When involved in a fire, this material may generate carbon dioxide, and carbon monoxide.

Special Protective Precautions and Equipment for Fire Fighters Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

Flammability Conditions Product is a non-flammable liquid.

Additional Information

Hazchem Code N/A

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures Personnel involved in the clean up should wear full protective clothing as listed in section 8. Avoid accidents, clean up immediately. Evacuate all unnecessary personnel. Increase ventilation. Avoid walking through spilled product as it is slippery when spilt. Stop leak if safe to do so. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment. Shut off all possible sources of ignition.

Methods and Materials for Containment and Clean Up Soak up spilled product using absorbent non-combustible material such as sand or soil. Avoid using sawdust or cellulose. When saturated, collect the material and transfer to a suitable, labelled chemical waste container and dispose of promptly. Wash spill area with plenty of water to sewer. Confirm with appropriate water authority for large spills.

7. HANDLING AND STORAGE

Precautions for Safe Handling Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product fumes.

Conditions for Safe Storage (Including Any Incompatibles) Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Keep away from sources of ignition. Freezing will affect the physical condition and may damage the material. Store between 0-30°C. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.

Container Type Packaging must comply with requirements of Hazardous Substances (Packaging) Regulations 2001. Store in original packaging as approved by manufacturer. Avoid iron containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards No exposure standard has been established for this product by The Australian Safety and Compensation Council (ASCC).

Biological Limit Values No information available on biological limit values for this product.

Engineering Controls 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 RESPIRATOR: Wear a respirator with an organic vapour filter where dusts/vapours are generated and engineering controls are inadequate (AS1715/1716) EYES: Safety glasses with side shields (AS1336/1337). HANDS: Wear butyl, neoprene or nitrile gloves (AS2161). CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Clear Colourless Liquid

Formula Al.Cl.HO

Odour No data available.

Vapour Pressure Not applicable.

Vapour Density Not applicable.

Boiling Point Approx. 100°C deg C

Melting Point Not applicable.

Solubility in Water Soluble

Specific Gravity 1.15-1.17 (20°C) (Water = 1)

Flash Point Test Unknown Does Not Flash

pH 2.7-3.5 ()

Lower Explosion Limit Not applicable.

Upper Explosion Limit Not applicable.

Ignition Temperature Does Not Ignite

Specific Heat Value Not applicable.

Particle Size Not applicable.

Volatile Organic Compounds (VOC) Content Not applicable.

Evaporation Rate Not applicable.

Viscosity Not applicable.

Percent Volatile Not applicable.

Octanol/Water partition coefficient Not applicable.

Saturated Vapour Concentration Not applicable.

Additional Characteristics Not applicable.

Flame Propagation/Burning Rate of Solid Materials Not applicable.

Properties of Materials That May Initiate or Contribute to Fire Intensity Not applicable.

Potential for Dust Explosion Not applicable.

Reactions that Release Flammable Gases Not applicable.

Fast of Intensely Burning Characteristics Not applicable.

Non-flammables That Could Contribute Unusual Hazards to a Fire Not applicable.

Release of Invisible Flammable Vapours and Gases Not applicable.

Decomposition Temperature Not applicable.

Additional Information

10. STABILITY AND REACTIVITY

Chemical Stability Product is stable under normal conditions of use, storage and temperature.

Conditions to Avoid Avoid excessive heat, direct sunlight, moisture, freezing, static charges and high temperatures.

Incompatible Materials Incompatible with oxidizing agents and sources of ignition.

Hazardous Decomposition Products When involved in a fire, this material may generate carbon dioxide, and carbon monoxide.

Hazardous Reactions Hazardous polymerization will not occur. Reacts with oxidising materials and may cause exothermic reaction.

11. TOXICOLOGICAL INFORMATION

Toxicity Data Oral LD50 Rat: >3000mg/Kg (approx.)

Health Effects - Acute

Swallowed Ingestion may cause nausea, vomiting, diarrhoea, dizziness, or convulsions.

Eye Irritating to eyes. May cause severe eye irritation.

Skin Irritating to skin. Prolonged skin contact may cause dermatitis.

Inhaled Irritating to respiratory system. Inhalation may irritate the nose, throat and lungs.

12. ECOLOGICAL INFORMATION

Ecotoxicity This substance is hazardous to the environment and care should be taken to avoid discharge into rivers and waterways. Daphnia Magna Ec50/48hr : >50mg/L (harmful)
Algae: Algal inhibition tests are not appropriate. The flocculating characteristics of the product interfere directly in the test medium preventing homogenous which invalidates the test.
Hydrolysis: At natural pHs (>6) the polymer degrades due to hydrolysis to more than 70% in 28 days. The hydrolysis products are not harmful to aquatic organisms. Other Ecological Information: The effects of this product on aquatic organisms are rapidly and significantly mitigated by the presence of dissolved organic carbon in the aquatic environment.

Persistence and Degradability No information available on persistence/degradability for this product.

Mobility No information available on mobility for this product.

Environmental Fate (Exposure) Do NOT let product reach waterways, drains and sewers.

Bioaccumulative Potential No information available on bioaccumulation for this product.

13. DISPOSAL CONSIDERATIONS

Disposal If utilisation or recycling of the product is not possible, it should be disposed of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

Special Precautions for Land Fill or Incineration Contact a specialist disposal company or the local waste regulator for advice. This should be done in accordance with 'The Hazardous Waste Act'.

14. TRANSPORT INFORMATION

Land Transport (Australia)

Regulation Name ADG

UN Number Not applicable.

Shipping Name POLYALUMINIUM CHLORIDE LIQUID

Dangerous Goods Class Not applicable.

Subsidiary Risk Not applicable.

Pack Group Not applicable.

Precaution for User IRRITANT

Hazchem Code N/A

EPG Not applicable.

Special Provision Not applicable.

Sea Transport

Regulation Name IMDG

UN Number Not applicable.

Shipping Name POLYALUMINIUM CHLORIDE LIQUID

Dangerous Goods Class Not applicable.

Subsidiary Risk Not applicable.

Pack Group Not applicable.

Precaution for User IRRITANT

Hazchem Code No data available.

EPG No data available.

Special Provision Not applicable.

Air Transport

Regulation Name IATA

UN Number Not applicable.

Shipping Name POLYALUMINIUM CHLORIDE LIQUID

Dangerous Goods Class Not applicable.

Subsidiary Risk Not applicable.

Pack Group Not applicable.

Precaution for User IRRITANT

Hazchem Code No data available.

EPG No data available.

Special Provision Not applicable.

Land Transport (New Zealand)

Regulation Name NZS5433

UN Number Not applicable.

Shipping Name POLYALUMINIUM CHLORIDE LIQUID

Dangerous Goods Class Not applicable.

Subsidiary Risk Not applicable.

Pack Group Not applicable.

Precaution for User IRRITANT

Hazchem Code N/A

EPG Not applicable.

Special Provision Not applicable.

15. REGULATORY INFORMATION

Poisons Schedule N/A

EPG N/A

AICS Name ALUMINIUM CHLORIDE HYDROXIDE (AlCl(OH)₅)

NZ Toxic Substance N

HSNO Hazard Classification No data available.

ERMA Approval Code No data available.

16. OTHER INFORMATION

Literature References No data available.

Sources for Data No data available.

Legend to Abbreviations and Acronyms

< less than

> greater than

ADG Australian Dangerous Goods Code

AICS Australian Inventory of Chemical Substances

CAS Chemical Abstracts Service (Registry Number)

cm² square centimetres

CO₂ Carbon Dioxide

COD Chemical Oxygen Demand

deg C (°C) degrees Celsius

ERMA Environmental Risk Management Authority

g gram

g/cm³ grams per cubic centimetre

g/l grams per litre

HSNO Hazardous Substance and New Organism

IATA International Air Transport Association Dangerous Goods Regulations

IDLH Immediately Dangerous to Life and Health

IMDG International Maritime Dangerous Goods Code

immiscible liquids are insoluble in each other

kg kilogram

kg/m³ kilograms per cubic metre

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 Litre

m³ cubic metre

mbar millibar

mg milligram

mg/24H milligrams per 24 hours

mg/kg milligrams per kilogram

mg/m³ milligrams per cubic metre

Misc miscible

miscible liquids form one homogeneous liquid phase regardless of the amount of either component present

mm millimetre
mPa.s milli Pascal per second
N/A Not Applicable
NOHSC National Occupational Health and Safety Commission
OECD Organization for Economic Co-operation and Development
PEL Permissible Exposure Limit
ppb parts per billion
ppm parts per million
ppm/2h parts per million per 2 hours
ppm/6h parts per million per 6 hours
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 (number)
wt weight

This MSDS summarises Price Chemicals Pty Ltd best knowledge of the health and safety hazard information of the selected substance and how to safely handle the selected substance in the workplace however Price Chemicals Pty Ltd expressly disclaims that the MSDS is a representation or guarantee of the chemical specifications for the substance.

Each user should read the MSDS and consider the information in the context of how the selected substance will be handled and used in the workplace including its use in conjunction with other substances.

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