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SAFETY DATA SHEET – Liquid Poly Aluminium Chloride

1. IDENTIFICATION

Revision Date	July 2023 (*valid for 5 years from this date)*
Product Name	POLYALUMINIUM CHLORIDE LIQUID
Other Names	ALUMINIUM CHLORIDE HYDROXIDE (Al2Cl(OH)5);
Uses	Floc agent
Contact Information	Chlorine Discounters Address: 43 Clapham Road, Regents Park NSW 2143 P: 02-96454433 F: 02-96454030 E: info@chlorinediscounters.com.au W: www.chlorinediscounters.com.au
Emergency Contact	Managing Director or Operations Manager

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not scheduled

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories
Skin Corrosion/Irritation - Category 3
Serious Eye Damage/Irritation - Category 2B

Pictograms



Signal Word Not Determined

Hazard Statements

H290	May be corrosive to metals.
H305	May be harmful if swallowed and enters airways.
H316	Causes mild skin irritation.
H320	Causes eye irritation.

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)

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 Drink large quantities of water. Neutralization may be accomplished by using aluminum hydroxide gel or milk of magnesia. Contact doctor for a proper instruction of a medical treatment.

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.

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.

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

Medical Conditions Aggravated by Exposure No information available on medical conditions which are aggravated from exposure to this product

5. FIRE FIGHTING MEASURES

General Measures 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.

Flammability Conditions Product is a non-flammable liquid.

Extinguishing Media In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions.

Fire and Explosion Hazard Non-combustible liquid.

Hazardous Products of Combustion Under fire conditions this product may emit toxic and/or irritating vapours and gases including hydrogen chloride.

Special Fire Fighting Instructions 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.

Personal Protective Equipment	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) or chemical splash suit.
Flash Point	Does Not Flash
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	Does Not Ignite
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

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

7. HANDLING AND STORAGE

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 vapours.
Storage	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. Store away from oxidizing agents and alkalis. Store in a dry place avoiding iron containers. Keep in a cool dry place (0 to 30 Deg C). Keep away from sources of ignition. Freezing will affect the physical condition and may damage the material.This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container	Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standard has been established for this product by The Australian Safety and Compensation Council (ASCC). NOTE: 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. These 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 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.
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
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. Adequate ventilation should be provided so that exposure limits are not exceeded.
Personal Protection Equipment	RESPIRATOR: None normally required. For prolonged or excessive exposure to heated material or mist, a full face chemical respirator with inorganic vapour/dust and mist cartridge is recommended (AS1715/1716). EYES: Chemical goggles. Wear a face shield if splashing hazard exists (AS1336/1337). HANDS: Wear rubber or plastic gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material (AS2161). CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210).
Work Hygienic Practices	Avoid contact with eyes and skin. Avoid prolonged or repeated exposure. Always wash hands before smoking, eating, drinking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Odour	Mild
Colour	Yellow to brown
pH	3.5 - 5.0 1% solution
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	~100 °C
Freezing Point	No Data Available
Solubility	Miscible 25°C
Specific Gravity	1.15 - 1.18
Flash Point	Does Not Flash °C
Decomposition Temperature	No Data Available
Saturated Vapour Concentration	No Data Available
Appearance	Liquid
Evaporation Rate	No Data Available

Reactions That Release Gases or Vapours	Will produce toxic chlorine gas in direct contact with NaOCl

10. STABILITY AND REACTIVITY

General Information	PAC tends to gradually hydrolyse to a white turbid solution and lose the effectiveness, when it is kept long as diluted solution of less than 3% Al2O3.
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.
Materials to Avoid	Strong bases, such as NaOH, CaCO3, NaOCl.
Hazardous Decomposition Products	If mix with NaOCl can produce toxic chlorine gas.
Hazardous Polymerisation	Has not been reported.

11. TOXICOLOGICAL INFORMATION

General Information	LD50 oral, rat > 12.79 gr/kg.
Eye Irritant	Eye contact may cause severe irritation.
Ingestion	Swallowing can result in nausea, vomiting, diarrhoea, and abdominal pain.
Inhalation	Inhalation may irritate the nose, throat and lungs.
Skin Irritant	Irritating to skin. Prolonged skin contact may cause dermatitis.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Eco-toxicity	No ecological information available for this product.
Persistence/Degradability	The chemical is decomposed into aluminium hydroxide (Al(OH)3) and hydrochloric acid (HCL) by hydrolysis.
Mobility	No information available on mobility for this product.
Environmental Fate	Do NOT let product reach waterways, drains and sewers.
Bioaccumulation Potential	No information available on bioaccumulation for this product.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose 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	Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG

UN Number	Not applicable.
Shipping Name	POLYALUMINIUM CHLORIDE LIQUID
Dangerous Goods Class	Not applicable.
Subsidiary Risk	Not applicable.
Pack Group	Not applicable.
Hazchem Code	N/A
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)

15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not scheduled
National/Regional Inventories	Australia (AICS) Listed

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 SDS summarises Chlorine Discounters 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 Chlorine Discounters expressly disclaims that the SDS is a representation or guarantee of the chemical specifications for the substance.

Each user should read theSDS 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.