

## Safety Data Sheet

### 1. IDENTIFICATION OF PRODUCT AND SUPPLIER

#### 1.1 Product identifiers

Product name : POLYALUMINIUM CHLORIDE SOLUTION

#### 1.2 Other means of identification

PAC, Aluminium chlorhydroxide, aluminium chlorhydrate, aluminium hydroxychloride, Multifloc.

#### 1.3 Recommended use of the product and restrictions on use

Coagulant/flocculant in the treatment of potable water, industrial waste water and many other waste water situations. Corrosion inhibitor. Pulp & paper manufacture.

#### 1.4 Details of supplier of the safety data sheet

Company : AGen Sales & Services Pty Ltd

Street address : 38 May Holman Drive, Bassendean, Western Australia 6054

Telephone : (+61 8) 6270 4500

Fax : (+61 8) 6270 4544

#### 1.5 Emergency telephone number

Telephone : 1300 883 844

### 2. HAZARDS IDENTIFICATION

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

HAZARDOUS according to the criteria of the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals & Safe Work Australia.

#### 2.1 GHS Classification

Skin corrosion/irritation (Category 3)

Serious eye damage/irritation (Category 2B)

#### GHS Label elements, including precautionary statements



Pictogram :

Signal word : WARNING

#### Hazard statement(s)

H290 May be corrosive to metals.

H305 Harmful if swallowed.

H316 Causes mild skin irritation.

H320 Causes eye irritation.

#### Precautionary statement(s)

##### Prevention

P103 Keep out of reach of children.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye & face protection.

**Response**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice.

**Storage**

P404 Store in a closed container.

**Disposal**

P501 Dispose of contents/ container to an approved waste disposal plant.

**2.2 Other hazards**

None.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Component	CAS Number	Classification	Concentration (%)
Polyaluminium Chloride Solution	1327-41-9	H302, H315, H319	20 – 40

For the full text of the H-Statements mentioned in this section, see Section 16

**4. FIRST AID MEASURES****4.1 Description of First Aid measures****General advice**

Contact the Poisons Information Centre (Phone: Australia 131 126; New Zealand 0800 764 766) or consult a doctor/physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

**In case of skin contact**

If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

**In case of eye contact**

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek immediate medical assistance.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in Section 2.2 and/or Section 11.

**4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically. Can cause corneal burns

**4.4 First Aid facilities**

Eye wash facilities and safety shower should be available.

**5. FIRE FIGHTING MEASURES****5.1 Suitable extinguishing media**

Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

**5.2 Special hazards arising from the chemical**

Non-combustible material.

**5.3 Special protective equipment and precautions for fire fighters**

Decomposes on heating emitting toxic fumes, including those of aluminium oxide, and hydrogen chloride. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

- 5.4 Hazchem code**  
Not applicable.

## 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**  
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
- 6.2 Environmental precautions**  
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. If contamination of sewers or waterways has occurred, advise local emergency services. Observe all local and national regulations.
- 6.3 Methods and materials for containment and cleaning up**  
Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Neutralise with lime or soda ash. Collect and seal in properly labelled containers or drums for disposal. Wash area down with excess water.

## 7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling**  
Avoid skin and eye contact and breathing in vapour, mists and aerosols. Keep out of reach of children. Always add the acid to water, never the reverse.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Store in cool place and out of direct sunlight. Store away from incompatible materials described in Section 10. Store away from foodstuffs. Do not store in aluminium containers. Do not store in galvanised containers. Keep containers closed when not in use - check regularly for leaks.
- This material is NOT classified as a Dangerous Goods Class 8 Corrosive by the criteria of the ADG Code.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- 8.1 Control parameters**  
**Occupational Exposure Limits**

Chemical Name	Reference	TWA – Peak Limitation		STEL		Carcinogen Category	Notices
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>		
Aluminium Chlorhydrate (1327-41-9)	ASCC	/	2 (as Al)	/	5 (as Al)	-	-

As published in "Workplace Exposure Standards for Airborne Contaminants, December 2011" by SWA.

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.

### Biological Limits

None allocated for this product.

- 8.2 Exposure controls**

### Appropriate engineering controls

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use.

### Personal protective equipment (PPE)

The selection of PPE is dependent on a risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods and environmental factors.

### Eye/face protection

Tightly fitting safety glasses, full face-shield (where appropriate). See Australian Standards (AS/NZS 1336 & 1337).

### Skin protection

Wear protective gloves, protective clothing and safety footwear and splash apron appropriate for the risk of exposure. See Australian Standards (AS 2161 & 2919 and AS/NZS 2210). Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination or type ABEK respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. See Australian Standards (AS/NZS 1715 & 1716).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Form : Liquid Colour : Pale yellow
<b>Odour:</b>	Mild
<b>Odour Threshold:</b>	No data available
<b>pH:</b>	2.0 – 3.0 (@ 25 °C)
<b>Melting Point:</b>	- 12 °C
<b>Boiling Point/Range:</b>	No data available)
<b>Decomposition Temperature:</b>	No data available
<b>Evaporation Rate:</b>	No data available
<b>Flash Point:</b>	Not applicable
<b>Flammability Limits:</b>	Not applicable
<b>Specific Gravity:</b>	1.20 (@ 10.1% Al <sub>2</sub> O <sub>3</sub> )
<b>Vapour Density (air=1):</b>	No data available
<b>Vapour Pressure:</b>	No data available
<b>% Volatiles:</b>	No data available
<b>Solubility in water:</b>	Miscible with water

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Reacts with chlorates. Reacts with chlorites.

### 10.2 Chemical stability

Stable under recommended storage conditions. Hygroscopic: absorbs moisture or water from surrounding air. Will slowly corrode metals if allowed to stand.

### 10.3 Possibility of hazardous reactions

Reacts with calcium hypochlorite, acids, and alkalis .

### 10.4 Conditions to avoid

Keep away from heat and sources of ignition. Protect from moisture. Avoid dust generation. Avoid exposure to direct sunlight.

### 10.5 Incompatible materials

Incompatible with alkalis, oxidising agents, chlorates & chlorites, permanganates, cyanides and many metals.

### 10.6 Hazardous decomposition products

Hydrogen chloride, chlorine gas and oxides of aluminium and chlorine.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

Oral LD50 (rat): 681 mg/kg.

Oral LD50 (mice): 316 mg/kg.

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available.

**Specific target organ toxicity (STOT) - single exposure**

No data available

**Specific target organ toxicity (STOT) - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Health Effects**

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

**Eye contact:** An eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.

**Skin contact:** Contact with skin will result in irritation. May cause skin burns.

**Ingestion:** Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.

**Inhalation:** Breathing in mists or aerosols will produce respiratory irritation

**11.2 Information on possible routes of exposure**

The substance can be absorbed into the body by inhalation of its aerosol, ingestion, skin and/or eye contact.

**11.3 Additional Information**

RTECS: MW4025000

**12. ECOLOGICAL INFORMATION**

**12.1 Ecotoxicity**

Avoid contaminating waterways.

**12.2 Persistence and degradability**

No data available.

**12.3 Bioaccumulative potential**

No data available.

**12.4 Mobility in soil**

No data available.

**12.5 Other adverse effects**

No data available.

**13. DISPOSAL CONSIDERATIONS**

**13.1 Disposal methods and containers**

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.

### 13.3 Special precautions for landfill or incineration

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

## 14. TRANSPORT INFORMATION

NOT classified as a Dangerous Goods by the criteria of the ADG Code for transport by road or rail  
NOT classified as a Dangerous Goods by the criteria of the IMDG Code for transport by sea  
NOT classified as a Dangerous Goods by the criteria of the IATA Code for transport by air

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations

#### Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Not listed

#### Carcinogen classification under WHS Regulations 2011, Schedule 10

Not listed

#### Notification status

**AICS** On the inventory, or in compliance with the inventory.

## 16. OTHER INFORMATION

### Key / legend to abbreviations and acronyms used in the MSDS

ADG	Australian Dangerous Goods
AICS	Australian Inventory of Chemical Substances
ASCC	Australian Safety and Compensation Council
GHS	Globally Harmonised System of Classification & Labelling of Chemicals
NOHSC	National Occupational Health and Safety Commission
RTECS	Registry of Toxic Effects of Chemical Substances.
TWA	Time weighted average
STEL	Short term exposure level
SWA	Safe Work Australia
Peak Limitations	A ceiling concentration that should not be exceeded over a measurement period, which should be as short as possible, but not exceeding 15 minutes
LD <sub>50</sub>	Lethal dose 50. The single dose of a substance that causes the death of 50% of an animal population from exposure to the substance by any route other than inhalation
LC <sub>50</sub>	Lethal concentration that kills 50% of an animal population within a specified time
RTECS	Registry of Toxic Effects of Chemical Substances
g/L	Grams per litre
g/cm <sup>3</sup>	Grams per cubic centimetre
mg/m <sup>3</sup>	Milligrams per cubic metre
mg/kg	Milligrams per kilogram
pH	Relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline
WHS	Work Health and Safety

### Literature references

"Workplace Exposure Standards for Airborne Contaminants, December 2011" by SWA Work Health and Safety Regulations 2011

### Reason(s) for Issue:

Revised primary SDS

Alignment to GHS requirements

### Disclaimer

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