



Polyaluminium Chloride Solution

AGent

AGent SDS: Polyaluminium Chloride Solution [2026.02]

Version No: 2026.02

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Hazard Alert Code: 2

Issue Date: July 2026
Print Date: (auto-fills on print)
AGENT.GHS.AUS.EN.E

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	Polyaluminium Chloride Solution
Chemical Name	Polyaluminium chloride solution (20–40%)
Synonyms	PAC; aluminium chlorhydroxide; aluminium chlorohydrate; aluminium hydroxychloride
Proper shipping name	Not Applicable — NON-DANGEROUS GOODS
Chemical formula	Aln(OH)mCl(3n-m) (polyaluminium chloride) in water
Other means of identification	Polyaluminium Chloride Solution [2026.02]

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Coagulant / flocculant for potable water, industrial and other waste-water treatment; corrosion inhibitor; pulp and paper manufacture.
Uses advised against	Not for unprotected domestic / consumer use. Do NOT store in aluminium or galvanised containers.

Details of the manufacturer or supplier of the safety data sheet

Registered company name	AGent Sales & Services Pty Ltd
Address	38 May Holman Drive, Bassendean WA 6054, Australia
Telephone	(+61 8) 6270 4500 / 1300 833 844
Website	agentsales.com.au
Email	admin@agentsales.com.au

Emergency telephone number

Association / Organisation	Hazrad (outside 24-hour emergency response provider)
Emergency telephone numbers	08 9418 4200 (24-hour) — answered by Hazrad on AGent's behalf
Other emergency telephone numbers	Poisons Information Centre 131 126 (Australia) / 0800 764 766 (NZ)

SECTION 2 Hazards identification

Classification of the substance or mixture

Classified as a HAZARDOUS CHEMICAL under the GHS criteria adopted by Safe Work Australia. NOT a Dangerous Good under the ADG Code — NON-DANGEROUS GOODS for transport (acidic aluminium salt solution).

Poisons Schedule (SUSMP)	Not Scheduled (SUSMP — not listed)
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Classification

- Acute Toxicity (Oral) Category 4 — H302
- Skin Corrosion/Irritation Category 2 — H315

- Serious Eye Damage/Eye Irritation Category 2A — H319

Label elements

Hazard pictogram(s)	
Signal word	WARNING

Hazard statement(s)

- H302 — Harmful if swallowed.
- H315 — Causes skin irritation.
- H319 — Causes serious eye irritation.

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

- P234 — Keep only in original container.
- P264 — Wash hands thoroughly after handling.
- P270 — Do not eat, drink or smoke when using this product.
- P280 — Wear protective gloves / protective clothing / eye protection / face protection.

Precautionary statement(s) Response

- P301+P312 — IF SWALLOWED: Call a POISON CENTRE / doctor if you feel unwell.
- P330 — Rinse mouth.
- P390 — Absorb spillage to prevent material damage.
- P302+P352 — IF ON SKIN: Wash with plenty of soap and water.
- P332+P313 — If skin irritation occurs: Get medical advice / attention.
- P321 — Specific treatment (see First Aid Measures).
- P362+P364 — Take off contaminated clothing and wash it before reuse.
- 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 / attention.

Precautionary statement(s) Storage

- P404 — Store in a closed container.
- P406 — Store in a corrosion-resistant container; do NOT use aluminium or galvanised containers.

Precautionary statement(s) Disposal

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

Other hazards

Acidic (pH 2–3). Hygroscopic; slowly corrodes metals if allowed to stand. Reacts with calcium hypochlorite, chlorates / chlorites, acids and alkalis liberating hazardous gases.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures.

Mixtures

CAS No.	% [weight]	Name	Classification
1327-41-9	20 – 40	Polyaluminium chloride solution (aluminium chlorohydrate)	Not listed on HCIS; not classified per supplier SDS (Rev 3, 2016); AGent retains Eye Irrit. 2 (H319) as a conservative in-house determination
7732-18-5	Balance	Water	Not classified

SECTION 4 First aid measures

Description of first aid measures

Eye Contact

Hold eyelids apart and flush the eye continuously with running water until advised to stop by a Poisons Information Centre or doctor, or for at least 15 minutes. Can cause corneal burns — seek medical advice.

Skin Contact

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

Inhalation

Remove victim from exposure to fresh air — avoid becoming a casualty. Remove / loosen contaminated clothing. Keep at rest and warm. Seek medical advice if effects persist.

Ingestion

Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek immediate medical assistance. Contact the Poisons Information Centre (Australia 131 126; New Zealand 0800 764 766).

Most important symptoms and effects, both acute and delayed

Acidic. Harmful if swallowed; causes burns to mouth, throat and GI tract. Skin contact causes irritation / possible burns; eye contact causes serious irritation / corneal burns. Inhalation of mist irritates the respiratory tract.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Can cause corneal burns. Contact the Poisons Information Centre (Australia 131 126; New Zealand 0800 764 766).

First Aid facilities

Eye wash facilities and a safety shower must be available in any area where this product is handled.

SECTION 5 Firefighting measures

Extinguishing media

Not combustible. Use fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder) suited to the surrounding fire.

Special hazards arising from the substance or mixture

Fire Incompatibility

Decomposes on heating emitting toxic fumes (aluminium oxide, hydrogen chloride, chlorine). Reacts with calcium hypochlorite / chlorates / chlorites.

Advice for firefighters

Fire Fighting

Wear self-contained breathing apparatus (SCBA) and suitable protective clothing if risk of exposure to decomposition products.

Fire / Explosion Hazard

Non-combustible acidic solution. Hydrogen chloride / chlorine / aluminium-oxide fumes on heating.

HAZCHEM Code	Not Applicable
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SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See Section 8 for personal protective equipment requirements.

Wear respiratory protection. Avoid breathing vapours / mist / gas. Ensure adequate ventilation. Evacuate non-essential personnel; work upwind. See Section 8.

Environmental precautions

Prevent product entering drains or waterways. Discharge to the environment must be avoided. If contamination occurs, advise local emergency services.

Methods and material for containment and cleaning up

Minor Spills

Slippery when spilt — clean up immediately. Wear PPE. Contain and prevent run-off. Absorb with inert material (soil, sand). Neutralise with lime or soda ash. Collect and seal in labelled containers for disposal per Section 13. Wash area down with excess water.

Major Spills

Isolate and ventilate; work upwind. Wear full PPE. Contain, absorb, neutralise cautiously and collect as above. Notify the Environmental Protection Authority if waterways are threatened.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling

Avoid skin and eye contact and breathing vapour / mist / aerosol. Keep out of reach of children. Always add the acid to water, never the reverse. Use PPE per Section 8.

Other information

Do NOT store in aluminium or galvanised containers. Keep containers closed when not in use; check regularly for leaks. Store away from foodstuffs and incompatible materials (see Section 10).

Conditions for safe storage, including any incompatibilities

Suitable container

Store in a cool place out of direct sunlight, in corrosion-resistant containers, closed when not in use. Do NOT use aluminium or galvanised containers. Store away from foodstuffs and incompatible materials (see Section 10).

Storage incompatibility

Alkalis; oxidising agents; chlorates and chlorites; calcium hypochlorite; permanganates; cyanides; many metals. Store away from incompatible materials (see Section 10).

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

Reference: Safe Work Australia, "Workplace Exposure Limits for Airborne Contaminants" (April 2024) by Safe Work Australia.

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
SWA WEL 2024	Aluminium (soluble salts, as Al)	Polyaluminium chloride (as Al)	2 mg/m ³ (as Al)	5 mg/m ³ (as Al)	Not assigned in SWA WEL 2024	SWA WEL 2024 aluminium soluble salts (as Al) TWA 2 mg/m ³ .

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Polyaluminium chloride (as Al)	Not established (DOE PAC)	Not established (DOE PAC)	Not established (DOE PAC)
Ingredient	Original IDLH		Revised IDLH
Polyaluminium chloride (as Al)	Not established (NIOSH)		Not established (NIOSH)

MATERIAL DATA

No whole-mixture occupational exposure data are available; manage on a per-component basis (above).

Exposure controls

Appropriate engineering controls

Apply the hierarchy of controls (WHS Reg 36). Where elimination or substitution is not reasonably practicable: provide local exhaust ventilation at points of vapour / mist generation; use closed transfer systems where possible; ensure general ventilation is adequate to keep airborne concentrations below the applicable WEL. Document the risk assessment supporting the chosen control hierarchy.

Individual protection measures, such as personal protective equipment

Eye and face protection

Safety glasses with side shields (AS/NZS 1336 & 1337) as a minimum. Chemical goggles and a face shield (AS/NZS 1336 & 1337) where splash potential exists.

Skin protection

See Hand protection below.

Hands/feet protection

Wear protective gloves, protective clothing, safety footwear and splash apron (AS 2161 & 2919, AS/NZS 2210). Tightly-fitting safety glasses and full face-shield where appropriate (AS/NZS 1336 & 1337). Where an inhalation risk exists, use a respirator with ABEK / multi-purpose cartridges (AS/NZS 1715 & 1716).

Body protection

See Other protection below.

Other protection

Long-sleeved chemical-resistant protective clothing and apron (PVC or equivalent)

Respiratory protection

If a risk assessment indicates an inhalation risk exists, wear a half-face or full-face respirator with appropriate filter (selection per AS/NZS 1715; respirator per AS/NZS 1716). Specific cartridge / canister recommendation to be confirmed during respiratory protection risk assessment per AS/NZS 1715.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Property	Value
Appearance	Liquid — pale yellow
Physical state	Liquid
Odour	Mild
Odour threshold	No data available in source SDS
pH (as supplied)	2.0 – 3.0 at 25 °C — acidic
Melting point / freezing point (°C)	-12 °C
Initial boiling point and boiling range (°C)	No data available in source SDS
Flash point (°C)	Not applicable — non-combustible aqueous solution
Evaporation rate	No data available in source SDS
Flammability	Not flammable
Upper Explosive Limit (%)	Not applicable
Lower Explosive Limit (%)	Not applicable
Vapour pressure (kPa)	No data available in source SDS
Solubility in water	Miscible with water
Vapour density (Air = 1)	No data available in source SDS
Relative density (Water = 1)	1.20 (at 10.1% Al ₂ O ₃)
Partition coefficient n-octanol/water	Not applicable — ionic
Auto-ignition temperature (°C)	Not applicable — non-combustible
Decomposition temperature (°C)	No data available in source SDS
Viscosity (cSt)	No data available in source SDS
Molecular weight (g/mol)	Not applicable — polymeric
Taste	Not applicable — do not taste
Explosive properties	None known
Oxidising properties	None known
Surface Tension (dyn/cm or mN/m)	No data available in source SDS
Volatile Component (% vol)	Water (main volatile fraction)
Gas group	Not applicable

pH as a solution (1%)	Acidic
VOC g/L	0 g/L — inorganic salt solution; no VOC

SECTION 10 Stability and reactivity

Reactivity	Reacts with chlorates and chlorites; acidic / mildly corrosive to metals. See Section 7 / 10.
Chemical stability	Stable under recommended storage conditions. Hygroscopic; slowly corrodes metals if allowed to stand.
Possibility of hazardous reactions	Reacts with calcium hypochlorite, acids and alkalis. Hazardous polymerisation will not occur.
Conditions to avoid	Heat; ignition sources; moisture; direct sunlight; incompatible materials.
Incompatible materials	See Section 7. Alkalis; oxidisers; chlorates / chlorites; calcium hypochlorite; permanganates; cyanides; many metals.
Hazardous decomposition products	Hydrogen chloride, chlorine gas and oxides of aluminium / chlorine on heating.

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled

Mist / aerosol irritates the respiratory tract.

Ingestion

Harmful if swallowed (H302). Causes nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the GI tract.

Skin Contact

Causes skin irritation (H315); may cause burns.

Eye

Causes serious eye irritation (H319); corneal burns possible; contamination can cause permanent injury.

Chronic

No carcinogen data in source SDS.

Per-ingredient toxicity

Ingredient	TOXICITY	IRRITATION
Polyaluminium chloride	Oral LD50 (rat): 681 mg/kg; Oral LD50 (mouse): 316 mg/kg (Acute Tox. 4)	Skin / eye irritant; corneal burns possible
Water	Not applicable	Not applicable

Hazard checklist (whole-product classification basis)

Hazard endpoint	Classified	Hazard endpoint	Classified
Acute Toxicity	✓	Carcinogenicity	—
Skin Irritation/Corrosion	✓	Reproductive Toxicity	—
Serious Eye Damage/Irritation	✓	STOT — Single Exposure	—
Respiratory or Skin Sensitisation	—	STOT — Repeated Exposure	—
Mutagenicity	—	Aspiration Hazard	—

Legend: ✓ = Data available to make classification; — = Data either not available or does not fill the criteria for classification.

Information on possible routes of exposure

Absorbed by inhalation of aerosol, ingestion, skin and / or eye contact.

Additional Information

RTECS	MW4025000
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SECTION 12 Ecological information

Toxicity

Ingredient	Endpoint	Test Duration	Species	Value	Source
Polyaluminium chloride	pH effect / flocculation	Not Provided	Aquatic organisms (general)	Low pH and flocculation may cause mechanical damage to aquatic organisms; no quantitative LC50 in source SDS	AGent SDS
Polyaluminium chloride	No quantitative data	Not applicable	Not applicable	No quantitative ecotoxicity data in source SDS	AGent SDS

Environmental precaution: Prevent entry to drains, waterways and soak-aways. Notify the relevant Environmental Protection Authority if waterway contamination occurs.

Persistence and degradability

Ingredient	Persistence: Water / Soil	Persistence: Air
Polyaluminium chloride	Not applicable in the OECD sense — inorganic; hydrolyses to aluminium hydroxide and chloride; acidity neutralises on dilution.	Not applicable — aqueous product.

Bioaccumulative potential

Ingredient	Bioaccumulation
Polyaluminium chloride	Not expected to bioaccumulate (aluminium precipitates as hydroxide).

Mobility in soil

Ingredient	Mobility
Polyaluminium chloride	Soluble and mobile in water; precipitates as $\text{Al}(\text{OH})_3$ near neutral pH.

Other adverse effects

Acidic / flocculating — may depress pH and cause mechanical damage to aquatic organisms. Avoid uncontrolled discharge.

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal

- Recycle wherever possible.
- Ensure waste disposal conforms to all relevant local, state and federal authority waste disposal regulations.
- Do NOT discharge into sewers or waterways.
- Empty containers should be returned via AGent's Closed Loop container return program where applicable.
- Whatever cannot be saved for recovery or recycling should be managed through an approved waste disposal facility.
- Cautiously neutralise (lime / soda ash) before disposal; dispose of in accordance with local, state and federal regulations.

SECTION 14 Transport information

Labels Required	Not Applicable — not regulated for transport
Marine Pollutant	No
HAZCHEM Code	Not Applicable

Land transport (ADG)

UN number	Not Applicable — NON-DANGEROUS GOODS
UN proper shipping name	Not Applicable — NON-DANGEROUS GOODS
Transport hazard class(es)	NON-DANGEROUS GOODS — not classified under the ADG Code for transport by road or rail (acidic; mildly corrosive to metals but below the ADG threshold).
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special precautions for user	Not Applicable — not regulated for transport.
ERG / EIP number	Not assigned — NON-DANGEROUS GOODS.

Air transport (ICAO-IATA / DGR)

UN number	Not Applicable — NON-DANGEROUS GOODS
UN proper shipping name (lowercase)	Not Applicable — NON-DANGEROUS GOODS
ICAO/IATA Class	ERG Code: Not Applicable
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special provisions	Not Applicable — not regulated for transport by air.
Cargo Only Packing Instructions	Not Applicable — AGent does not transport this product by air. Refer to land transport (ADG) above for the applicable classification.
Cargo Only Max Qty/Pack	Not Applicable — AGent does not transport this product by air. Refer to land transport (ADG) above for the applicable classification.
Passenger and Cargo Packing Instructions	Not Applicable — AGent does not transport this product by air. Refer to land transport (ADG) above for the applicable classification.
Passenger and Cargo Max Qty/Pack	Not Applicable — AGent does not transport this product by air. Refer to land transport (ADG) above for the applicable classification.

Sea transport (IMDG-Code / GGVSee)

UN number	Not Applicable — NON-DANGEROUS GOODS
UN proper shipping name	Not Applicable — NON-DANGEROUS GOODS
IMDG Class	NON-DANGEROUS GOODS
Packing group	Not Applicable
Environmental hazard	Not a Marine Pollutant
EMS Number	Not Applicable
Special provisions	Not Applicable — not regulated for transport by sea.

Transport in bulk according to MARPOL Annex II and the IBC Code

Not Applicable — AGent does not transport this product in bulk by sea.

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
Polyaluminium Chloride Solution	Not Applicable — AGent does not transport this product in bulk by sea.

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
Polyaluminium Chloride Solution	Not Applicable — AGen does not transport this product in bulk by sea.

SECTION 15 Regulatory information**Safety, health and environmental regulations / legislation specific for the substance or mixture**

POLYALUMINIUM CHLORIDE (CAS 1327-41-9) is found on / assessed against the following regulatory lists:

- Australia Hazardous Chemical Information System (HCIS): Not listed
- Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Not listed
- Australian Inventory of Industrial Chemicals (AIIC): Listed
- IARC Group classification: Not classified
- Schedule 10 of the model WHS Regulations (prohibited / restricted carcinogens): Not listed
- Schedule 14 of the model WHS Regulations (health monitoring trigger): Not listed

Additional Regulatory Information

Subject to: Work Health and Safety (General) Regulations 2022 (WA); "Workplace Exposure Limits for Airborne Contaminants" (April 2024) by Safe Work Australia; Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code) current edition.

National Inventory Status

Country / Inventory	Listed
Australia (AIIC / AICS)	Yes
Canada (DSL)	Not applicable — AGen does not export this product
Canada (NDSL)	Not applicable — AGen does not export this product
China (IECSC)	Not applicable — AGen does not export this product
Europe (EINECS / ELINCS / NLP)	Not applicable — AGen does not export this product
Japan (ENCS)	Not applicable — AGen does not export this product
Korea (KECI)	Not applicable — AGen does not export this product
New Zealand (NZIoC)	Not applicable — AGen does not export this product
Philippines (PICCS)	Not applicable — AGen does not export this product
USA (TSCA)	Not applicable — AGen does not export this product
Taiwan (TCSI)	Not applicable — AGen does not export this product
Mexico (INSQ)	Not applicable — AGen does not export this product
Vietnam (NCI)	Not applicable — AGen does not export this product
Russia (FBEPH)	Not applicable — AGen does not export this product

Legend: Yes = All CAS declared ingredients are on the inventory; No = One or more CAS listed ingredients are not on the inventory (may be exempt or require registration).

SECTION 16 Other information

Revision Date	July 2026
Initial Date	June 2026 (AGent 2026 format)

SDS Version Summary

Version	Date of Update	Sections Updated
2026.02 (AGent 2026 format)	July 2026	§3 ingredient classification(s) harmonised to the substance-level determination for CAS 1327-41-9 (SWA HCIS where listed; documented supplier basis otherwise) — cross-CAS consistency triage, 24 July 2026. Substance classification is a property of the CAS number and must be identical across all AGent SDS.
2026.01 (AGent 2026 format); earlier: V2.2 (legacy AGent format)	June 2026	Reformatted from legacy V2.2 to AGent 2026 layout. §8 updated to SWA WEL 2024 (aluminium soluble salts as Al 2 mg/m ³); removed superseded legacy abbreviations and exposure-standard references; AICS→AIIC. NORMALISED legacy non-Australian hazard codes (H305 / H316 / H320) to the AU GHS classification carried by the PAC component (Met Corr 1 H290 / Acute Tox 4 H302 / Skin Irrit 2 H315 / Eye Irrit 2A H319). Warning; NON-DANGEROUS GOODS.

Other information

This SDS is intended as a hazard communication tool to assist in workplace Risk Assessment. It is not an Australian Standard or a definitive document.

Definitions and abbreviations

Abbreviation	Definition
ADG	Australian Dangerous Goods Code
AICS / AIIC	Australian Inventory of Industrial Chemicals (formerly AICS)
AUH	Additional / Australian Hazard statements
BCF	Bioconcentration Factor
BEI	Biological Exposure Index
CAS	Chemical Abstracts Service Registry Number
DNEL	Derived No Effect Level
DSEN	Dermal sensitiser (SWA WEL 2024 notation)
EC50	Effect Concentration causing effect in 50% of test population
EMS	IMDG Emergency Schedule
ERG / EIP	Emergency Response Guide / Emergency Information Panel (SAA/SNZ HB76)
ES	Exposure Standard (legacy term — now WEL)
GHS	Globally Harmonised System of Classification and Labelling
HCIS	Hazardous Chemical Information System (Safe Work Australia)
IARC	International Agency for Research on Cancer
IDLH	Immediately Dangerous to Life or Health
LC50	Lethal Concentration causing death in 50% of test population
LD50	Lethal Dose causing death in 50% of test population
LOAEL	Lowest Observed Adverse Effect Level
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OEL	Occupational Exposure Limit
OTO	Ototoxic (SWA WEL 2024 notation)
PC-STEEL	Permissible Concentration — Short Term Exposure Limit
PC-TWA	Permissible Concentration — Time Weighted Average
PNEC	Predicted No Effect Concentration
RSEN	Respiratory sensitiser (SWA WEL 2024 notation)
SDS	Safety Data Sheet
Sk	Skin notation — absorption through the skin a significant route
STEEL	Short Term Exposure Limit (15 min TWA)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TEEL	Temporary Emergency Exposure Limit

TLV	Threshold Limit Value
TWA	Time Weighted Average (8 hr / 40 hr week)
WEL	Workplace Exposure Limit (Safe Work Australia, April 2024)
WHS	Work Health and Safety

Disclaimer

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