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MATERIAL SAFETY DATA SHEET

Revision No: 0

Date Revised: Not applicable

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PRODUCT NAME: PAC-SP

CHEMICAL NAME: Polyaluminium Chloride 18% w/w (Al₂O₃), [AKA: Polyaluminium Chloride 40% w/w Solution, Polyaluminium Chlorohydrate].

Classified as Hazardous according to the criteria of Worksafe Australia.

UN No.: 1760	HAZCHEM: 2R	DG CLASS: 8
Poison Schedule: None	Packaging Group: III	EPG: 37

Product Uses: used as very effective and efficient coagulant for treatment of potable and waste waters; also effective in phosphate removal.

Ingredients:

Reference in ACOIN: YES

Name:	CAS Number:	Proportion:
Poyaluminium Chloride	1327-41-9	40%
Water	7732-18-5	to 100%

PHYSICAL DATA

Appearance & odour:	Water clear to slightly turbid aqueous solution
Molecular weight:	192.90
Boiling point (°C):	~100
Melting point (°C):	Not available
Specific Gravity (H ₂ O = 1):	1.30 at 25°C
pH (7 = neutral):	2.3 - 2.8 at 25°C
Vapour pressure (kPa):	Not applicable
Relative vapour density (air = 1):	Not applicable
Volatile by weight (%):	60 (Includes product change)
Solubility in water:	Completely miscible
Evaporation rate:	Not relevant (n-butyl acetate = 100)

FIRE AND EXPLOSION HAZARD DATA

Flash point (°C):	Material is non-flammable and non-combustible.
Auto ignition point (°C):	Not applicable.
Explosion Limits In Air (% by volume)	
Lower:	Not applicable.
Upper:	Not applicable.

Extinguishing media:	Compatible with water, foam CO ₂ and dry chemical.
Special Procedures:	None.
Unusual hazards:	None known.
Conditions to avoid:	Do not freeze. Material may decompose at high temperatures (after water has evaporated and product dries and reaches calcination temperatures) to evolve Hydrogen Chloride gas.
Materials to avoid:	Corrosive to steel.
Decomposition products:	Severe overheating may produce Hydrogen Chloride gas and Aluminium Oxide.
Hazardous polymerisation:	Will not occur.
Label safety and risk phrases: R36/38; Irritating to eyes and skin, S24/25; Avoid contact with skin and eyes, S36/37/39; Wear suitable protective clothing, gloves and eye/face protection.	

HEALTH HAZARD DATA

Threshold limit value: TWA 2 mg (Al)/m³ (as mist) [Ref - ACGIH soluble Al salts].

TWA: the Time-Weighted Average airborne concentrations over an eight-hour, for a five-day working week over an entire working life.

EFFECTS OF EXPOSURE

Eyes (Contact):	Irritation and redness.
Skin (Contact & absorption):	May cause skin irritation with prolonged contact. A mild human skin irritant.
Inhalation (breathing):	No vapour, product is not volatile. Mist could cause irritation to mucous tissue.
Ingestion (swallowing):	Nausea and vomiting.

FIRST AID

Eyes (contact):	Flush with water for 15 minutes. Seek medical attention.
Skin (contact):	Remove contaminated clothing. Flush affected areas with soap and water.
Inhalation (breathing):	No vapour. If inhaled as mist treat symptomatically.
Ingestion (Swallowing):	Do not cause vomiting, give water to drink. NEVER give water to unconscious patient.

SPILL OR LEAK PROCEDURE

Steps to be taken in case material is released or spilled: Prevent drain or sewer contamination with absorbent such as sand or sawdust etc. Collect for disposal. Hose final residues to drain.

Waste disposal method: Refer to local waste disposal authority.

SAFE HANDLING INFORMATION

SPECIAL PROTECTION INFORMATION

Respiratory protection:	None required in normal operations. Fit respirator if application generates mist.
Ventilation:	Local exhaust recommended.
Protective gloves:	PVC or rubber.
Eye protection:	Chemical goggles.
Other protective equipment:	None required.
Toxicity data:	(ex "Sax's, Dangerous Properties of Industrial Materials" Ed. 8) - Skn-hmn 150 mg/3D-I MLD
Safety Profile:	A mild human skin irritant.

SPECIAL PRECAUTIONS

Handling & storage:	Do not store in metal drums. Store in cool place and out of direct sunlight if possible.
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Environmental impact:

Environmental fate and distribution:	Not a persistent pollutant, can cause coagulation of solids in aqueous suspension.
Toxicity:	Low level toxicity.
Effect on effluent treatment:	Used as a coagulant in water treatment, may settle out finely divided solids from aqueous streams.

EMERGENCY CONTACTS:

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[This MSDS consists of 3 pages, please advise if your document does not contain the same number of pages as it will not be complete]

This MSDS summarises our best knowledge of health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

Please contact the company if any further information is required.