MATERIAL SAFETY DATA SHEET

Poly Aluminium Chloride

1. Chemical Product and Company Identification

Product Identification

Chemical Name	Poly Aluminium Chloride (10%, 18%, 30%)
Common Name	Poly Aluminium Chloride (PAC)
Formula	AlCl3 - [Al2(OH)nCl6-n·XH2O]m (m≤10, n=1-5)
Molecular Weight	241.43
Manufacturer	Cosmo Chemistry India Pvt. Ltd.
Contact No.	+91 979797 7958
Supplied By	Cosmo Chemistry India Pvt. Ltd.
Address	Office No. 713, 7th Floor, Millennium Business Hub, Sarthana Jakatnaka, Varachha Main Road, Surat, Gujarat, India – 395006
Email	info@cosmochemistryindia.com

2. Composition / Information on Ingredients

Chemical Name	**CAS Number**	**Weight %**
Poly Aluminium Chloride	1327-41-9	29-31 (as Aluminium Oxide)
		38-42 (as Basicity)
		33-35 (as Chloride)

Toxicological data on ingredients: see Section 11.

3. Hazards Identification

CAS No.	1327-41-9

Person-related safety precautions

Product is an irritant to eyes and a sensitizer to skin. Use all necessary means to clean up spill safely. Provide adequate ventilation to spill area. Approved breathing apparatus may be necessary.

Measures for environmental protection: Do not allow to enter sewers, surface or ground water.

Measures for cleaning/collecting: Stop leaks. Clean up spill immediately. Build dikes as necessary to contain flow of large spills. Do not allow liquid to enter stream or waterways. For small spills, use soda ash to neutralize, and inert material to absorb, or wash product to a chemical sewer.

Additional information: No dangerous substances are released.

Emergency Overview – Potential Acute Health Effects

Hazardous in case of skin contact (irritant, corrosive), eye contact (irritant, corrosive), and ingestion. Slightly hazardous in case of inhalation. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching.

Potential Chronic Health Effects

Carcinogenic Effects	Not available
Mutagenic Effects	Not available
Teratogenic Effects	Not available
Developmental Toxicity	Not available

4. First Aid Measures

General Information	No special measures required.
After Inhalation	Remove person to non-contaminated air. Get immediate medical attention.
After Skin Contact	Wash skin thoroughly with soap and water, remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention if irritation develops.
After Eye Contact	Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential for maximum effectiveness. Seek medical attention.
After Swallowing	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical help immediately. If possible, give large amounts of water to drink. If vomiting occurs spontaneously, keep airway clear.
Information for Doctor	Aluminium soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents. Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5. Fire Fighting Measures

Suitable Extinguishing Agents	Product does not burn. Use water to keep containers cool.
Protective Equipment	Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing, and should avoid inhaling any combustion products.

6. Accidental Release Measures

Wear appropriate protective equipment.

Person-related safety precautions

Product is an irritant to eyes and a sensitizer to skin. Use all necessary means to clean up spill safely. Provide adequate ventilation to spill area. Approved breathing apparatus may be necessary.

Measures for environmental protection: Do not allow to enter sewers, surface or ground water.

Measures for cleaning/collecting: Stop leaks. Clean up spill immediately. Build dikes as necessary to contain flow of large spills. Do not allow liquid to enter stream or waterways. For small spills, use soda ash to neutralize, and inert material to absorb, or wash product to a chemical sewer.

Additional information: No dangerous substances are released.

7. Handling and Storage

Handling

Information for safe handling: May be harmful if swallowed or inhaled. Keep away from heat and open flame.

Information about fire and explosion protection: No special measures required.

Storage

Requirements to be met by storerooms and receptacles: Store in a cool dry place away from direct heat. Keep container tightly closed when not in use.

Information about storage in one common storage facility: Store away from incompatible materials.

Further information about storage conditions: Do not store in unlined metal containers.

8. Exposure Control / Personal Protection

Additional information about design of technical facilities: Provide adequate local exhaust ventilation to minimize worker exposure.

Ingredients with limit values that require monitoring at the workplace: Not required.

Personal Protective Equipment

General Protective and Hygienic Measures	Avoid prolonged inhalation of heated vapors. Wear standard work clothing and work shoes. A safety shower and eye wash should be located in the immediate area.
Respiratory Protection	When exposures exceed the PEL, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134.

Hand Protection	Protective gloves impermeable and resistant to the product must be used. Selection depends on material quality and varies by manufacturer. Break-through time must be verified with the glove manufacturer.
Eye Protection	Safety glasses with side shield.
Body Protection	Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.

9. Physical and Chemical Properties

Appearance / Form	Clear liquid / powder
Colour	Colourless to light yellow
Odour	No appreciable odour
Melting Point / Range	-20°C
Boiling Point / Range	120°C
Flash Point	Not applicable
Danger of Explosion	Product does not present an explosion hazard
Vapour Pressure at 20°C	18 mmHg
Density	Not determined
Solubility in / Miscibility with Water	Soluble

10. Stability and Reactivity

Thermal Decomposition / Conditions to Avoid	Corrosive liquid. Avoid storage in unlined metal containers. Product may slowly corrode iron, brass, copper, aluminium and mild steel.
Materials to Avoid	Alkalis
Dangerous Reactions	No dangerous reactions known
Dangerous Decomposition Products	Thermal decomposition may release toxic and/or hazardous gases such as chlorine and hydrochloric acid

11. Toxicological Information

Acute Toxicity

LD/LC50 values relevant for classification: Oral LD50 > 12.79 mg/kg (rat)

Primary Irritant Effect – Skin	May cause mild skin irritation
Primary Irritant Effect – Eye	Irritating effect
Sensitization	No sensitizing effects known

Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us. The substance is not subject to classification according to the latest version of the EU lists.

Acute Effects (Acute Toxicity, Irritation and Corrosivity)

Skin	Dermatitis
Eye	Irritation and burns
Inhalation	Nose and respiratory irritation
Ingestion	Toxic; nausea, vomiting, diarrhoea, burns to mucous membrane, liver and kidney damage

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction): Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

12. Ecological Information

Results of PBT and vPvB assessment: to be provided in the registration dossier.

13. Disposal Considerations

Product – Recommendation

Wastes must be tested using methods described in 40 CFR Part 261 to determine if they meet applicable definitions of hazardous waste.

Uncleaned Packaging – Recommendation

Contain and collect using absorbent material if needed. Place collected material into properly labeled, suitable containers for proper disposal. Dispose in accordance with applicable MOEF, CPCB & GPCB regulations.

14. Transport Information

Land Transport ADR/RID (cross-border) – Class	-
Maritime Transport IMDG – Class	-
Marine Pollutant	No

Air Transport ICAO-TI and IATA-DGR – Class	-
UN "Model Regulation"	-
Special Provisions for Transport	Not available

Further Information: Vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

15. Regulatory Information

Health Hazard	3
Fire Hazard	0
Reactivity	0
Personal Protection / Protective Equipment	Hand gloves, full suit, vapor respirator. Use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Use face shield.

This product has been classified according to the hazard criteria of the MOEF, CPCB, GPCB & DISH Regulations, and the MSDS contains all required information.

16. Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and Acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. RID: Regulations Concerning the International Transport of Dangerous Goods by Rail. IMDG: International Maritime Code for Dangerous Goods. IATA: International Air Transport Association. IATA-DGR: Dangerous Goods Regulations by IATA. ICAO: International Civil Aviation Organization. ICAO-TI: Technical Instructions by ICAO. EINECS: European Inventory of Existing Commercial Chemical Substances. CAS: Chemical Abstracts Service (division of the American Chemical Society).

Sources: Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Preparation Information

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