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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Product: Polyaluminium Chloride (PAC) 28%	**Revision date:** 2026-10-29	**Version:** 1.0	**Brand:** Richest

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

Product name	Polyaluminium Chloride (PAC) 28%
Synonyms	Polyaluminium chloride; Aluminium chlorohydrate; PAC
CAS No.	1327-41-9
EC No.	215-477-2
Molecular formula	[Al2(OH)nCl6-n]m
Molecular weight	Variable (inorganic polymer)
Relevant identified uses	Coagulant for drinking water and industrial/municipal wastewater treatment; papermaking.
Uses advised against	None
Company	Richest Group Ltd.
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SECTION 2: Hazards identification

GHS Classification	Not classified
Pictogram(s)	None
Signal word	None
Hazard statement(s)	None
Precautionary statement(s)	None

Other hazards	None known.

SECTION 3: Composition/information on ingredients

Component	Polyaluminium chloride
CAS No.	1327-41-9
EC No.	215-477-2
Classification	Not classified
Concentration (%)	≤100 %

SECTION 4: First aid measures

If inhaled	Remove person to fresh air and keep comfortable for breathing. If breathing is difficult or irritation persists, seek medical attention.
In case of skin contact	Take off contaminated clothing. Wash with soap and plenty of water. If irritation occurs, seek medical advice.
In case of eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.
If swallowed	Rinse mouth. Do NOT induce vomiting. Seek medical attention if large amounts are swallowed or if you feel unwell.
Most important symptoms and effects	May cause mechanical irritation of eyes, skin and respiratory tract. Ingestion of large amounts may cause gastrointestinal discomfort.
Indication of any immediate medical attention	Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media	The product is non-flammable. Use extinguishing media appropriate to the surrounding fire: water spray, foam, dry powder, carbon dioxide (CO2).
Unsuitable extinguishing media	None.
Special hazards arising from the chemical	May emit hydrogen chloride gas on strong heating.
Advice for firefighters	Wear self-contained breathing apparatus and full protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective	Avoid dust formation and inhalation of dust. Wear appropriate personal

equipment and emergency procedures	protective equipment (see section 8).
Environmental precautions	Prevent further leakage or spillage. Do not let large quantities enter drains or waterways.
Methods and materials for containment and cleaning up	Sweep up and shovel into suitable, dry, closed containers for disposal. Flush residues with water.

SECTION 7: Handling and storage

Precautions for safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Provide adequate ventilation.
Conditions for safe storage, including any incompatibilities	Stored indoors in a dry, ventilated and cool place; do not get wet. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

Occupational exposure limit values	No specific occupational exposure limit established; observe general occupational dust limits (inhalable dust 10 mg/m3; respirable dust 3 mg/m3).
Biological limit values	None established.
Appropriate engineering controls	Ensure adequate ventilation. Use local exhaust ventilation where dust is generated.
Eye/face protection	Tightly fitting safety goggles or safety glasses with side-shields.
Skin protection	Handle with impervious gloves. Wash and dry hands after use.
Body protection	Wear appropriate protective clothing.
Respiratory protection	In case of dust formation, wear a suitable particulate respirator.
Thermal hazards	None known.

SECTION 9: Physical and chemical properties

Physical state	Yellow powder
Colour	Yellow
Odour	Odourless
Melting point / freezing point	Decomposes on heating before melting
Boiling point or initial boiling point and boiling range	Not applicable (inorganic solid, decomposes on heating)

Flammability	Non-flammable
Lower and upper explosion limit / flammability limit	Not applicable (non-combustible)
Flash point	Not applicable
Auto-ignition temperature	Not applicable (non-combustible)
Decomposition temperature	>190 °C (may release hydrogen chloride on strong heating)
pH	3.0-5.0 (1 % aqueous solution)
Kinematic viscosity	Not applicable (solid)
Solubility	Soluble in water
Partition coefficient n-octanol/water	Not applicable (inorganic polymer)
Vapour pressure	Not applicable (non-volatile solid)
Density and/or relative density	No data available
Relative vapour density	Not applicable (non-volatile)
Particle characteristics	Powder

SECTION 10: Stability and reactivity

Reactivity	Hydrolyses in water; reacts with strong bases.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	None known under normal conditions of use.
Conditions to avoid	Moisture (do not get wet) and heat.
Incompatible materials	Strong bases; aqueous solution is corrosive to aluminium, zinc and mild steel.
Hazardous decomposition products	Hydrogen chloride gas (on strong heating).

SECTION 11: Toxicological information

Acute toxicity - Oral / Inhalation / Dermal	LD50 Oral - Rat - 3,730 mg/kg
Skin corrosion/irritation	Dust may cause mechanical irritation; aqueous solution is acidic (pH 3.0-5.0).
Serious eye damage/irritation	Dust may cause eye irritation.
Respiratory or skin sensitization	Not expected to cause sensitization.

Germ cell mutagenicity	Not mutagenic (Ames test with aluminium salts: negative).
Carcinogenicity	Not classified (aluminium salts not listed by IARC/NTP).
Reproductive toxicity	Not classified (based on available data)
STOT - single exposure	None known.
STOT - repeated exposure	None known.
Aspiration hazard	Not applicable (solid).

SECTION 12: Ecological information

Toxicity to fish / daphnia / algae	Aluminium ions hydrolyse and precipitate as aluminium hydroxide in natural waters (low bioavailability); high concentrations may lower pH locally.
Persistence and degradability	Inorganic substance; biodegradation is not applicable.
Bioaccumulative potential	Not expected to bioaccumulate (inorganic; precipitates as Al(OH)3).
Mobility in soil	Hydrolyses and precipitates in water/soil; low mobility.
Other adverse effects	Large spills may alter the pH of receiving water.

SECTION 13: Disposal considerations

Product disposal methods	Dispose of contents in accordance with local, regional and national regulations. Offer surplus and non-recyclable product to a licensed disposal company.
Contaminated packaging	Dispose of as unused product or in accordance with local regulations.

SECTION 14: Transport information

UN Number (ADR/RID, IMDG, IATA)	Not regulated as dangerous goods
UN Proper Shipping Name	Not regulated as dangerous goods
Transport hazard class(es)	Not regulated as dangerous goods
Packing group	Not regulated as dangerous goods
Environmental hazards (Marine pollutant)	No
Special precautions for user	None known.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product	EINECS: Listed; TSCA (USA): Listed; IECSC (China): Listed; DSL (Canada): Listed; AICS (Australia): Listed.

SECTION 16: Other information

Full text of H-Statements	None
Revision date	2026-10-29
Version	1.0

Abbreviations and acronyms: CAS: Chemical Abstracts Service; EC: European Commission; EINECS: European Inventory of Existing Commercial Chemical Substances; ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road; RID: Regulation concerning the International Carriage of Dangerous Goods by Rail; IMDG: International Maritime Dangerous Goods; IATA: International Air Transport Association; TWA: Time Weighted Average; STEL: Short Term Exposure Limit; LD50: Lethal Dose 50%; LC50: Lethal Concentration 50%; EC50: Effective Concentration 50%; PBT: Persistent, Bioaccumulative and Toxic; vPvB: very Persistent and very Bioaccumulative; SDS: Safety Data Sheet.

References: ECHA - European Chemicals Agency, https://echa.europa.eu/; IPCS - International Chemical Safety Cards (ICSC), http://www.ilo.org/; HSDB - Hazardous Substances Data Bank; eChemPortal - OECD Global Portal to Information on Chemical Substances; ERG - Emergency Response Guidebook by U.S. DOT.

Disclaimer: The information in this SDS is only applicable to the specified product and is provided in good faith. It is based on the knowledge available to Richest Group Ltd. at the date of issue and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not constitute any guarantee of the properties of the product. Richest Group Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.