

MATERIAL SAFETY DATA SHEET

Polyaluminum Chloride Solution

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

	<u>USA</u>	<u>CANADA</u>
Supplier:	Kemira Water Solutions, Inc. 316 Bartow Municipal Airport Bartow, Florida 33830	Kemira Water Solutions, Inc. of Canada 3405 Blvd. Marie Victorin Varenes, Québec J3X 1T6
Customer Service Telephones:	(800) 879-6353 (785) 842-7424 (800) 450-7352 - Polymers	(800) 465-6171 (450) 652-0665

Emergency Contacts (24 hr.)

FOR EMERGENCIES INVOLVING CHEMICAL SPILL OR RELEASE, CALL

CHEMTREC (800) 424-9300

USA (TOLL FREE)

CANUTEC (613) 996-6666

CANADA (CALL COLLECT)

Product Name:	Polyaluminum Chloride Solution
Chemical Family:	Polynuclear inorganic Salt
Formula:	$Al_2(OH)_xCl_{6-x}$ $0 < x < 6$
Synonym:	Poly(aluminum hydroxy)chloride; Aluminum chlorohydrate; PAX 10; PAX 11; PAX 14; PAX 18; PAX 28; PAX-XL1; PAX-XL9; PAX-XL19; PAX-XL30; PAX-XL30A; PAX-XL30C; PAX-XL31; PAX-XL31A; PAX-XL31C; PAX-XL32; PAX-XL32A; PAX-XL32C; PAX-XL37; PAX-XL39; PAX-XL39A; PAX-XL39C; PAX-XL60; PAX-XL70; PAX-XL71; PAX-XL72
MSDS Code:	PAX
Acceptable Product Uses:	Water treatment chemical

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number #</u>	<u>Concentration</u>	<u>ACGIH TWA</u>
Polyaluminum chloride	1327-41-9	8 – 24%	2 mg/m ³ (as Al)

WHMIS Classification: CLASS E

OSHA Classification: Physical: Corrosive Health: Corrosive

Target Organs: None known

3. HAZARDS IDENTIFICATION

Emergency Overview: Irritating to skin, eyes, and mucous membranes.

Carcinogenicity: Does not contain any known carcinogens or potential carcinogens.

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4. FIRST AID MEASURES

- General:** If you feel unwell, seek medical attention (show the label or this MSDS if possible). Ensure that medical personnel are aware of the material(s) involved.
- Skin Contact:** Remove all contaminated clothing, jewelry, and shoes. Remove contaminated clothing and wash before reuse. Wash affected area with soap or mild detergent and running water for at least 15 minutes. If irritation develops, get medical attention.
- Eye Contact:** Flush immediately with water for at least 15 minutes, occasionally lifting upper and lower lids to be sure rinsing is complete. Get medical attention.
- Inhalation:** Move to fresh air. Obtain medical attention if cough or other respiratory symptoms develop.
- Ingestion:** **DO NOT INDUCE VOMITING.** If conscious, drink water or milk of magnesia. Do not give anything by mouth to an unconscious person. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point	Not applicable. Will not burn
Flammable Limits (Lower)	Not applicable
Flammable Limits (Upper)	Not applicable
Auto Ignition Temperature	Not applicable
Combustion and Thermal Decomposition Products	Hydrogen chloride may be released in a fire. Aluminum oxide and oxides of sulfur.
Rate of Burning	Does not burn
Explosive Power	Not applicable
Sensitivity to Static Discharge	Not available

Fire and Explosion Hazards: During a fire, irritating/toxic and corrosive fumes may evolve.

Extinguishing Media: The substance is not combustible. Use extinguishing media appropriate to the surrounding fire. Containers can build up pressure in the event of a fire. As in any fire, wear SCBA, pressure demand, pressure-demand and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Spills, Leaks, or Release:

- **Restrict access** until clean-up operations are complete. Wear appropriate Personal Protective Equipment per Section 8. Ensure trained personnel conduct clean up and wear Personal Protective Equipment per Section 8.

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- **Stop discharge if possible.** Avoid personal risk.
- **Notify Authorities** if release exceeds reportable quantity per Section 15
- **Small Spills** – Absorb spill with clay or dry material and collect in appropriate container for disposal.
- **Large Spills** – Prevent entry into sewers and confined areas. Dike, if possible. Keep unnecessary people away, isolate area and deny entry. Collect in appropriate container for disposal.
- **Neutralize spill residuals** carefully with lime, limestone, or soda ash and collect in a suitable container for disposal. Flush area with water. Notify the appropriate environmental authorities.

7. HANDLING AND STORAGE

Handling: Handle all chemicals with respect. Review the label, this MSDS and any other applicable information before use. Keep separated from incompatible substances. Use appropriate Personal Protective Equipment per Section 8. Handle only with equipment, materials and supplies specified by their manufacturer as being compatible and appropriate for use with this product.

Storage: Material may be stored in tightly closed shipping containers, preferably the supplier's containers. Containers of this material may be hazardous when empty, since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Do not use metal containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Preventive Measures:

Engineering Controls: There should be enough local ventilation to circulate air. Ensure that eyewash station and safety showers are proximal to the workstation location.

Personal Protection Equipment:

Eye Protection: Wear splash resistant chemical goggles and, where splashing is possible, a full face shield. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to avoid skin contact.

Recommended Protective Material: Neoprene, Never use leather.

Respiratory Protection: Consider respirator warning properties before use.

- With limited contact use an appropriate chemical cartridge respirator with acid gas cartridge(s)

- When cleaning, decontaminating or performing maintenance on tanks, containers, piping systems and accessories, and in any other situations where airborne contaminants and/or dust could be generated, use protective equipment to protect against ingestion or inhalation. HEPA or air supplied respirator, full protective coveralls with head cover, gloves and boots or chemical suits, and boots are suggested.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear amber or colorless
Odor:	Pungent chlorine-like odor
Form:	Liquid
pH as is:	0.5-4.4
Vapor Pressure (mm Hg):	ca. 18 mm Hg at 20°C
Boiling Point:	100 – 110 °C
Specific Gravity):	1.15 – 1.40 @ 25 °C
Solubility (water):	soluble
Vapor Density (Air=1):	1.3
Percent Volatile by Vol.:	N/A
Freezing Point:	-20 to -5 °C

10. STABILITY AND REACTIVITY

Hazardous Decomposition Products: Thermal decomposition: after completely dry and heated to decomposition will produce sulfur oxides and aluminum oxides as well as HCl gas.

Chemical Stability: Stable at normal temperatures and pressure.

Conditions to Avoid: Avoid contact with mineral acids, excessive heat and bases/alkalis

Incompatibility with other Substances: Carbon steel, aluminum, carbon, brasses, and nylon.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Not available.

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Review Federal, State, Provincial, and Local government regulations prior to disposal. This material exhibits the characteristic of corrosivity to metals and other building materials and any disposal must comply with hazardous waste disposal requirements. Any residues and/or rinse waters from cleaning of tanks, containers, piping systems and accessories may be a hazardous characteristic waste and must be properly disposed of in accordance with federal, state, provincial and local laws.

RCRA: Test waste material for corrosivity, D002, prior to disposal

14. TRANSPORT INFORMATION

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	Canada (TDG)	U.S. (DOT)
Shipping Name	Corrosive liquid, acidic, inorganic, NOS.	Corrosive liquid, acidic, inorganic, NOS.
Hazard Class/Division	8	8
Identification No. Packing Group:	UN 3264 III	UN 3264 III

Transportation Emergency Telephone Numbers:

1-800-424-9300 CHEMTREC (USA)

1-613-996-6666 CANUTEC (CANADA) (CALL COLLECT)

IATA/ICAO Class: 8

15. REGULATORY INFORMATION

USA CLASSIFICATION:

OSHA Classification: Hazardous by definition of Hazard Communication Standard (29 CFR 1920.1200)

SARA Regulations sections 313 and 40 CFR 372: No

SARA Hazard Categories, SARA SECTIONS 311/312 (40CFR370.21):

Acute	Yes
Chronic	No
Fire	No
Reactive	No
Sudden Release	No
OSHA Process Safety (29CFR1910.119)	No

Clean Water Act Requirements: Designated as a hazardous substance under section 311(b)(2)(A) of the Federal Water Pollution Control Act and further regulated by the Clean Water Act Amendments of 1977 and 1978. These regulations apply to discharges of this substance.

TSCA: This substance or all ingredients of this product are listed on the Chemical Substances Inventory of the TSCA. Does not require reporting.

Other Regulations/Legislation which apply to this product:

California Proposition 65: No

Right-To-Know Lists: Massachusetts, New Jersey, Pennsylvania, California

This product does not contain, nor is it manufactured with, ozone-depleting substances.

CANADIAN CLASSIFICATION

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all information required by the CPR.

Controlled Products Regulation (WHMIS) Classification: E: Corrosive

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CEPA / Canadian Domestic Substances List (DSL): The substance in this product is on the Canadian Domestic Substances List (CEPA DSL).

SHELF LIFE: Please use within one year.

16. <u>OTHER INFORMATION</u>

National Fire Protection Association (NFPA) and Hazardous Materials Identification System (HMIS) Ratings:

	NFPA	HMIS
HEALTH	1	1
FIRE	0	0
REACTIVITY	0	0

4 = Extreme/Severe
3 = High/Serious
2 = Moderate
1 = Slight
0 = Minimum

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MSDS Revised on October 1, 2006 by Kemira Water Solutions HSE group