



MATERIAL SAFETY DATA SHEET

MSDS: 0081000  
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Kemira PAX-XL19**  
Synonyms: Poly(aluminumhydroxy)chloride; Aluminum chlorohydrate  
Product Description: Polyaluminum Chloride Solution  
Chemical Family: Polynuclear inorganic salt  
Intended/Recommended Use: Water treating chemical

KEMIRA WATER SOLUTIONS, INC., 316 BARTOW MUNICIPAL AIRPORT, BARTOW, FLORIDA 33830, USA  
For Product Information call 1-800/879-6353. Outside the USA and Canada call 1-785/842-7424.  
EMERGENCY PHONE: For emergency involving spill, leak, fire, exposure or accident call CHEMTREC: 1-800/424-9300.  
Outside the USA and Canada call 1-703/527-3887.

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS	
Component / CAS No.	45 - 55 % (w/w)
Poly(aluminum hydroxy)chloride	Not established (TWA)
	2 mg/m <sup>3</sup> as Al
	-
	OSHA (PEL): ACGIH (TLV) Carcinogen

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR:

Color: Clear amber or colorless  
Appearance: liquid  
Odor: pungent slight chlorine

STATEMENTS OF HAZARD:

WARNING! IRRITATING TO EYES, SKIN, RESPIRATORY AND DIGESTIVE TRACTS

POTENTIAL HEALTH EFFECTS

EFFECTS OF EXPOSURE:

Direct contact with this material may cause moderate eye and skin irritation. Inhalation overexposure to the mist or vapor may cause respiratory tract irritation. Refer to Section 11 for toxicology information on the regulated components of this product. The acute oral (rat) LD50 is estimated to be >2000 mg/kg.

4. FIRST AID MEASURES

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### Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. Give one or two glasses of water to drink and refer to medical personnel or take direction from either a physician or a poison control center.

### Skin Contact:

Do not reuse contaminated clothing without laundering. Wash immediately with plenty of water. Remove contaminated clothing and shoes without delay. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.

### Eye Contact:

In case of eye contact, immediately irrigate with plenty of water for 15 minutes. Obtain medical attention without delay for any symptoms of injury to the eye.

### Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Apply artificial respiration if patient is not breathing. Obtain medical attention immediately.

## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media:

The substance is not combustible. Use extinguishing media appropriate to the surrounding fire.  
NOTE: Also see "Section 10 - Stability and Reactivity"

### Protective Equipment:

Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection). Firefighters, and others exposed, wear self-contained breathing apparatus.

### Special Hazards:

Keep containers cool by spraying with water if exposed to fire. Decomposition releases may include hydrogen chlorides, aluminum oxides, and oxides of sulfur. During a fire, irritating/toxic and corrosive fumes may evolve.

### Mechanical/Static Sensitivity Statements:

None

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions:

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. Stop leak if possible. Avoid personal risk.

### Methods For Cleaning Up:

'Small Spills - Absorb spill with clay or dry material or neutralize with lime, limestone or soda ash and collect in appropriate container for disposal. Neutralization with soda ash can generate carbon dioxide so additional ventilation may be necessary.  
'Large Spills - Prevent entry into sewers and confined areas. Dike, if possible. Keep unnecessary people away, isolate area and deny entry. Pump liquid material into appropriate vessels as possible or absorb spill with clay absorbents or non-reactive dry materials and collect in appropriate container for disposal.  
Neutralize spill residuals carefully with lime, limestone, or soda ash and collect in suitable container for disposal. Flush area with water. This could generate carbon dioxide so additional ventilation may be necessary.  
Notify Authorities if release exceeds reportable quantity per Section 15

## 7. HANDLING AND STORAGE

### HANDLING

**Precautionary Measures:** Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

**Special Handling Statements:** 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

Prevent material from coming in contact with common metals. Material may be stored in tightly closed shipping containers, preferably the suppliers 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. Product should be used within one (1) year.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Measures:

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

### Respiratory Protection:

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

### Eye Protection:

Eye/wash equipment and safety shower should be provided in areas of potential exposure. Wear eye/face protection such as chemical splash and safety shower should be provided in areas of potential exposure. Wear eye/face protection such

### Skin Protection:

Wear impermeable gloves and suitable protective clothing. Avoid skin contact.

### Additional Advice:

Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Color:

Clear amber or colorless

### Appearance:

liquid

### Odor:

pungent slight chlorine

### Boiling Point:

100 - 110 °C

### Melting Point:

> -5 °C 23 °F

### Vapor Pressure:

18mm Hg @ 20 °C

### Specific Gravity/Density:

1.33 - 1.35 @ 25 °C

### Vapor Density:

1.3

### Percent Volatile (% by wt.):

Not available

### pH:

4.0 - 4.4 30% solution

### Saturation in Air (% By Vol.):

Not applicable

### Evaporation Rate:

Not applicable

### Solubility in Water:

Complete

### Volatile Organic Content:

None

### Flash Point:

Not applicable

### Flammable Limits (% By Vol):

Not applicable

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Autoignition Temperature: Not applicable  
 Decomposition Temperature: Not available  
 Partition coefficient (n-octanol/water): Not available  
 Odor Threshold: Not available

## 10. STABILITY AND REACTIVITY

**Stability:** Stable  
**Conditions To Avoid:** Avoid contact with mineral acids, excessive heat and bases/alkalis.  
**Polymerization:** Will not occur  
**Conditions To Avoid:** None known  
**Materials To Avoid:** Metals such as iron or steel which are subject to corrosion. Carbon steel, aluminum, carbon, brasses, and nylon.  
**Hazardous Decomposition Products:** Thermal decomposition: after completely dry and heated to decomposition will produce sulfur oxides and aluminum oxides as well as HCL gas.

## 11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section 3. HAZARDS IDENTIFICATION. Toxicological information on the regulated components of this product is as follows:

Polyaluminum chloride (PAC) has an estimated acute oral (rat) LD50 of >13.0 g/kg. Aqueous solutions of PAC are very acidic. Direct contact may cause moderate to severe eye and skin irritation. The acute oral (mouse) LD50 for aluminum chloride is 770 mg/kg. The dermal (rabbit) LD50 is >2000 mg/kg. Direct skin contact with the soluble salts of aluminum results in moderate irritation.

## 12. ECOLOGICAL INFORMATION

### Ecological Assessment

The ecological properties of this material have not been fully investigated. This material is not expected to be harmful to fish or aquatic organisms.

### FISH TEST RESULTS

**Test:** Acute toxicity, freshwater (EPA Whole Effluent Toxicity Method 600/4-90/027F)  
**Duration:** 48 hr.

**Species:** Fathead Minnow (*Pimephales promelas*)  
LC50

Information based on a structurally and compositionally similar material

**Duration:** 96 hr

**Species:** Zebra Fish (*Brachydanio rerio*)  
LC50

Information based on a structurally and compositionally similar material

### INVERTEBRATE TEST RESULTS

**Test:** EPA Whole Effluent Toxicity Method 600/4-90/027F  
**Duration:** 48 hr

**Species:** Water Flea (*Ceriodaphnia dubia*)  
LC50

Information based on a structurally and compositionally similar material

**Duration:** 48 hr

**Species:** Water Flea (*Daphnia magna*)  
EC50

Information based on a structurally and compositionally similar material

## 13. DISPOSAL CONSIDERATIONS

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The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA listed hazardous waste or has any of the four RCRA hazardous waste characteristics. Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA listed hazardous waste; information contained in Section 15 of this MSDS is not intended to indicate if the product is a listed hazardous waste. RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. Kemira encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. Kemira recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. Kemira has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

### 14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

#### US DOT

Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s.  
 Hazard Class: 8  
 Packing Group: III  
 UN/ID Number: UN3264  
 Transport Label Required: Corrosive  
 Technical Name (N.O.S.): Contains polyaluminum chloride  
 Hazardous Substances:  
 Not applicable

#### TRANSPORT CANADA

Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s.  
 Hazard Class: 8  
 Packing Group: III  
 UN Number: UN3264  
 Transport Label Required: Corrosive  
 Technical Name (N.O.S.): Contains polyaluminum chloride

#### ICAO / IATA

Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s.  
 Hazard Class: 8  
 Packing Group: III  
 UN Number: UN3264  
 Transport Label Required: Corrosive  
 Packing Instructions/Maximum Net Quantity Per Package:  
 Passenger Aircraft: See regulations  
 Cargo Aircraft: See regulations  
 Technical Name (N.O.S.): Contains polyaluminum chloride

#### IMO

Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s.  
 Hazard Class: 8  
 UN Number: UN3264

Packing Group: III  
 Transport Label Required: Corrosive  
 Technical Name (N.O.S.): Contains polyaluminum chloride

## 15. REGULATORY INFORMATION

### INVENTORY INFORMATION

**United States (USA):** All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

**Canada:** All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

**European Union (EU):** All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

**Australia:** All components of this product are included in the Australian Inventory of Chemical Substances (AICS).

**China:** All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

**Korea:** All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

**Philippines:** All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

### OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

Component / CAS No.	%	TPQ (lbs)	RQ(lbs)	TSCA 12B
Poly(aluminum hydroxy) chloride	45 - 55	None	0	S313
				No
				No

This product does not contain any components regulated under these sections of the EPA

### PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA

- Acute

## 16. OTHER INFORMATION

### NFPA Hazard Rating (National Fire Protection Association)

Health: 1 - Materials that, under emergency conditions, can cause significant irritation.

Fire: 0 - Materials that will not burn.

Reactivity: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

### Reasons For Issue:

Revised Section 12

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