Aluminum Chlorohydrate

Safety Data Sheet


Revision Date: 05/14/2018 Date of Issue: 05/14/2015

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture
Product Name: Aluminum Chlorohydrate

Intended Use of the Product

Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Paper machine pitch control. Retention and drainage aid, pitch control, and neutral size bonding agent for paper machines operating in the pH range of 6.0 to 7.8. Point of application to the paper machine is critical in obtaining maximum benefit. This product may be used on fourdrinier and cylinder machines, as well as twin wire formers. It is effective for a variety of paper and board grades.

Name, Address, and Telephone of the Responsible Party

Manufacturer
CHEMTRADE LOGISTICS INC.
155 Gordon Baker Road
Suite 300
Toronto, Ontario M2H 3N5
For SDS Info: (416) 496-5856
www.chemtradelogistics.com

Emergency Telephone Number

Emergency Number
Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300
INTERNATIONAL: +1-703-741-5970
Chemtrade Emergency Contact: (866) 416-4404
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification
Eye Irrit. 2A H319

Full text of hazard classes and H-statements : see section 16

Label Elements

GHS Labeling
Hazard Pictograms

Signal Word
Warning

Hazard Statements
H319 - Causes serious eye irritation.

Precautionary Statements
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing, and eye protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

Other Hazards
Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

Unknown acute toxicity
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
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### Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%*</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>50</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aluminum chloride, basic</td>
<td>(CAS No) 1327-41-9</td>
<td>50</td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

### SECTION 4: FIRST AID MEASURES

**Description of First-aid Measures**

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

**Most Important Symptoms and Effects Both Acute and Delayed**

**General:** Causes serious eye irritation.

**Inhalation:** Prolonged exposure may cause irritation.

**Skin Contact:** Prolonged exposure may cause skin irritation.

**Eye Contact:** Contact causes severe irritation with redness and swelling of the conjunctiva.

**Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

### SECTION 5: FIRE-FIGHTING MEASURES

**Extinguishing Media**

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**Special Hazards Arising From the Substance or Mixture**

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

**Advice for Firefighters**

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.


Reference to Other Sections

Refer to Section 9 for flammability properties.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid breathing (vapor, mist, spray). Avoid all contact with skin, eyes, or clothing.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).


For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

Environmental Precautions
Prevent entry to sewers and public waters.

Methods and Materials for Containment and Cleaning Up
For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections
See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE
Precautions for Safe Handling
Additional Hazards When Processed: Handle in accordance with standard industrial practices, and ensure appropriate ventilation. Avoid all contact with skin, eyes, and clothing. Do not release into the environment. Hydrochloric acid fumes may be generated if heated.
Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid breathing vapors, mist, and spray. Avoid contact with skin, eyes and clothing.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures: Comply with applicable regulations.
Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from extremely high or low temperatures and incompatible materials.
Incompatible Materials: Strong acids, strong bases, strong oxidizers.
Specific End Use(s)
Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Paper machine pitch control. Retention and drainage aid, pitch control, and neutral size bonding agent for paper machines operating in the pH range of 6.0 to 7.8. Point of application to the paper machine is critical in obtaining maximum benefit. This product may be used on fourdrinier and cylinder machines, as well as twin wire formers. It is effective for a variety of paper and board grades.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
Control Parameters
For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Exposure Controls
Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Chemical resistant clothing materials and fabrics.
Hand Protection: Wear protective gloves.
Eye Protection: Chemical safety goggles.
Skin and Body Protection: Wear suitable protective clothing.
Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.
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Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
Information on Basic Physical and Chemical Properties
- Physical State: Liquid
- Appearance: Colorless
- Odor: Not available
- Odor Threshold: Not available
- pH: 2.5 - 4.4
- Evaporation Rate: Not available
- Melting Point: Not applicable
- Freezing Point: -12 – -1 °C (10 – 30 °F)
- Boiling Point: Not available
- Flash Point: Not Flammable
- Auto-ignition Temperature: Not available
- Decomposition Temperature: Not available
- Flammability (solid, gas): Not applicable
- Lower Flammable Limit: Not available
- Upper Flammable Limit: Not available
- Vapor Pressure: Not available
- Relative Vapor Density at 20°C: Not available
- Specific Gravity: 1.09 - 1.44
- Solubility: 100%
- Partition Coefficient: N-Octanol/Water: Not available
- Viscosity: Not available

SECTION 10: STABILITY AND REACTIVITY
Reactivity: May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas.
Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Conditions to Avoid: Extremely high or low temperatures, and incompatible materials.
Incompatible Materials: Strong acids, strong bases, strong oxidizers.
Hazardous Decomposition Products: None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION
Information on Toxicological Effects - Product
- Acute Toxicity (Oral): Not classified
- Acute Toxicity (Dermal): Not classified
- Acute Toxicity (Inhalation): Not classified
- LD50 and LC50 Data: Not available
- Skin Corrosion/Irritation: Not classified
- pH: 2.5 - 4.4
- Eye Damage/Irritation: Causes serious eye irritation.
- pH: 2.5 - 4.4
- Respiratory or Skin Sensitization: Not classified
- Germ Cell Mutagenicity: Not classified
- Carcinogenicity: Not classified
- Specific Target Organ Toxicity (Repeated Exposure): Not classified
- Reproductive Toxicity: Not classified
- Specific Target Organ Toxicity (Single Exposure): Not classified
- Aspiration Hazard: Not classified
- Symptoms/Effects After Inhalation: Prolonged exposure may cause irritation.
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Symptoms/Effects After Skin Contact: Prolonged exposure may cause skin irritation.
Symptoms/Effects After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.
Symptoms/Effects After Ingestion: Ingestion may cause adverse effects.
Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)
LD50 and LC50 Data:

<table>
<thead>
<tr>
<th></th>
<th>LD50 Oral Rat</th>
<th>LD50 Dermal Rat</th>
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<tbody>
<tr>
<td>Water (7732-18-5)</td>
<td>&gt; 90000 mg/kg</td>
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<tr>
<td>Aluminum chloride, basic (1327-41-9)</td>
<td>&gt; 2000 mg/kg</td>
<td>&gt; 2000 mg/kg</td>
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</table>

SECTION 12: ECOLOGICAL INFORMATION

Toxicity
Ecology - General: Not classified.
Persistence and Degradability

<table>
<thead>
<tr>
<th></th>
<th>Persistence and Degradability</th>
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Bioaccumulative Potential

<table>
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<tr>
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<tbody>
<tr>
<td>Aluminum Chlorohydrate</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

Mobility in Soil
Not available

Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

Not regulated for transport according to: US DOT, IMDG, IATA, and Canada’s TDG.

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>CERCLA RQ</th>
<th>EPCRA 304 RQ</th>
<th>SARA 302 TPQ</th>
<th>SARA 313</th>
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<tbody>
<tr>
<td>Aluminum chloride, basic (1327-41-9)</td>
<td>Not present</td>
<td>Not present</td>
<td>Not present</td>
<td>No</td>
</tr>
</tbody>
</table>

SARA 311/312

Aluminum Chlorohydrate
Immediate (acute) health hazard

US TSCA Flags
Not present

US State Regulations

California Proposition 65

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Carcinogenicity</th>
<th>Developmental Toxicity</th>
<th>Female Reproductive Toxicity</th>
<th>Male Reproductive Toxicity</th>
</tr>
</thead>
</table>
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Aluminum chloride, basic (1327-41-9) No No No No

State Right-To-Know Lists

Aluminum chloride, basic (1327-41-9)

U.S. - Massachusetts - Right To Know List - No
U.S. - New Jersey - Right to Know Hazardous Substance List - No
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List - No
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances - No
U.S. - Pennsylvania - RTK (Right to Know) List - No

Canadian Regulations

Aluminum chloride, basic (1327-41-9)

Listed on the Canadian DSL (Domestic Substances List)
Not listed on the Canadian NDSL (Non-Domestic Substances List)

International Inventories/Lists

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Australia AICS</th>
<th>Turkey CICR</th>
<th>Korea ECL</th>
<th>EU EINECS</th>
<th>EU ELINCS</th>
<th>EU SVHC</th>
<th>EU NLP</th>
<th>Mexico INSQ</th>
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<tbody>
<tr>
<td>Aluminum chloride, basic (1327-41-9)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Chemical Name (CAS No.)</td>
<td>China IECSC</td>
<td>Japan ENCS</td>
<td>Japan ISHL</td>
<td>Japan PDSCL</td>
<td>Japan PRTR</td>
<td>Philippines PICCS</td>
<td>New Zealand NZIOC</td>
<td>US TSCA</td>
</tr>
<tr>
<td>Aluminum chloride, basic (1327-41-9)</td>
<td>Yes</td>
<td>Yes</td>
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</table>

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 05/14/2018

Revision Summary

<table>
<thead>
<tr>
<th>Section</th>
<th>Change</th>
<th>Date Changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>NFPA/HMIS update</td>
<td>05/14/2018</td>
</tr>
</tbody>
</table>

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Hazardous Products Regulations (HPR).

NFPA 704

 NFPA Health Hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

 NFPA Fire Hazard : 0 - Materials that will not burn under typical dire conditions.

 NFPA Reactivity Hazard : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS Rating

 Health : 1 Slight Hazard - Irritation or minor reversible injury possible

 Flammability : 0 Minimal Hazard

 Physical : 0 Minimal Hazard

 PPE : See Section 8

GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Eye Irrit. 2A</th>
<th>Serious eye damage/eye irritation Category 2A</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>

International Inventories/Lists

AICS – Australian Inventory of Chemical Substances
ACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
ISHL - Japan Industrial Safety and Health Law
LC50 - Median Lethal Concentration
LD50 - Median Lethal Dose

05/14/2018 EN (English US) SDS#: CHE-6021S 6/7
Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA’S “Right to Know” (29 CFR 1910.1200) and Canada’s WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.