

Section 1: Product & Company Information**Product Identifier:** Aluminum Chlorohydrate Solution**Other Means of Identification**

Product Number: 174151

Recommended Use and Restrictions on Use

Recommended Use: This material is used as a water treatment coagulant.

Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information**Company Name:** CORECHEM Inc.**Address:** 4320 Greenway Drive
Knoxville, TN 37918 USA**Information Telephone Number:** 1-865-524-4239**Fax Number:** 1-865-524-3375**Website:** www.corecheminc.com**Contact Person:** Regulatory Manager**E-mail:** regulatory@corecheminc.com**Emergency Phone Number:** Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)**Section 2: Hazards Identification****GHS Hazard Classification(s)**

Not classified as hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Section 3: Composition/Information on Ingredients**Substance**

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Aluminum Chloride	Aluminum Chlorohydrate, Dialuminum Chloride Pentahydroxide	12042-91-0	~40	No

1. Information regarding the composition and the percentage ranges of the mixtures ingredients are not presented as its Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.

2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.

3. "—" Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures**General Information**

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

Inhalation

Supply fresh air. Rinse mouth and nose with water. Contact a physician.

Skin Contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

Ingestion

Do NOT induce vomiting. Rinse mouth with water. Drink 1 or 2 glasses of water or milk. If symptoms persist, call a physician. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed**Symptoms**

Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation

Indication of immediate medical attention and special treatment needed

Hazards

No data available

Treatment

Treat symptomatically. Symptoms may be delayed.

Section 5: Fire-Fighting Measures

General Fire Hazards

No data available.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media

Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific Hazards Arising from the Chemical

Corrosive to metals. Contact with metals may evolve flammable hydrogen gas. Hydrogen chloride may be released when heating above the decomposition temperature.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Use water spray or fog for cooling exposed containers.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray). Product is water-soluble and compatible with water treatment plants. Product reacts with soaps forming a hydroxide gel.

Methods and Materials for Containment and Clean-Up

Contain spills in dyke or use absorptive barriers. Remove larger spills using a vacuum truck. Must be disposed of in accordance with local and national regulations.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Cover the drains to prevent the product from entering the environment. If the product contaminates rivers and lakes or drains inform respective authorities.

Section 7: Handling and Storage

Precautions for Safe Handling

Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Use good housekeeping practices during storage, transfer and handling. Wear gloves in a suitable material such as PVC, Neoprene or Natural rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also consider the specific local conditions under which the product is used, such as the danger of cuts, abrasion and the contact time. Tightly fitted safety goggles must be worn. This material is used as a water treatment coagulant. When used in these applications, the product should be handled as described above to minimize worker exposure to lungs, eyes and skin.

Conditions for Safe Storage, including any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Product should be stored in dry conditions above freezing and below high temperatures (not >60°C). Avoid incompatible materials including non acid-proof metals such as aluminum, copper and iron, bases, unalloyed steel and galvanized surfaces.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Occupational exposure limit is 2mg/m³ as Aluminum for soluble Aluminum compounds.

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

Material transfer should be done under conditions of local exhaust ventilation to avoid breathing mist.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Wear safety glasses with side shields.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Skin should be covered by clothing at a minimum. Avoid excessive skin contact.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Liquid
Color: White to light yellow

Odor:

Not available.

Odor Threshold:

No data available.

pH:

Approximately 4 in a 15% aqueous solution.

Melting Point/Freezing Point:

Not applicable.

Initial Boiling Point and Boiling

110 – 115°C.

Range:

Flash Point:

Not flammable

Evaporation Rate (butyl acetate=1):

No data available.

Flammability (solid, gas):

No data available.

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: Not applicable.

Flammability Limit – Lower: Not applicable.

Explosive Limit – Upper: Not applicable.

Explosive Limit – Lower: Not applicable.

Vapor Pressure:

2.3 kPa

Vapor Density (air =1):

No data available.

Relative Density (water=1):

1.33 – 1.35 g/cm³

Solubility(ies):

Solubility in water: 100%

Solubility (other): No data available.

Partition coefficient

No data available.

(n-octanol/water):

Auto-Ignition Temperature:

Not applicable.

Decomposition Temperature:

No data available.

Viscosity:

(Dynamic) 10 mPa s

Other Information:

Molecular Weight: No data available.

Formula: No data available.

Section 10: Stability and Reactivity

Reactivity

Corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

Chemical Stability

Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Direct sunlight. Extremely high or low temperatures. Incompatible materials. Excessive heating after water evaporation for long periods of time can result in the evolution of HCl. Will react with caustics to form aluminum hydroxides. Can corrode ordinary grades of steel.

Incompatible Materials

Strong acids, strong bases, strong oxidizers. Nonacid-proof metals. Galvanized surfaces.

Hazardous Products Decomposition

Hydrochloric acid fumes may be generated.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Inhalation: May cause respiratory irritation.

Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye damage.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Aluminum Chloride (CAS # 1327-41-9): LD50 Rat >2000 mg/kg

Dermal

Aluminum Chloride (CAS # 1327-41-9): LD50 Rat >2000 mg/kg

Inhalation

No data available.

Repeated Dose Toxicity

No data available.

Skin Corrosion/Irritation

No data available.

Serious Eye Damage/Eye Irritation

No data available.

Respiratory/Skin Sensitization

No data available.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

Not classified. Read across from Aluminum Hydroxy Chloride reproductive / developmental toxicity screening test. NOAEL 1000 mg/kg/day (equivalent to 90 mg/kg bw/day Al³⁺) and Aluminum Citrate one year developmental and chronic neurotoxicity study (oral, rat).

Specific Target Organ Toxicity - Single Exposure

None known.

Specific Target Organ Toxicity - Repeated Exposure

None known.

Aspiration Hazard

Not classified.

Other Effects

None known.

Ecotoxicity**Acute Hazards to the Aquatic Environment****Fish**

Aluminum Chlorohydrate Solution: Zebra fish LC₅₀ (96h) 100 – 500 mg/l (OECD 203), Daphnia Magna EC₅₀ (48h) 397mg/l, EC₅₀ (bactéria) > 1000 mg/l Fermentation tube test.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment**Fish**

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability**Biodegradation**

Inorganic product, not degradable. Cannot be eliminated from water by biological purification processes.

BOD/COD Ratio

No data available.

Bioaccumulative Potential**Bioconcentration Factor (BCF)**

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log K_{ow})

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions

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

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information**US Federal Regulations****Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)**

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)**EPCRA 302 Extremely Hazardous Substance**

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2
Chronic Health Hazard: /
Flammability: 0
Physical Hazard: 0
Personal Protection: B

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0
Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared By: Regulatory Manager

Version #: 001

Issue Date: April 11, 2016

Last Revised By: Regulatory Assistant C

Last Revision Date: 12/5/2023

Current Revision: 02

Sections Revised: 2-12, 16

Key to Abbreviations and

Acronyms

ATE - Acute Toxicity Estimate	ACGIH - American Conference of Industrial Hygienists
BCF - Bioconcentration Factor	AIHA - American Industrial Hygiene Association
EC50 - Effective concentration, 50%	BEI - Biological Exposure Indices
IDHL - Immediately Dangerous to Life and Health	CAS - Chemical Abstracts Service
Kg - Kilogram	DOT - US Department of Transportation
l - Liter	EPA - US Environmental Protection Agency
lb - Pound	GHS - Globally Harmonized System of Classification and Labelling of Chemicals
LC50 - Lethal Concentration, 50%	IARC - International Agency for Research on Cancer
LD50 - Lethal Dose, 50%	IATA - International Air Transport Association
mg - milligram	IBC - Intermediate Bulk Container
ml - milliliter	IMDG - International Maritime Dangerous Goods
N/A - Not Applicable	NIOSH - National Institute for Occupational Safety and Health
N/D - Not Determined	NTP - National Toxicology Program
PEL - Permissible Exposure Limit	OSHA - US Occupational Health and Safety Administration
REL - Recommended Exposure Limit	SARA - US EPA Superfund Amendments and Reauthorization Act
STEL - Short-term Exposure Limit	TSCA - US EPA Toxic Substances Control Act
TWA - Time weighted average	UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

The information in this SDS was obtained from sources which we believe are reliable. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.