



SAFETY DATA SHEET

Revision date 2015-09-21

Revision number 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name Aluminum Chlorohydrate Solution
Product code 3204H
Synonyms Water And Wastewater Treatment Coagulant/Flocculant

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended use [RU] No information available
Uses advised against None known

1.3 Details of the supplier of the safety data sheet

Supplier
GEO Specialty Chemicals, Inc.
9213 Arch Street Pike
Little Rock, AR 72206
+1-800-453-2586

Only representative
GEO Specialty Chemicals UK Ltd
Charleston Road, Hardley, Hythe
Southampton, Hampshire SO45 3ZG
United Kingdom
Phone: +44 (0)23 80894666
Fax No: +44 (0)23 80243113

Responsibility Statement For further information, please contact safety-data-sheet-fp@geosc.com

1.4 Emergency telephone number

Emergency telephone 24 Hour Emergency Phone Number
GEO Specialty Chemicals UK Ltd
+44 (0)23 80891806

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Skin Corrosion/Irritation	Category 2
Serious eye damage/eye irritation	Category 2
Corrosive to metals	Category 1

2.2 Label elements

Classification according to Regulation (EC) No. 1272/2008 [CLP]



Signal word WARNING

Hazard statements

H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H290 - May be corrosive to metals

Precautionary statements

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
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P332 + P313 - If skin irritation occurs: Get medical advice/attention
 P362 - Take off contaminated clothing and wash before reuse
 P390 - Absorb spillage to prevent material damage
 P406 - Store in corrosive resistant container with a resistant inner liner

2.3 Other information

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Component	EU EINECS	weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Regulations
Aluminum Chlorohydrate 12042-91-0	234-933-1	50%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	In compliance
Water 7732-18-5	231-791-2	50%	Not Classified as Hazardous	In compliance

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact

Remove contact lenses, if worn. Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. If eye irritation persists: Get medical advice/attention.

Skin contact

Immediately wash thoroughly with soap and water, remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention if irritation should develop.

Ingestion

Seek medical attention immediately. Give large amounts of water to drink. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air.

4.2 Most important symptoms and effects, both acute and delayed**Most important symptoms and effects**

No information available.

Acute effects

Possible eye, skin and respiratory tract irritation.

Chronic effects

May aggravate existing skin, eye, and lung conditions. Persons with kidney disorders have an increased risk from exposure based on general information found on aluminum salts.

4.3 Indication of any immediate medical attention and special treatment needed**Note to physicians**

Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents. Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media**Suitable extinguishing media**

Water Spray, Carbon Dioxide, Foam, Dry Chemical.

Extinguishing media which must not be used for safety reasons

No information available

5.2 Special hazards arising from the substance or mixture**Special Hazard**

May produce hazardous fumes or hazardous decomposition products.

5.3 Advice for firefighters**Special protective equipment for firefighters**

Not determined.

Firefighting measures

Product is a water solution and nonflammable. In a fire, this product may build up pressure and rupture a sealed container; cool exposed containers with water spray. Use self-contained breathing apparatus in confined areas; avoid breathing mist or spray.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures**Personal precautions**

Wear suitable protective clothing and gloves.

6.2 Environmental precautions**Environmental precautions**

Do not permit run-off to get into sewers or surface waterways.

6.3 Methods and material for containment and cleaning up**Methods for cleaning up**

Stop leaks. Clear spills immediately. Contain large spill and remove using a vacuum truck. Soak up small spills with inert absorbent material and place in a labeled waste container for disposal. Ventilate area of leak or spill. Spills of solution are extremely slippery so all residue must be removed promptly.

6.4 Reference to other sections

See Section 12 for additional Ecological Information

7. HANDLING AND STORAGE**7.1 Precautions for safe handling****Advice on safe handling**

Keep container closed when not in use

Keep away from heat and open flame.

Avoid contact with eyes, skin and clothing

Wear chemical splash goggles, gloves, and protective clothing when handling.

Wash thoroughly after handling

Avoid breathing vapor or mist

Use with adequate ventilation and employ respiratory protection where mist or spray may be generated.

FOR INDUSTRIAL USE ONLY.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions**

Do not store in unlined metal containers.

Product may slowly corrode iron, brass, copper, aluminum, mild steel, and stainless steel.

Store in a cool, dry place away from direct heat.

Keep in tightly closed container.

7.3 Specific end use(s)**Specific use(s)**

Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****Occupational exposure limit value**

Component	European Union	United Kingdom	Spain	Germany
Aluminum Chlorohydrate 12042-91-0	NAV	NAV	NAV	NAV

Biological limit values

Component	European Union	United Kingdom	Spain	Germany
Aluminum Chlorohydrate 12042-91-0	NAV	NAV	NAV	NAV

Legend

NAV - Not available

8.2 Exposure controls**Personal Protective Equipment**

Eye/face Protection

Wear chemical splash goggles and face shield (when eye and face contact is possible due to splashing or spraying of material).

Hand Protection

Appropriate chemical resistant gloves should be worn.

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

If exposures exceed the PEL or TLV, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134.

Other personal protection data

Eyewash fountains and safety showers must be easily accessible.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	liquid
Color	colorless to yellow
Appearance	No information available
Odor	odorless
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	3.5	as is
Melting / freezing point	-7 °C / 19 °F	No information available
Boiling point / boiling range	No information available	No information available
Flash point	Not applicable	No information available
Evaporation rate	No information available	No information available
Flammability (solid, gas)	No information available	No information available
Flammability Limit in Air		
Upper flammability limit	No information available	No information available
Lower flammability limit	No information available	No information available
Vapor pressure	No information available	No information available
Vapor density	No information available	No information available
Specific gravity	1.33 - 1.35	No information available
Solubility (water)	Soluble	No information available
Solubility in other solvents	No information available	No information available
Partition coefficient: n-octanol/water	No information available	No information available

Autoignition temperature	Not applicable	No information available
Decomposition temperature	No information available	No information available
Kinematic viscosity	No information available	No information available
Dynamic viscosity	< 100 cps @ 20 °C	No information available
Density	11.0 - 11.3 lb/gal	No information available

9.2 Other information

Bulk Density	No information available
Explosive properties	No information available.
Oxidizing properties	No information available.
Softening point	No information available
Molecular weight	No information available
Volatile organic compounds (VOCs) content	No information available
Percent Volatile, wt.%	40 - 50%

10. STABILITY AND REACTIVITY**10.1 Reactivity****Reactivity**

No information available.

10.2 Chemical stability**Chemical stability**

Stable.

10.3 Possibility of hazardous reactions**Hazardous polymerization**

No.

10.4 Conditions to avoid**Conditions to avoid**

None

10.5 Incompatible materials**Materials to avoid**

Oxidizing agents.

10.6 Hazardous decomposition products**Hazardous decomposition products**Thermal decomposition may release toxic and/or hazardous gases such as Cl₂ and HCl.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute health hazard

Eye contact

May cause moderate eye irritation that can become severe with prolonged contact. Prolonged exposure to Aluminum salts may cause conjunctivitis.

Skin contact

May be harmful in contact with skin. Prolonged and/or repeated contact may cause skin irritation.

Ingestion

May cause irritation of the mouth, throat and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Inhalation

Inhalation of mist or vapor may cause respiratory tract irritation.

Acute toxicity - Product Information

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	No information available

Acute toxicity - Component Information

Component	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum Chlorohydrate 12042-91-0 (50%)	= 9187 mg/kg (Rat)	> 2000 mg/kg (Rat)	--

Skin corrosion/irritation

Irritating to skin

Serious eye damage/eye irritation

Causes serious eye irritation

Sensitization

No information available

Germ cell mutagenicity

No information available

Carcinogenicity

No information available

Reproductive toxicity

No information available

Specific target organ toxicity - Single exposure

No information available.

Specific target organ toxicity - Repeated exposure

No information available

Aspiration hazard

No information available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute aquatic toxicity - Product Information

Fish	LC 50 (96 hour, static) 776.4 mg/L <i>Pimephales promelas</i> (Fathead Minnow) ¹ EC 50 (96 hour, static) 265.5 mg/L <i>Pimephales promelas</i> (Fathead Minnow) ¹
Crustacea	LC 50 (48 hour, static) 803.8 mg/L <i>Ceriodaphnia dubia</i> (Water Flea) ¹ EC 50 (48 hour, static) 33.2 mg/L <i>Ceriodaphnia dubia</i> (Water Flea) ¹
Algae/aquatic plants	No information available

Acute aquatic toxicity - Ecotoxicity of Individual Components

Component	Algae/aquatic plants	Fish	Toxicity to daphnia and other aquatic invertebrates
Aluminum Chlorohydrate 12042-91-0	--	LC50 (96 h static) 100 - 500 mg/L (Brachydanio rerio)	--

12.2 Persistence and degradability

Persistence and degradability
No information available

12.3 Bioaccumulative potential

Bioaccumulative potential
No information available

12.4 Mobility in soil

Mobility
No information available

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment
No information available

12.6 Other adverse effects

Other information

¹ Generated from tests conducted by ECT-Superior Laboratories May 2010

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal of wastes

Do NOT mix with other chemical wastes. Do not put solutions containing this product into sewer systems. Dispose of product in an approved chemical waste landfill or incinerate in accordance with applicable Federal, state and local regulations. Do not re-use empty containers.

Contaminated packaging

Since empty containers retain product residue, follow label warnings even after container is emptied

14. TRANSPORT INFORMATION

DOT (US) NOT REGULATED BY DOT

This product is excepted from DOT regulations under 49 CFR 173.154(d) when shipped by road or railway. The product exception is referenced in 49 CFR 172.101 Table. Packaging material must not be aluminum, steel or be degraded by this product

14.1 UN number

14.2 Proper shipping name

14.3 Hazard class

14.4 Packing group

14.5 Environmental hazard

14.6 Special precautions for user

Land transport (ADR/RID)

14.1 UN number UN3264

14.2 Proper shipping name Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum Chloride Solution)

14.3 Hazard class 8

14.4 Packing group III

14.5 Environmental hazard

14.6 Special precautions for user

Inland waterway transport (ADN)

14.1 UN number UN3264

14.2 Proper shipping name Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum Chloride Solution)

14.3 Hazard class 8

14.4 Packing group III

14.5 Environmental hazard

14.6 Special precautions for user

Air transport (ICAO-TI / IATA-DGR)

14.1 UN number UN3264

14.2 Proper shipping name Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum Chloride Solution)

14.3 Hazard class 8

14.4 Packing group III

14.5 Environmental hazard

14.6 Special precautions for user

ERG Code 8L

Sea transport (IMDG)

14.1 UN number UN3264

14.2 Proper shipping name Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum Chloride Solution)

14.3 Hazard class 8

14.4 Packing group III

14.5 Environmental hazard

14.6 Special precautions for user

EmS F-A, S-B

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Harmonized Tariff Number

2827.32

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

Australia (AICS)

All ingredients are on the inventory or exempt from listing

Canada (DSL)

All ingredients are on the inventory or exempt from listing

Canada (NDSL)

None of the ingredients are on the inventory.

China (IECSC)

All ingredients are on the inventory or exempt from listing

EINECS (European Inventory of Existing Chemical Substances)

All ingredients are on the inventory or exempt from listing

ELINCS (European List of Notified Chemical Substances)

None of the ingredients are on the inventory.

ENCS (Japan)

All ingredients are on the inventory or exempt from listing

South Korea (KECL)

All ingredients are on the inventory or exempt from listing

Philippines (PICCS)

All ingredients are on the inventory or exempt from listing

TSCA (United States)

All ingredients are on the inventory or exempt from listing

Legend

AICS - Australian Inventory of Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - China Inventory of Existing Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

15.2 Chemical Safety Report

No information available.

16. OTHER INFORMATION

Product code 3204H

Revision date 2015-09-21

Full text of H-Statements referred to under sections 2 and 3

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H290 - May be corrosive to metals

Key or legend to abbreviations and acronyms used in the safety data sheet

NAV - Not available

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006.

Additional information

None

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text