

# 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](mailto: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

<b>Physical state</b>	liquid
<b>Color</b>	colorless to yellow
<b>Appearance</b>	No information available
<b>Odor</b>	odorless
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
<b>pH</b>	3.5	as is
<b>Melting / freezing point</b>	-7 °C / 19 °F	No information available
<b>Boiling point / boiling range</b>	No information available	No information available
<b>Flash point</b>	Not applicable	No information available
<b>Evaporation rate</b>	No information available	No information available
<b>Flammability (solid, gas)</b>	No information available	No information available
<b>Flammability Limit in Air</b>		
Upper flammability limit	No information available	No information available
Lower flammability limit	No information available	No information available
<b>Vapor pressure</b>	No information available	No information available
<b>Vapor density</b>	No information available	No information available
<b>Specific gravity</b>	1.33 - 1.35	No information available
<b>Solubility (water)</b>	Soluble	No information available
<b>Solubility in other solvents</b>	No information available	No information available
<b>Partition coefficient: n-octanol/water</b>	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 Cl<sub>2</sub> 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

<b>Fish</b>	LC 50 (96 hour, static) 776.4 mg/L <i>Pimephales promelas</i> (Fathead Minnow) <sup>1</sup> EC 50 (96 hour, static) 265.5 mg/L <i>Pimephales promelas</i> (Fathead Minnow) <sup>1</sup>
<b>Crustacea</b>	LC 50 (48 hour, static) 803.8 mg/L <i>Ceriodaphnia dubia</i> (Water Flea) <sup>1</sup> EC 50 (48 hour, static) 33.2 mg/L <i>Ceriodaphnia dubia</i> (Water Flea) <sup>1</sup>
<b>Algae/aquatic plants</b>	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

<sup>1</sup> 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