

SAFETY DATA SHEET



MUL = 250 mg/L

Revision date 01-Jul-2025

Revision Number 9

1. Identification

Product identifier

Product Name Aluminum Chlorohydrate Solution

Other means of identification

Product Code(s) 3204H

Synonyms Water and Wastewater Treatment Coagulant/Flocculant.

Recommended use of the chemical and restrictions on use

Recommended use Coagulating and Flocculating agent.

Restrictions on use None known.

Details of the supplier of the safety data sheet

Supplier Address

Usalco, LLC
2601 Cannery Ave.
Baltimore, MD 21226
+1-800-453-2586 Hours: Monday - Friday
9:00 - 5:00 CST (Central Standard Time)

Manufacturer Address

Usalco, LLC
2601 Cannery Ave.
Baltimore, MD 21226

Contact Point sds@usalco.com

Emergency Telephone CHEMTREC: (800) 424-9300
Outside USA - +1 (703) 527-3887 collect calls accepted

2. Hazard(s) identification

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Corrosive to metals.	Category 1

Hazards not otherwise classified (HNOC)

Not applicable.

Label elements

WARNING**Hazard statements**

Causes skin irritation and serious eye irritation.
May be corrosive to metals.



Appearance Clear

Physical state Liquid

Odor No appreciable odor

Precautionary Statements - Prevention

Keep in original packaging.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash hands, face and any exposed skin thoroughly after handling. Do not touch eyes.
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical help.
Specific treatment (See Section 4. First aid measures – Skin contact).
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical help.
Take off contaminated clothing and wash it before reuse.
Absorb spillage to prevent material damage.

Precautionary Statements - Storage

Store in corrosive resistant container with a resistant inner liner.

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Other information

May be harmful if swallowed.

3. Composition/information on ingredients

Substance

Not applicable.

Synonyms

Water and Wastewater Treatment Coagulant/Flocculant.

Chemical name	CAS No	Weight-%	Trade secret
Aluminum Chlorohydrate	12042-91-0	30 - 60%	*

*The exact percentage (concentration) of composition has been withheld as a trade secret. While some components are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

4. First-aid measures

Description of first aid measures

Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen. Call physician immediately.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms Eye and skin contact may cause irritation, including redness, itching, and rashes.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Contact with metals may evolve flammable hydrogen gas. Sealed containers may rupture when heated. Cool containers with water spray.
Hazardous combustion products	Thermal decomposition (as may be experienced in a fire) may release toxic and/or hazardous gases such as HCl and Cl ₂ .
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions Ensure adequate ventilation.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.
Prevention of secondary hazards	Do not permit run-off to get into sewers or surface waterways.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

Packaging materials Store in corrosion resistant container with a resistant inner liner.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Aluminum Chlorohydrate 12042-91-0	TWA: 1 mg/m ³ respirable particulate matter	-	-

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers.
Eyewash stations.
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses or goggles to protect against exposure.

Hand protection Wear suitable protective gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls Do not allow liquid to enter streams or waterways.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear
Color Colorless to yellow
Odor No appreciable odor
Odor threshold Not applicable.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	3.5 - 4.5	As is.
Melting point / freezing point	< -9.4 °C / (15 °F)	
Boiling point / boiling range	~ 104 °C / (220 °F)	
Flash point	Not applicable.	
Evaporation rate	Not determined.	

Flammability (solid, gas)	Not applicable.
Flammability Limit in Air	
Upper flammability or explosive limits	Not applicable.
Lower flammability or explosive limits	No data available.
Vapor pressure	No data available.
Relative vapor density	No data available.
Relative density	1.330 - 1.350
Water solubility	Soluble below pH 4
Solubility(ies)	
Partition coefficient	Not determined.
Autoignition temperature	Not applicable.
Decomposition temperature	Not determined.
Kinematic viscosity	Not determined.
Dynamic viscosity	<50 cps Brookfield @ 25 °C
Other information	
Explosive properties	Not an explosive.
Oxidizing properties	Not expected to be oxidizing based on the chemical structure.
VOC Content (%)	No information available
Liquid Density	11.09 - 11.34 lbs./gal.

10. Stability and reactivity

Reactivity	Stable under normal conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	No.
Conditions to avoid	High temperatures.
Incompatible materials	Metals.
Hazardous decomposition products	Thermal decomposition (as may be experienced in a fire) may release toxic and/or hazardous gases such as HCl and Cl ₂ .

11. Toxicological information

Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May be harmful in contact with skin.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Eye contact: Adverse symptoms may include the following: watering, redness. and irritation. Skin contact: Adverse symptoms may include the following: irritation and redness.
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Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 18,374.0000 mg/kg
ATEmix (dermal) 4,004.00 mg/kg

Component Information

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

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	May cause skin irritation.
Serious eye damage/eye irritation	May cause eye irritation.
Respiratory or skin sensitization	No data available.
Germ cell mutagenicity	No data available.
Carcinogenicity	This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.
Reproductive toxicity	No data available.
Developmental toxicity	No data available.
STOT - single exposure	No data available.
STOT - repeated exposure	No data available.
Aspiration hazard	No data available.
Other adverse effects	None known.
Interactive effects	None known.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Method	Species	Endpoint type	Effective dose	Exposure time	Results
EPA-821-R-02-012 and EPA-821-R-02-023	Pimephales promelas (Fathead Minnow)	LC50	400 mg/L	48 hr, 3-brood, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Pimephales promelas (Fathead Minnow)	IC25	29.57 mg/L	48 hr, 3-brood, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Pimephales promelas (Fathead Minnow)	IC50	39.10 mg/L	48 hr, 3-brood, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Ceriodaphnia dubia (Water Flea)	LC50	> 400 mg/L	96 hr, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Ceriodaphnia dubia (Water Flea)	IC25	8.61 mg/L	96 hr, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Ceriodaphnia dubia (Water Flea)	IC50	17.22 mg/L	96 hr, static, renewal	

Chemical name	Algae/aquatic plants	Fish	Toxicity to	Crustacea
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			microorganisms	
Aluminum Chlorohydrate 12042-91-0	--	LC50 (96 h static) 100 - 500 mg/L (Brachydanio rerio)	-	-

Persistence and degradability	Not determined.
Bioaccumulation	No information available.
Mobility	Not determined.
Other adverse effects	No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

<u>DOT</u>	This product is exempted from DOT regulations under 49 CFR 173.154(d) when shipped by road or railway in bulk packaging constructed of materials that will not react dangerously with or be degraded by the corrosive material. The product exception is referenced in 49 CFR 172.101 Table.
Notes	When shipping in non-bulk packaging such as drums or pails the above exception does not apply. The product must be shipped as Regulated UN3264, Corrosive liquid, acidic, inorganic, N.O.S. (Polyaluminum chloride solution), 8, III, ERG#154
<u>TDG</u>	Regulated
UN number or ID number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, N.O.S. (Polyaluminum chloride solution)
Transport hazard class(es)	8
Packing group	III
Technical Name	
Description	Polyaluminum chloride solution.
<u>IATA</u>	Regulated
UN number or ID number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, N.O.S. (Polyaluminum chloride solution)
Transport hazard class(es)	8
Packing group	III
ERG Code	8L
<u>IMDG</u>	Regulated
UN number or ID number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, N.O.S. (Polyaluminum chloride solution)
Transport hazard class(es)	8
Packing group	III
EmS-No	F-A, S-B

15. Regulatory information**International Inventories**

TSCA All ingredients are on the inventory or exempt from listing.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Aluminum Chlorohydrate	12042-91-0	Present	Active
Water	7732-18-5	Present	Active

DSL/NDSL All ingredients are on the DSL inventory or exempt from listing. None of the ingredients are on the NDSL inventory.

EINECS/ELINCS All ingredients are on the EINECS inventory or are exempt from listing. None of the ingredients are on the ELINCS inventory.

ENCS All ingredients are on the inventory or exempt from listing.

IECSC All ingredients are on the inventory or exempt from listing.

KECL All ingredients are on the inventory or exempt from listing.

PICCS All ingredients are on the inventory or exempt from listing.

AICS All ingredients are on the inventory or exempt from listing.

Legend:

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable.

16. Other information

NFPA	Health hazards 1	Flammability 0	Instability 0	Special hazards
HMIS	Health hazards 1	Flammability 0	Physical hazards 0	Personal protection B

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 01-Jul-2025

Revision Note .

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.

End of Safety Data Sheet