

## Safety Data Sheet

### 1. IDENTIFICATION

**Product Identifier**

**Product Name** Aluminum Chloride Basic, Solution

**Other means of identification**

**SDS #** 650

**UN/ID No** UN3264  
**Synonyms** Aluminum chloride hydroxide

**Recommended use of the chemical and restrictions on use**  
**Recommended Use** Water treatment chemical.

**Manufacturer**  
USALCO, LLC  
2601 Cannery Ave  
Baltimore, MD 21226

**Emergency Telephone Number**  
**Company Phone Number** Business 1-410-354-0100 (7:00am-5:00pm)  
Fax 1-410-354-1021  
**Emergency Telephone (24 hr)** 1-800-282-5322

### 2. HAZARDS IDENTIFICATION

**Appearance** Colorless to yellow liquid  
Normally clear but may be hazy  
**Physical State** Liquid  
**Odor** Negligible to hydrogen chloride

**Classification**

Serious eye damage/eye irritation	Category 2
Corrosive to Metals	Category 1

**Signal Word**  
Danger

**Hazard Statements**  
Causes serious eye irritation  
May be corrosive to metals



**Precautionary Statements – Prevention**  
Wear eye/face protection. Wash hands and any exposed skin thoroughly after handling.  
Wear protective gloves. Keep only in original container.

**Precautionary Statements - Response**  
If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. 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 attention.

**Precautionary Statements – Storage**  
Store in corrosive resistant plastic or FRP container or container with corrosive resistant inner liner.

**Precautionary Statements - Disposal**  
Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): May be D002 under §261.22(a)(2) due to the rate of corrosion of metal.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No	Weight-%
Water	7732-18-5	70-85
Aluminum Chloride, Basic	1327-41-9	30-34

**4. FIRST-AID MEASURES**
**First Aid Measures**

<b>General Advice</b>	After first aid, get appropriate in-plant, paramedic, or community medical support.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.
<b>Skin Contact</b>	Wash off immediately with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse. Get medical attention if necessary.
<b>Inhalation</b>	Remove to fresh air. Oxygen or artificial respiration if needed. Get medical attention if symptoms occur.
<b>Ingestion</b>	Give large amounts of water to drink. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects**

<b>Symptoms</b>	May cause eye burns and permanent eye damage. May cause blurred vision, redness, watering and burning of the eyes. May include redness, drying and cracking of skin. May cause irritation to the mucous membranes and upper respiratory tract.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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**5. FIRE-FIGHTING MEASURES**
**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Combustion products may be toxic.

**Hazardous Combustion Products** Hydrogen chloride. Chlorine gas.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to keep fire-exposed containers cool. Do not release runoff from fire control methods to sewers or waterways.

**6. ACCIDENTAL RELEASE MEASURES**
**Personal precautions, protective equipment and emergency procedures**

<b>Personal Precautions</b>	Use personal protective equipment as required.
<b>Environmental Precautions</b>	Do not release into sewers or waterways. See Section 12 for additional Ecological Information.

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

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
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**Methods for Clean-Up**

Small Spills: If directed to an industrial sewer, wash down with large volumes of water. Spills can be neutralized and absorbed with soda ash or lime, but neutralization will release carbon dioxide, which can generate a breathing hazard. Dike far ahead of liquid spill for later disposal. Contain large spills and pump into a suitable tank for disposal. Neutralize with a lime or soda ash and flush area with large amounts of water. Adequate ventilation is required due to release of Carbon Dioxide.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**
**Advice on Safe Handling**

Wash thoroughly after handling. Use personal protection recommended in Section 8. Ensure that all containers are labeled in accordance with OSHA regulations. Avoid contact with metal, as product will slowly corrode iron, brass, copper, aluminum and mild steel. Avoid contact with skin and eyes.

**Conditions for safe storage, including any incompatibilities**
**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials. Keep storage temperature between 0°C/32°F and 30°C/86°F. Keep only in original container.

**Packaging Materials**

Store in rubber-lined, plastic or FRP vessels.

**Incompatible Materials**

Strong bases. Alcohols. Organic materials. Ammonia. Will react with most metals (aluminum, iron, zinc, tin, etc.) to release flammable hydrogen gas.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

No exposure limits noted for product.  
 Exposure Limits for aluminum metal  
 NIOSH REL - TWA 10 mg/m<sup>3</sup> (total) TWA 5 mg/m<sup>3</sup> (resp)  
 OSHA PEL - TWA 15 mg/m<sup>3</sup> (total) TWA 5 mg/m<sup>3</sup> (resp)

**Appropriate engineering controls**
**Engineering Controls**

Local exhaust ventilation recommended. Eyewash stations. Showers.

**Individual protection measures, such as personal protective equipment**
**Eye/Face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with, contact lenses.

**Skin and Body Protection**

Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Respiratory Protection**

Seek professional advice prior to respirator selection and use. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. **WARNING!** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**General Hygiene Considerations**

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance	Colorless to yellow liquid. Normally clear but may be hazy.
Odor	Negligible to hydrogen chloride
Odor threshold	Not determined
pH	<1.0
Relative density; (specific gravity)	±1.3 (1=Water) @ 4°C
Melting point/freezing point	< -32° C / <0° F
Initial boiling point and boiling range	> 110° C / >230° F
Decomposition temperature	±120° C / 250° F
Viscosity	10 centipoise
Auto-ignition temperature	Not flammable
Evaporation rate;	Similar to water
Flammability (solid, gas)	Not flammable
Flash point	Will not burn
Upper/lower flammability or explosive limits	Will not burn
Partition coefficient: n-octanol/water	Not relevant
Solubility	Soluble in water
Vapor density	Similar to water
Vapor pressure	Similar to water

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

Not compatible with strong bases (such as sodium hydroxide and potassium hydroxide); alcohols, organic materials (such as wood, paper, leather) and ammonia. Mixing may generate heat, spattering or boiling and toxic vapors.

**Hazardous Polymerization**      Hazardous polymerization does not occur.

### Conditions to Avoid

Contact with incompatible materials.

### Incompatible Materials

Strong bases. Alcohols. Organic materials. Ammonia. Will react with most metals (aluminum, iron, zinc, tin, etc.) to release flammable hydrogen gas.

### Hazardous Decomposition Products

Hydrogen chloride. Chlorine gas.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Eye Contact</b>	Causes serious eye damage.
<b>Skin Contact</b>	Avoid contact with skin.
<b>Inhalation</b>	Avoid breathing vapors or mists.
<b>Ingestion</b>	Do not taste or swallow.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum chloride, basic 1327-41-9	> 2000 mg/kg ( Rat )	-	-

**Information on physical, chemical and toxicological effects**

**Symptoms** Please see section 4 of this SDS for symptoms.

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

**Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**12. ECOLOGICAL INFORMATION**
**Ecotoxicity**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**Persistence/Degradability**

Not determined

**Bioaccumulation**

Not determined

**Mobility**

Not determined

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS**
**Waste Treatment Methods**

**Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION**

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

<b>UN/ID No</b>	UN3264
<b>Proper Shipping Name</b>	Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum chloride, basic)
<b>Hazard Class</b>	8
<b>Packing Group</b>	III

**IATA**

<b>UN/ID No</b>	UN3264
<b>Proper Shipping Name</b>	Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum chloride, basic)
<b>Hazard Class</b>	8
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**IMDG**

<b>UN/ID No</b>	UN3264
<b>Proper Shipping Name</b>	Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum chloride, basic)
<b>Hazard Class</b>	8
<b>Packing Group</b>	III

**15. REGULATORY INFORMATION**
**International Inventories**

Not determined

**US Federal Regulations**
**CERCLA**

Does not apply

**SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**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

**CWA (Clean Water Act)**

Does not apply

**US State Regulations**
**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Aluminum chloride, basic 1327-41-9			X

**16. OTHER INFORMATION**

NFPA	Health Hazards 2	Flammability 0	Instability 0	Special Hazards Not determined
HMIS	Health Hazards 2	Flammability 0	Instability 0	Personal Protection Not determined

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 Revision Note    New format

**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