



Safety Data Sheet

Aluminum Chloride Hexahydrate

SECTION 1. IDENTIFICATION

Product Name	Aluminum Chloride Hexahydrate	Supplier's details	Groupe AEM Canada 80 Louis-Landry Cap-Chat, Québec
Synonyms	Aluminum Chloride (III) Hexahydrate Aluminum Trichloride Hexahydrate	Emergency Phone	(418) 786-1336 <i>Canutec</i> Tel (24h) : (613) 996-6666
Recommended use	Deodorant manufacture Wood Preservative		

SECTION 2. HAZARDS IDENTIFICATION

Classification Corrosive to metals; Category 1; May be corrosive to metals.; Skin corrosion; Category 1B; Causes severe skin burns and eye damage; Eye corrosion/irritation; Category 1; Causes serious eye damage.;

Hazard Pictogram



Signal Word: Danger

Hazard Statement:

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage

Precautionary Statements:

P234 Keep only in original container.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing.

Response :

IN CASE OF INHALATION: Take the person outside and keep in a position comfortable for breathing. Call a POISON CENTER or a doctor/physician in case of fainting.



IN CASE OF SKIN (OR HAIR) CONTACT: Immediately remove all contaminated clothes. Rinse with skin and hair with water. Wash contaminated clothes before reusing them.

IN CASE OF EYE CONTACT: Rinse cautiously with water for at least 15 minutes, remove contact lenses if present and easy to do. Continue rinsing.

IN CASE OF INGESTION: Rinse. DO NOT induce vomiting.

Spillage: Collect and store in a sealed container.

Storage: Store in a well ventilated place. Keep cool. Keep container tightly closed.

Disposal: Eliminate in accordance with local, provincial, federal or international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Concentration	Synonyms	Chemical Composition
Aluminium Chloride Hexahydrate	7784-13-6	100 % m	Aluminum Trichloride Hexahydrate	$AlCl_3 \cdot 6(H_2O)$

SECTION 4. FIRST AID MEASURES

Inhalation	Move to fresh air. Keep at rest. Oxygen or artificial respiration if needed. Oxygen should be administered by qualified personnel. Call POISON Center or obtain medical attention in case of fainting.
Skin contact	Wash off immediately with plenty of water removing all contaminated clothes and shoes. Rinse immediately, with lukewarm water, softly, for 15 to 20 minutes. In case of skin rash, see a doctor. Thoroughly wash clothes, shoes and any other contaminated items before reusing them, or dispose of them safely.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing eyes during transport to hospital.
Ingestion	Rinse mouth with plenty of water. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Obtain medical attention. Show this safety data sheet to the doctor in attendance.
Most important symptoms and effects, both acute or delayed	In case of inhalation: intense irritation of the nose and throat. Hacking cough and difficult breathing. Headache, nausea, vomiting. In case of skin contact: painful irritation, skin redness and swelling. Deep burns. In case of eye contact: intense irritation, watery eyes, eye redness and eyelid swelling. Burns. Risk of severe or permanent eye damage. In case of ingestion: intense Irritation, burns, risk of digestive perforation with state of shock. Profuse salivation. Risk of throat edema with choking. Nausea, vomiting, abdominal cramps and diarrhea.



SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media	The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special hazards arising from the substance or mixture	Hazardous fumes may be released. Fire may cause evolution of chlorine, hydrogen chloride (HCl).
Special protective actions for firefighters	Wear self-contained breathing apparatus and acid-resistant protective suit. Clean equipment after the intervention. Cool down containers exposed to fire. Disperse gases and vapors with water spray. After fire, quickly clean surfaces exposed to fumes in order to limit damage to equipment. As for any fire, ventilate and clean the rooms before returning to them.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Immediately evacuate. Isolate the danger zone. Do not let in unnecessary or unprotected staff. Increase ventilation in danger zone or move the non-sealed container to a safe, well ventilated area. Before entering, especially in confined spaces, check the air with suitable monitoring device. Do not touch the damaged containers or spilled product unless wearing appropriate protective suit. See this SDS section 8 for proper personal protection.
Environmental precautions	Prevent undiluted product from entering the environment (sewers, soil, water sources). If the spill occurs in a building, prevent the product from entering the drains, the ventilation system and confined spaces. Immediately notify the competent authorities in the event of a spill. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	Minor spillages and leaks: Sweep-up and transfer into suitable containers for disposal; always wear adequate protective breathing apparatus. If dispersed in water: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Large amounts: neutralize with lime or soda. Dike spilled product in order to prevent runoff. Withdraw or recover the liquid by means of pumps or suction equipment. Dike and recover contaminated water in order to dispose of it appropriately. Store recovered product in containers tightly sealed.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling	Handle product in well ventilated place. Avoid splashes and leaks. Use equipment made with compatible materials (plastic with fiberglass reinforcement, PVC, polyethylene, polypropylene containers). Handle away from reactive products (see section 10). Wear personal protective equipment to avoid direct contact with this chemical. Hands must be washed thoroughly after handling this product.
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**Conditions for safe storage**

Keep in a cool, well ventilated place, isolated from incompatible materials (see Section 10: Stability and reactivity). Store a minimum quantity. Holding tanks under containers and transport facility.
Adhere to all applicable health and safety regulations, and to all building and fire prevention codes.

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION**Components with workplace control parameters**

Components	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
Aluminium chloride	2 mg/m ³			

Appropriate engineering controls

Eye wash bottle or emergency eye-wash fountain must be found in the work place.

Individual protection measures

Avoid any eye contact. Wear safety glasses/goggles or face-shield.

Skin and eye protection

Wear protective clothing if necessary. Rubber boots and apron. Tightly fitting safety goggles or face-shield. Avoid skin contact.

Respiratory protection

Ensure adequate ventilation. Breathing apparatus needed when fumes or aerosol is formed (acid vapors).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Crystals as a powder, white to yellow when in contact with humid air (Solid)

Odour

Odorless when dry; irritant when in humid environment

Olfactory threshold

N.A.

pH

N.A.

Melting point/range

N.A.

Initial boiling point

N.A.

Chemical Formula

AlCl₃·6H₂O

Molecular Weight

241,4 g/mol

Flash point

N.A.

Flammability (solids and gas)

Non-flammable

Explosive properties :**Lower explosion limit**

N.A.

Upper explosion limit

N.A.

Vapor pressure

N.A.

Specific Gravity (water = 1)

2,398

Water solubility

1 111 g/L @ 20°C

Solubility in other liquids

Not available

Partition coefficient n-octanol / water

Not applicable

Viscosity, dynamic

N.A.

Temperature of decomposition

± 120°C



SECTION 10. STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	Not compatible with Strong bases, alcohols, Organic material, ammoniac
Conditions to avoid	Incompatible products
Incompatible materials	Strong bases, alcohols, Organic material, ammoniac, metals
Hazardous decomposition products	Hydrogen Chlorine Gas, Chlorine

SECTION 11. TOXICOLOGICAL INFORMATION

Likely route of human exposure

Inhalation; Skin contact; Eye contact; Ingestion

Acute Toxicity

CL50	Not available
DL50 (ingestion)	3 311 mg/kg (rat)
DL50 (skin)	Not available

Corrosion /Irritation May cause moderate to severe irritation
Symptoms include pain, redness and swelling

Serious eye damage/ eye irritation Risk of severe damage to eye

Aspiration hazard This product is absorbed by respiratory and digestive tracts.

Specific target organ toxicity- Repeated exposure By mouth, after long-term exposure, rat, target organ(s): central nervous system, 50 mg/kg, observed effect (anhydrous form)
Inhalation, after repeated exposure, rat, target organ(s): kidneys, liver, 1,83 mg/m3, observed effect (anhydrous form)

Skin or respiratory sensitisation Not sensitizing

Carcinogenicity

Chemical Name	CIRC	ACGIH®	OSHA
Aluminium Chloride	Groupe 3	Not evaluated	Not evaluated



Toxicity for reproduction	No known effect
Fœtal development	Fetotoxic effect (anhydrous form)
Sexual fonction and fertility	No known effect (anhydrous form)
Effect on breastfeeding	Not available
Germ cell mutagenicity	Not available
Interaction effects	Not available

SECTION 12. ECOLOGICAL INFORMATION

This product is toxic for the environment. It may be harmful to aquatic organisms due to pH shift if released to the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Product Must be disposed of as hazardous waste. Residues must be neutralized. Dispose of in compliance with local and national regulations

SECTION 14. TRANSPORT INFORMATION

Regulation	UN number	Proper shipping name	Technical name	Shipping Name Class	Packaging Group
TMD	1726		Aluminium chloride hexahydrate	8	I II < 1 kg III < 5 kg

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental regulations/legislation specific for the substance or mixture CNESST



SECTION 16. OTHER INFORMATIONS

Preparation date December 7, 2021
Date of latest revision December 7, 2021
Revision 0
Made by Sylvain Seyer, P. Eng.

References CNESST. (2021). Complete SDS for Aluminum Chloride Hexahydrate.
https://reptox.cnesst.gouv.qc.ca/pages/fiche-complete.aspx?no_produit=692343&no_seq=6
