



# Aluminium(III) chloride.6aq a.r.

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Date of issue: 10/31/2018 Version: 1.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Substance
Trade name	: Aluminium(III) chloride.6aq a.r.
CAS-No.	: 7784-13-6
Product code	: CL00.0122
Type of product	: Pure substance, Hygroscopic substance. Preventive measures apply to the substance in dry state only
Formula	: $\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$
Synonyms	: aluminium chloride, hexahydrate / aluminium chloride-6-hydrate / aluminium trichloride, hexahydrate / aluminium(III)chloride, hexahydrate / aluwets / anhydrol (=aluminium chloride, hexahydrate) / chloralum / dricol

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemical

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Chem-Lab nv  
Industriezone "De Arend" 2  
Zedelgem - Belgium  
T +32 50 288320  
[info@chem-lab.be](mailto:info@chem-lab.be) - [www.chem-lab.be](http://www.chem-lab.be)

#### 1.4. Emergency telephone number

Emergency number : +32 50 28 83 20

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2 H315  
Serious eye damage/eye irritation, Category 2 H319  
Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning  
Hazard statements (CLP) : H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
Precautionary statements (CLP) : P302+P352 - IF ON SKIN: Wash with plenty of water/....  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Substance type : Mono-constituent

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminium(III) chloride.6aq a.r.	(CAS-No.) 7784-13-6	100	Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Cover eyes aseptically. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Call Poison Information Centre ( <a href="http://www.big.be/antigif.htm">www.big.be/antigif.htm</a> ). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Do not give chemical antidote. Doctor: gastric lavage is not recommended.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of lung oedema. Possible inflammation of the respiratory tract.
Symptoms/effects after skin contact	: Tingling/irritation of the skin.
Symptoms/effects after eye contact	: Irritation of the eye tissue. Inflammation/damage of the eye tissue.
Symptoms/effects after ingestion	: Gastrointestinal complaints.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Adapt extinguishing media to the environment for surrounding fires.
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### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Non combustible.
Hazardous decomposition products in case of fire	: On heating/burning: release of toxic and corrosive gases/vapours (hydrogen chloride).

### 5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Dilute toxic gases with water spray.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes.
Measures in case of dust release	: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

No additional information available

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### 6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.
- Methods for cleaning up : Prevent dispersion by covering with dry sand/earth. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.
- Hygiene measures : Observe strict hygiene.

### 7.2. Conditions for safe storage, including any incompatibilities

- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) acids. (strong) bases. water/moisture.
- Storage area : Store in a dry area. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: synthetic material.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Aluminium(III) chloride.6aq a.r. (7784-13-6)		
Belgium	Limit value (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
France	VME (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>

### 8.2. Exposure controls

<b>Materials for protective clothing:</b>
GIVE GOOD RESISTANCE: butyl rubber. natural rubber. neoprene. nitrile rubber. PVC. viton
<b>Hand protection:</b>
Gloves
<b>Eye protection:</b>
Face shield. In case of dust production: protective goggles
<b>Skin and body protection:</b>
Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing
<b>Respiratory protection:</b>
Dust production: dust mask with filter type P2. On heating: full face mask with filter type B

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Crystalline solid. Crystalline powder.
- Molecular mass : 241.43 g/mol
- Colour : Colourless to light yellow.
- Odour : Irritating/pungent odour.
- Odour threshold : No data available
- pH : 2.5 - 3.5 (5 %)
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available

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Freezing point	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: 100 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: Not applicable
Relative density	: 2.4
Density	: 2398 kg/m³
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in glycerol. Soluble in propyleneglycol. Water: 111 g/100ml Ethanol: > 25 g/100ml
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

VOC content	: 0 %
Other properties	: Hygroscopic. Acid reaction.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with (some) bases.

### 10.2. Chemical stability

Hygroscopic.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Aluminium(III) chloride.6aq a.r. (7784-13-6)	
LD50 oral rat	3311 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)

Skin corrosion/irritation	: Causes skin irritation. pH: 2.5 - 3.5 (5 %)
Serious eye damage/irritation	: Causes serious eye irritation. pH: 2.5 - 3.5 (5 %)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Potential adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Causes skin irritation. Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Causes serious eye irritation.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Toxic to crustacea. Harmful to fishes. Groundwater pollutant. Mild water pollutant (surface water). Toxic to algae. pH shift. Reacts by forming substances having a decreased toxicity.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

#### Aluminium(III) chloride.6aq a.r. (7784-13-6)

LC50 fish 1	27.1 mg/l (96 h, Gambusia affinis, Anhydrous form)
EC50 Daphnia 1	3.9 mg/l (48 h, Daphnia magna, Anhydrous form)
EC50 72h algae (1)	0.46 mg/l (Selenastrum capricornutum, Metal ion)

#### 12.2. Persistence and degradability

#### Aluminium(III) chloride.6aq a.r. (7784-13-6)

Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

#### 12.3. Bioaccumulative potential

#### Aluminium(III) chloride.6aq a.r. (7784-13-6)

Bioaccumulative potential	Not bioaccumulative.
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#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized dump (Class I). Precipitate/make insoluble.

Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

European List of Waste (LoW) code : 15 01 10\* - packaging containing residues of or contaminated by dangerous substances  
16 03 03\* - inorganic wastes containing dangerous substances

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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### 14.4. Packing group

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

### 14.5. Environmental hazards

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

#### Inland waterway transport

Not applicable

#### Rail transport

Not applicable

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Aluminium(III) chloride.6aq a.r. is not on the REACH Candidate List

Aluminium(III) chloride.6aq a.r. is not on the REACH Annex XIV List

VOC content : 0 %

Directive 2012/18/EU (SEVESO III)

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 1, low hazard to water

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

### Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*