Printing date 11/20/2014

Reviewed on 06/10/2014

1 Identification

- · Product identifier
- · Trade name: <u>Aluminum Chloride Hexahydrate Laboratory Grade, Crystal</u>
- · Article number: A3975
- CAS Number: 7784-13-6
- *EC number*:
- 231-208-1
- Index number: 013-003-00-7
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Aqua Solutions, Inc.
 6913 Highway 225 DEER PARK, TX 77536 USA
 800-256-2586
- Information department: Technical Coordinator Sherman Nelson sherman@aquasolutions.org Product safety department
 Emergency telephone number:
- *Chemtrec: 800-424-9300 Canutec: 613-996-6666*

2 *Hazard*(*s*) *identification*

· Classification of the substance or mixture



Skin Irrit. 2H315Causes skin irritation.Eye Irrit. 2AH319Causes serious eye irritation.STOT SE 3H335May cause respiratory irritation.

· Label elements

• *GHS label elements* The substance is classified and labeled according to the Globally Harmonized System (GHS). • *Hazard pictograms*



Signal word Warning
Hazard statements

Causes skin irritation.
Causes serious eye irritation.

May cause respiratory irritation.
Precautionary statements

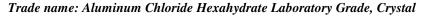
Avoid breathing dust/fume/gas/mist/vapors/spray
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

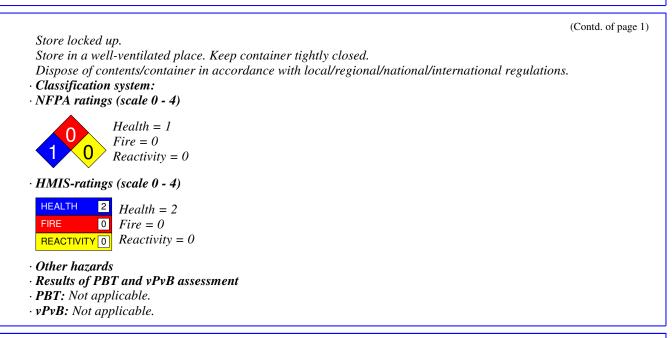


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3 Composition/information on ingredients

- Chemical characterization: Substances • CAS No. Description
- 7784-13-6 Aluminum Chloride Hexahydrate
- · Identification number(s)
- EC number: 231-208-1
- Index number: 013-003-00-7

4 First-aid measures

- · Description of first aid measures
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- *Indication of any immediate medical attention and special treatment needed No further relevant information available.*

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

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6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system.
- Methods and material for containment and cleaning up: Ensure adequate ventilation.
- · Reference to other sections
- See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

• **Precautions for safe handling** No special precautions are necessary if used correctly.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.
- Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation (Contd. on page 4)

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· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

Information on basic physical and ch	nemical properties	
General Information	ienteur properties	
Appearance:		
Form:	Crystalline	
Color:	Colorless	
Odor:	Odorless	
Odour threshold:	Not determined.	
pH-value (50 g/l) at 20 °C (68 °F):	2.5 - 3.5	
Change in condition		
Melting point/Melting range:	100 °C (212 °F)	
Boiling point/Boiling range:	not available °C	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Product is not flammable.	
Ignition temperature:		
Decomposition temperature:	Not determined.	
Auto igniting:	Not determined.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not applicable.	
Density at 20 °C (68 °F):	2.398 g/cm ³ (20.011 lbs/gal)	
Relative density	Not determined.	
Vapour density	Not applicable.	
Evaporation rate	Not applicable.	
Solubility in / Miscibility with		
Water:	Not determined.	
Partition coefficient (n-octanol/water	r): Not determined.	
Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	

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• Other information

No further relevant information available.

10 Stability and reactivity

- · Reactivity
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

• Acute toxicity:

· LD/LC50 values that are relevant for classification:

Oral	LD50	3311 mg/kg (rat)	
Dermal	LD50	not available mg/kg (rat)	
Inhalative	LC50/4 h	not available mg/l (Human)	
Irritation of skin	Skin Corrosion/Irritation	not available (Human)	
Irritation of eyes	Eye damage/eye irritation	not available (rabbit)	
	Germ cell mutagenicity	see comment (Human)	

· Primary irritant effect:

• on the skin: Irritant to skin and mucous membranes.

• on the eye: Irritating effect.

- Sensitization: No sensitizing effects known.
- Additional toxicological information:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer) Substance is not listed.

· NTP (National Toxicology Program) Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

· Toxicity

- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes: Not known to be hazardous to water.
- · Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

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· Other adverse effects No further relevant information available.

13 Disposal considerations

• Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

· UN-Number · DOT, IMDG, IATA	UN3260
· UN proper shipping name · DOT	Corrosive solid, acidic, inorganic, n.o.s. (Aluminum Chlori Hexahydrate)
IMDG, IATA	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Alumini Chloride Hexahydrate)
· Transport hazard class(es)	
· DOT	
· Class	8 Corrosive substances
· Label	8
· IMDG, IATA	
· Class	8 Corrosive substances
· Label	8
Packing group DOT, IMDG, IATA	III
Environmental hazards:	
• Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	8
• Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.

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	(Contd. of page (
· Transport/Additional information:	
·DOT	
• Quantity limitations	On passenger aircraft/rail: 25 kg
	On cargo aircraft only: 100 kg
· IMDG	
· Limited quantities (LQ)	5 kg
\cdot Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN3260, Corrosive solid, acidic, inorganic, n.o.s. (Aluminum Chloride Hexahydrate), 8, III

15 Regulatory information

 \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture \cdot Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- *GHS label elements* The substance is classified and labeled according to the Globally Harmonized System (GHS). • *Hazard pictograms*



Signal word Warning
Hazard statements

Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department.

- · Date of preparation / last revision Creation date for SDS 06-10-2014. STN 11/20/2014 / -
- Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

[·] Contact: Mr. Nelson