Clear Assist

Safety Data Sheet

Date of Issue: 03/22/2022

Date revised: March 22, 2022

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

1.1 Product Identifier

Product Form: Liquid Mixture

Product Name: Clear Assist

Product Code:

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

Use of the mixture: Sand Filter Aid

1.3 Details of the supplier of the safety data sheet

Automated Aquatics
15442 - 131 Ave
Edmonton AB, T5V 0A1
Ph: (780) 468-3261 Fx: (780) 465-5398

1.4 Emergency telephone number

CANUTEC (613) 996-6666

SECTION 2: Hazards identification

2.1 Classification of the substance of mixture

WHMIS 2015 - GHS Classification

Corrosive to metals; Category 1; May be corrosive to metals
Serious eye damage; Category 1; Causes serious eye damage

2.2 Label elements

DANGER

Hazards:
H290 May be corrosive to metals.
H318 Causes serious eye damage.

Prevention:
P234 Keep only in original container.
P280 Use personal protective equipment as required.

Response:	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310	Immediately call a POISON CENTER/doctor.
	P390	Absorb spillage to prevent material damage.
Storage:	P405	Store locked up.
	P406	Store in corrosive resistant container with a resistant inner liner.
Disposal:	P501	Dispose of contents/container as special waste in compliance with local and national regulations.

2.3 Other Hazards

SECTION 3: Composition/Information on ingredients

Component	CAS#	Concentration	LD50 (rat, oral)
Aluminum chloride hydroxide sulfate	39290-78-3	30 - 35 %	2360 mg/kg

SECTION 4: First-aid measures

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes. If possible use lukewarm water. Seek medical advice.

Skin Contact: Wash off immediately with plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.

Inhalation: If breathing is difficult, remove to fresh air and provide oxygen. If not breathing, give artificial respiration. Seek medical attention if cough or other symptoms develop.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Drink 1 or 2 glasses of water. Obtain medical attention.

SECTION 5: Fire fighting measures

Extinguishing media: Non- flammable. Use media appropriate for surrounding fire.

Chemical hazards: Thermal decomposition products: aluminium compounds, Sulphur oxides, hydrogen chloride (HCl)

Protective equipment for fire fighters: Wear self-contained breathing apparatus and protective suit.

Further information: Cool containers/tanks with water spray.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment.

Environmental precautions

Should not be released into the soil, surface water or ground water system. Must be disposed of in accordance with local and national regulations.

Methods and materials for containment and cleaning up

Small amounts:
Absorb with materials such as; Clay. or Neutralize with lime or soda. Collect for subsequent disposal.
Large amounts:
In case of large spillage, contain by damming up. Collect by pump or with suitable inert absorbent material. Neutralize with lime or soda. Flush away traces with water.

SECTION 7: Handling and storage

Precautions for handling: Avoid contact with skin, eyes and clothing. Wash contact areas after handling.

Condition for safe storage: Store in original container. Follow all MSDS/label precautions even after container is emptied because they may retain product residues. Store in corrosive resistant stainless steel container with a resistant inner liner. plastic with fiberglass reinforcement or plastic. Keep containers tightly closed in a cool, well-ventilated place.
Materials for packaging
Suitable material: butyl-rubber, plastic
Materials to avoid:
Iron, steel, metals (including their alloys)
Corrodes base metals., Carbon steel, aluminium, carbon, brass, Nylon
mineral acids, Bases, Alkaline materials

SECTION 8: Exposure controls/personal protection

Control parameters: Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location. Handle in accordance with good industrial hygiene and safety practice. Eye wash bottle or emergency eye-wash fountain must be found in the work place.

Respiratory Protection: When there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

Hand protection: Glove material: PVC and neoprene gloves Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Break through time: > 480 min

Skin and body protection: Wear suitable protective clothing.

Personal protective equipment: Tightly fitting safety goggles or face-shield.

SECTION 9: Physical and chemical properties

Appearance: Clear blue liquid

Odour:	Slight
Odour threshold:	n.av.
pH:	2.1 - 3.1
Melting point:	-12 °C
Initial boiling point and boiling range:	102 °C
Flash point	Non-flammable
Evapouration rate:	n.av.
Flammability:	Non-flammable
Upper/lower flammability limits:	n.av.
Vapour pressure:	n.av.
Vapour density:	1.3
Relative density:	1.18 - 1.28 g/mL
Solubility:	Completely soluble
Partition coefficient: n-octanol/water:	n.av.
Auto-ignition temperature:	n.ap.
Decomposition temperature:	n.av.
Viscosity:	n.av.

SECTION 10: Stability and reactivity

Reactivity:	Hazardous polymerization does not occur
Chemical stability:	Stable under normal conditions.
Conditions to avoid:	Avoid extreme temperatures.
Incompatible materials:	Iron, steel, metals (including alloys), base metals, carbon steel, aluminum, carbon, brass, nylon, mineral acids, bases, alkaline materials.
Hazardous decomposition products:	Sulphur oxides (SOx), Aluminium oxide, Hydrogen chloride gas

SECTION 11: Toxicological information

Acute oral toxicity	**Aluminium chloride hydroxide sulfate:** /OECD Test Guideline 401/Rat/2,360 mg/kg/LD50
Acute inhalation toxicity	**Aluminium chloride hydroxide sulfate:** LC50/Rat/4 h/aerosol: />/5 mg/l/OECD Test Guideline 403
Acute dermal toxicity	**Aluminium chloride hydroxide sulfate:** LD50/Rat/male and female/> /2,000 mg/kg/OECD Test Guideline 402
Skin corrosion/irritation	Conclusion: Repeated or prolonged skin contact may cause:, Skin irritation, dry skin **Aluminium chloride hydroxide sulfate:** Rabbit

Result: No irritating effects.
/OECD Test Guideline 404

Serious eye damage/eye irritation

Conclusion: May cause irreversible eye damage.
Aluminium chloride hydroxide sulfate:
Rabbit
Result: No eye irritation
/OECD Test Guideline 405/72 h

Respiratory or skin sensitisation

Aluminium chloride hydroxide sulfate:
/Guinea pig
Not sensitizing./OECD Test Guideline 406
Remarks: Read-across (Analogy), CAS-No., 12042-91-0

Germ cell mutagenicity

Genotoxicity in vitro

Aluminium chloride hydroxide sulfate:
AMES test/Mutagenicity (Salmonella typhimurium - reverse mutation assay)/with and without
Result: negative
OECD Test Guideline 471
Aluminium chloride hydroxide sulfate:
micronucleus test/In vitro mammalian cells/with and without
Result: negative
OECD Test Guideline 487
Remarks: Read-across (Analogy), 1327-41-9
Aluminium chloride hydroxide sulfate:
Lymphoma/In vitro gene mutation study in mammalian cells/with and without
Result: negative
OECD Test Guideline 476
Remarks: Read-across (Analogy), 1327-41-9

Carcinogenicity

Aluminium chloride hydroxide sulfate:
Not believed to be a carcinogen.

Reproductive toxicity

Toxicity for reproduction

Aluminium chloride hydroxide sulfate:
Reproductive effects/Rat/female/Oral/3,225 mg/kg/OECD Test Guideline 452
Remarks: Read-across (Analogy), CAS-No., 31142-56-0
Conclusion: No known effect.
Aluminium chloride hydroxide sulfate:
Screening test/Rat/male and female/Oral/1,000 mg/kg/OECD Test Guideline 422
Remarks: Read-across (Analogy), 1327-41-9
Conclusion: No known effect.
Aluminium chloride hydroxide sulfate:
Conclusion: Not believed to be toxic for reproduction.

Teratogenicity

Aluminium chloride hydroxide sulfate:
Rat/female/Oral/1,075 mg/kg/OECD Test Guideline 452

Conclusion: Read-across (Analogy), Did not show mutagenic or teratogenic effects in animal experiments., CAS-No., 31142-56-0

SECTION 12: Ecological information

Ecotoxicity effects

Aquatic Toxicity

This material is not classified as dangerous for the environment. At environmentally relevant pH 5,5 – 8, the solubility of aluminium is low. Aluminium salts dissociate with water resulting in rapid formation and precipitation of aluminium hydroxides. At pH <5.5, the free ion (Al3+) becomes the prevalent form, the increased availability at this pH is reflected in higher toxicity. At pH 6.0–7.5, solubility declines due to the presence of insoluble Al(OH)3. At higher pH (pH >8.0), the more soluble Al(OH)4 - species predominate, which again increases availability. Aluminium salts must not be released to rivers and lakes in an uncontrolled way and pH variations around 5 - 5.5 should be avoided.

Aluminium chloride hydroxide sulfate:
LC50/96 h/Danio rerio/semi-static test/OECD Test Guideline 203: > 1,000 mg/l
Remarks: Read-across (Analogy), CAS-No., 1327-41-9
NOEC/Danio rerio/semi-static test/OECD Test Guideline 203: > 1,000 mg/l
Remarks: Read-across (Analogy), CAS-No., 1327-41-9
LC50/Danio rerio/semi-static test/OECD Test Guideline 203: > 0.156 mg/l
Calculated as Al Maximum soluble concentration under the test conditions.
EC50/48 h/Daphnia magna (Water flea)/OECD Test Guideline 202: 98 mg/l
Remarks: Read-across (Analogy), CAS-No., 1327-41-9
NOEC/Daphnia magna (Water flea)/OECD Test Guideline 202: 24 mg/l
Remarks: Read-across (Analogy), CAS-No., 1327-41-9
EC50/72 h/Pseudokirchneriella subcapitata (green algae)
/static test/OECD Test Guideline 201: 14 mg/l
EC50: 3.4 mg/l
Calculated as Al
NOEC/72 h/Pseudokirchneriella subcapitata (green algae)
/static test/OECD Test Guideline 201: 1 mg/l
NOEC: 0.24 mg/l
Calculated as Al

Persistence and degradability

Biological degradability:
The methods for determining biodegradability are not applicable to inorganic substances.
Chemical degradation:
When reacting with water on pH range 5.8 - 8 precipitates of aluminium hydroxides are formed.

Bioaccumulative potential

The product is not expected to bioaccumulate.

Mobility in soil

Water solubility: completely soluble

SECTION 13: Disposal considerations

Product should be disposed of in accordance to provincial or state and local government requirements prior to disposal. If the product was supplied in a single use container, care should be taken to dispose of the container in a responsible manner in accordance to local regulations.

SECTION 14: Transport information

Canadian TDG: UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Aluminum chloride hydroxide sulfate)

SECTION 15: Regulatory information

DSL: All components are listed on the Canadian DSL

SECTION 16: Other information

Prepared by: Automated Aquatics

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