Safety Data Sheet

Aluminum Chloride 50% in 50% IPA

Revision Date: 07/17/19

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier Trade name: Aluminum Chloride 50% in 50% IPA
Product code(s): 3519-08

1.2 Relevant identified uses Laboratory Reagent

Supplier: Astral Diagnostics Inc.

800-441-0366 Technical Service
Monday-Friday: 8:00 -5:00 PM

Synonym: None.
Material uses: Laboratory Reagent.
Validation date: 12/11/2013
In case of emergency: 800-424-9300 CHEMTREC (USA)
24 Hours/Day: 7 Days/Week

2. HAZARDS IDENTIFICATION

Emergency Overview:

2.1 Classification of the substance or mixture

GHS-US Classification

Acute Toxicity (Cat 4)
Skin Corrosive (Cat 1B)
Eye Damage (Cat 1)

2.2 Label elements

GHS-US labeling

Hazard Pictograms:

Signal Word: Danger

Hazard Statements

H225: Highly flammable liquid vapour
H302: Harmful if swallowed
H314: Causes severe skin burns and eye damage
H318: Causes serious eye damage
H332: Harmful if inhaled

Precautionary Statements

P210: Keep away from heat/sparks/open flames. No smoking
P233: Keep container tightly closed
P264: Wash hands, forearms and face thoroughly after handling
P280: Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P302+P352: IF ON SKIN: Wash with plenty of soap and 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

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS number	% by volume
Water	7732-18-5	Balance
Aluminum Chloride	7784-13-6	50
Isopropanol	67-63-0	25

4. FIRST AID MEASURES

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: *Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.*

First-aid measures after skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media: Do not use a heavy water stream

5.2 Special hazards arising from the substance or mixture

No additional information available

5.3 Advice for firefighters

Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water form entering environment. Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Gloves. Safety glasses. Combined gas/dust mask with filter type B/P3.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.
Hygiene measures: Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Comply with applicable regulations.
Storage conditions: Keep container closed when not in use. Protect from sunlight. Store in a well-ventilated place.
Incompatible products: Strong oxidizers. Acetyl Chloride, Acyl Halides, Benzenesolfonyl Chlorides
Incompatible materials: Sources of ignition. Direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult local authorities for acceptable exposure limits.

Component	Source	Type	Value	Note
Aluminum Chloride	OSHA	TWA	2 mg/m3	
	NIOSH	TWA	2 mg/m3	
	ACGIH	TWA	10 mg/m3	
	OSHA	PEL	15 mg/3	
Isopropanol	ACGIH	TWA	200 ppm	
	ACGIH	STEL	400 ppm	
	NIOSH	TWA	980 mg/m3, 400 ppm	
	OSHA	TWA	980 mg/m3, 400 ppm	

Personal protective equipment: Safety glasses. Gloves. Protective clothing. High gas/vapor concentration: gas mask with filter type B.
Hand protection: Wear protective gloves.
Eye protection: Chemical goggles or face shield.
Skin and body protection: Wear suitable protective clothing.
Respiratory protection: Wear appropriate mask. Gas mask with filter type B.
Other information: Do not eat, drink or smoke during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: liquid
Color: colorless to slight yellow
Flash Point: 12^{o}C
Odor: Negligible
pH: NA
Boiling/condensation point: 82^{o}C
Melting/freezing point: -88^{o}C
Relative density: NA
Vapor pressure: NA
Vapor density: 2.1
Odor threshold: NA
Evaporation rate: NA
VOC: NA
Solubility: Soluble in the following materials: water

10. STABILITY AND REACTIVITY

10.1. Reactivity

Thermal decomposition generates corrosive vapors

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Avoid bases, oxidizing agents, reducing agents

10.4. Conditions to avoid

Avoid bases, oxidizing agents, reducing agents

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Carbon oxides

11. TOXICOLOGICAL INFORMATION

Water (7732-18-5)
LD50 oral rat ≥ 90000 mg/kg
ATE US (oral) 90000.000 mg/kg body weight

Aluminum Chloride (7784-13-6)
LD50 oral rat 3311 mg/kg

Isopropanol
LD50 dermal rabbit 12870 mg/kg
LC50 inhalation rat 73 mg/l/4hr
ATE oral 5045 mg/kg body weight

Skin corrosion/irritation: Causes severe skin burns and eye damage
Serious eye damage/irritation: Causes severe eye damage
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not Classified

12. ECOLOGICAL INFORMATION

Toxicity:

Isopropanol		
	LC50 fish2	9640 mg/l
	EC50 Daphnia2	13299 mg/l
Aluminum Chloride		
	LC 50 fish 1	27.1 mg/l
	EC50 Daphnia 1	27.3 mg/l

Persistence and degradability:

Isopropanol		
	BOD	1.19 gO2/g
	COD	2.23 gO2/g
	ThOD	2.4 gO2/g

Bioaccumulative potential: no data available
Mobility in soil:

Isopropanol	Surface tension	0.021 N/m

PBT and vPvB assessment: no data available
Other adverse effects: no data available

13. DISPOSAL CONSIDERATIONS

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT (US)
UN-No, UN1987
Proper shipping name: Isopropyl Alcohol/ Aluminum Chloride

Transportation hazard class(es): 3
Packing group: II

15. REGULATORY INFORMATION

15.1 US Federal regulations
Listed on the United States TSCA (Toxic Substances Control Act) Inventory
Listed on SARA section 313 (specific toxic chemical listings)

15.2 International regulations
Isopropanol
WHMIS Classification: Class B Division 2-Flammable Liquid, Class D Division 2 Subdivision A- Very toxic material causing other toxic effects

15.3 California Proposition 65
This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

16. OTHER INFORMATION

National Fire Protection Association (U.S.A.)

Notice to reader

This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labeling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Astral Diagnostics, Inc be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.