According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 09.20.2016

Ammonia Std, 4.62 ppm

SECTION 1: Identification

Product identifier

Product name: Ammonia Std, 4.62 ppm Product code: AS2005SS

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory chemicals Uses advised against: Not determined or not applicable. Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer: United States AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover, PA 17331 1-717-632-1291

Emergency telephone number: Canada ChemTel: (24-hour) +1(800)255-3924 +1(813)248-0585 (International)

SECTION 2: Hazard identification

GHS classification: Not a hazardous substance or mixture

Label elements

Hazard pictograms: None

Signal word: None

Hazard statements: None

Precautionary statements: None

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 12125-02-9	Ammonium Chloride	<0.01
CAS number: 7732-18-5	Water	99.89
CAS number: 64-19-7	Acetic Acid	0.02

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CAS number: 111-30-8	Glutaraldehyde	0.05
CAS number: 16674-78-5	Magnesium Acetate	0.03

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:

Not determined or not available.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position Maintain an unobstructed airway Get medical advice/attention if you feel unwell

After skin contact:

Rinse affected area with soap and water If symptoms develop or persist, seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes Remove contact lenses, if present and easy to do Continue rinsing Get medical advice/attention

After ingestion:

Rinse mouth and then drink plenty of water Do not induce vomiting Get medical advice/attention if you feel unwell

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not available.

Delayed symptoms and effects:

Not determined or not available.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not available.

Notes for the doctor:

Not determined or not available.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

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Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing Refer to Section 8 Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Heating causes a rise in pressure, risk of bursting and combustion Shut off sources of ignition Carbon monoxide and carbon dioxide may form upon combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation Ensure air handling systems are operational Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances. Avoid breathing mist or vapor. Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area. Store away from foodstuffs.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Ammonium Chloride	12125-02-9	ACGIH TLV TWA 10.0 mg/m ³
	Acetic Acid	64-19-7	ACGIH TLV TWA 10 ppm
	Acetic Acid	64-19-7	ACGIH TLV STEL 15 ppm
	Glutaraldehyde	111-30-8	ACGIH TLV Ceiling 0.05 ppm

Occupational Exposure limit values:

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Country (Legal Basis)	Substance	Identifier	Permissible concentration	
	Ammonium Chloride	12125-02-9	ACGIH TLV STEL 20.0 mg/m ³	
NIOSH	Ammonium Chloride	12125-02-9	NIOSH REL ST 20.0 mg/m ³	
	Acetic Acid	64-19-7	NIOSH REL TWA 10 ppm	
	Acetic Acid	64-19-7	NIOSH REL TWA 25 mg/m ³	
	Acetic Acid	64-19-7	NIOSH REL ST 15 ppm	
	Acetic Acid	64-19-7	NIOSH REL ST 37 mg/m ³	
	Glutaraldehyde	111-30-8	NIOSH REL C 0.2 ppm	
	Glutaraldehyde	111-30-8	NIOSH REL C 0.8 mg/m ³	
	Ammonium Chloride	12125-02-9	NIOSH REL TWA 10.0 mg/m ³	
United States (OSHA)	Acetic Acid	64-19-7	OSHA PEL TWA 10 ppm	
	Acetic Acid	64-19-7	OSHA PEL TWA 25 mg/m ³	

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:

Wash hands before breaks and at the end of work. Avoid contact with skin, eyes and clothing. Perform routine housekeeping. Wash contaminated clothing before reusing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid
Odor:	Odorless
Odor threshold:	Not available
pH-value:	5.5 - 7
Melting/Freezing point:	Approx. 0°C
Boiling point/range:	Approx. 100°C

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Not available
Not available
1 - 1.01
Not determined or not available.
Not available
Not determined or not available.
Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

None known.

Incompatible materials:

None known.

Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
Ammonium Chloride	oral	LD50 - Mouse: 1300 mg/kg
Glutaraldehyde	oral	LD50 - Mouse - 100 mg/kg
	inhalation	LC50 - Rat - 0.28 to 0.39 mg/L - 4 h

Skin corrosion/irritation

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Assessment: Based on available data, the classification criteria are not met. **Product data:** No data available.

Substance data:

Name	Result
Acetic Acid	Causes severe skin burns and eye damage.
Glutaraldehyde	Corrosive to the skin.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Ammonium Chloride	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Glutaraldehyde	Sensitization possible through respiratory and skin contact.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed. **National Toxicology Program (NTP):** None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Glutaraldehyde	May cause respiratory irritation to organs through single exposure

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

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Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Glutaraldehyde	EC50 - Green algae - 0.375 mg/L - 72 h

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available. **Substance data:** No data available.

Bioaccumulative potential

Product data: No data available. **Substance data:** No data available.

Mobility in soil

Product data: No data available. Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

SECTION 14: Transport information

Canadian Transportation of Dangerous Goods (TDG)

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

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International Maritime Dangerous Goods (IMDG)

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code		
Bulk Name	None	
Ship type	None	
Pollution category	None	

SECTION 15: Regulatory information

Canada regulations

Domestic substances list (DSL):

12125-02-9	Ammonium Chloride	Listed
7732-18-5	Water	Listed
16674-78-5	Magnesium Acetate	Not Listed
64-19-7	Acetic Acid	Listed
111-30-8	Glutaraldehyde	Listed

Non-domestic substances list (NDSL): Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the

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conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0

HMIS: 1-0-0

Initial preparation date: 09.20.2016

End of Safety Data Sheet