

# Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 02.24.2017

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## Nitrate Buffer Solution

### SECTION 1: Identification

#### Product identifier

**Product name:** Nitrate Buffer Solution

**Product code:** NB3095SS

#### 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:

Eye irritation, category 2A

Skin irritation, category 2

Reproductive toxicity, category 1B

Chronic aquatic hazard, category 3

#### Label elements

##### Hazard pictograms:



**Signal word:** Danger

#### Hazard statements:

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H360 May damage fertility or the unborn child.

H412 Harmful to aquatic life with long lasting effects.

#### Precautionary statements:

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P273 Avoid release to the environment.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P321 Specific treatment (see supplemental first aid instructions on this label).

P362 Take off contaminated clothing and wash before reuse.

P302+P352 If on skin: Wash with soap and water.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P308+P313 If exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents and container as instructed in Section 13.

**Hazards not otherwise classified:** None

### SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7732-18-5	Water	>97
CAS number: 10043-01-3	Aluminum Sulfate	<2
CAS number: 5329-14-6	Sulfamic Acid	<1
CAS number: 10043-35-3	Boric acid	<1
CAS number: 10294-26-5	Silver Sulfate	<1

**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:

Wash affected area with soap and water

Seek medical attention if symptoms develop or persist

##### After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

Remove contact lens(es) if able to do so during rinsing

Seek medical attention if irritation persists or if concerned

##### After ingestion:

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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.

#### 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

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### 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.

### Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Aluminum Sulfate	10043-01-3	ACGIH TLV 2 mg/m <sup>3</sup> (as Al soluble salt)
	Boric acid	10043-35-3	ACGIH TLV TWA 2.0 mg/m <sup>3</sup> , inhalable fraction
	Boric acid	10043-35-3	ACGIH STEL 6.0 mg/m <sup>3</sup>
	Silver Sulfate	10294-26-5	ACGIH TLV 0.01 mg/m <sup>3</sup> , as Ag (compounds)
United States (OSHA)	Silver Sulfate	10294-26-5	OSHA PEL 0.01 mg/m <sup>3</sup> , as Ag
NIOSH	Silver Sulfate	10294-26-5	NIOSH IDLH 10 mg/m <sup>3</sup> , as Ag

### 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.

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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

<b>Appearance (physical state, color):</b>	Clear, colorless liquid
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not available
<b>pH-value:</b>	3.0-4.0
<b>Melting/Freezing point:</b>	Approx. 0°C
<b>Boiling point/range:</b>	Approx. 100°C
<b>Flash point:</b>	Not available
<b>Evaporation rate:</b>	Not available
<b>Flammability (solid, gaseous):</b>	Not available
<b>Explosion limit upper:</b>	Not available
<b>Explosion limit lower:</b>	Not available
<b>Vapor pressure:</b>	Not available
<b>Vapor density:</b>	Not available
<b>Density:</b>	Not available
<b>Relative density:</b>	1.03
<b>Solubilities:</b>	Not determined or not available.
<b>Partition coefficient (n-octanol/water):</b>	Not available
<b>Auto/Self-ignition temperature:</b>	Not available
<b>Decomposition temperature:</b>	Not available
<b>Dynamic viscosity:</b>	Not available
<b>Kinematic viscosity:</b>	Not available
<b>Explosive properties</b>	Not determined or not available.
<b>Oxidizing properties</b>	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.

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#### 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:** No data available.

#### Skin corrosion/irritation

**Assessment:** Causes skin irritation

**Product data:** No data available.

**Substance data:**

Name	Result
Sulfamic Acid	Causes skin irritation

#### Serious eye damage/irritation

**Assessment:** Causes serious eye irritation

**Product data:** No data available.

**Substance data:**

Name	Result
Aluminum Sulfate	Causes serious eye damage.
Silver Sulfate	Causes serious eye damage
Sulfamic Acid	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:** No data available.

#### 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:** May damage fertility or the unborn child

**Product data:** No data available.

**Substance data:**

Name	Result
Boric acid	May damage fertility or the unborn child.

#### Specific target organ toxicity (single exposure)

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**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 (repeated exposure)

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

**Product data:** No data available.

**Substance data:** No data available.

#### 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
Silver Sulfate	LC50 - Pimephales promelas - 0.0012 mg/L - 96 h
	NOEC - Isonychia bicolor - 0.00031 mg/L - 20 d
	EC50 - Ceriodaphnia dubia (Water Flea) - 0.0045 mg/L - 48 h
Sulfamic Acid	LC50 - Pimephales promelas (Fathead Minnow) - 14.2 mg/L - 96 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)

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### 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

#### 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):

10043-01-3	Aluminum Sulfate	Listed
7732-18-5	Water	Listed
10043-35-3	Boric acid	Listed
10294-26-5	Silver Sulfate	Listed
5329-14-6	Sulfamic Acid	Listed

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



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#### 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 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

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**End of Safety Data Sheet**