

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 09.19.2016

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## Acidified Beryllium Chloride Reagent

### SECTION 1: Identification

#### Product identifier

**Product name:** Acidified Beryllium Chloride Reagent

**Product code:** BC4074SS

#### Recommended use of the product and restriction on use

**Relevant identified uses:** Phosphonate Buffer

**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(s) identification

#### GHS classification:

Serious eye damage, category 1

Skin corrosion, category 1A

Specific target organ toxicity - single exposure, category 3, respiratory irritation

#### Label elements

##### Hazard pictograms:



**Signal word:** Danger

#### Hazard statements:

H318 Causes serious eye damage.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

#### Precautionary statements:

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

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P305+P351+P338+P310 IF IN EYES: 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.

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

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P363 Wash contaminated clothing before reuse.

P304+P340+P310 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

P301+P330+P331+P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

P303+P361+P353+P310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

P405 Store locked up.

P403+P233 Store in a well ventilated place. Keep container tightly closed.

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	94.49
CAS number: 7647-01-0	Hydrochloric acid	5
CAS number: 7787-47-5	Beryllium chloride	0.06

**Additional Information:** None

### SECTION 4: First aid measures

#### Description of first aid measures

##### General notes:

Not determined or not applicable.

##### After inhalation:

Move exposed individual to fresh air

Loosen clothing as necessary and position individual in a comfortable position

Maintain an unobstructed airway

Immediately call a POISON CONTROL CENTER or seek medical attention

##### After skin contact:

Immediately remove all contaminated clothing

Wash affected area with soap and water

Immediately call a POISON CONTROL CENTER or seek medical attention

##### 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

Immediately call a POISON CONTROL CENTER or seek medical attention

##### After swallowing:

Immediately call a POISON CONTROL CENTER or seek medical attention

Do not induce vomiting

Rinse mouth and then drink plenty of water

#### Most important symptoms and effects, both acute and delayed

##### Acute symptoms and effects:

Not determined or not applicable.

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**Delayed symptoms and effects:**

Not determined or not applicable.

**Immediate medical attention and special treatment****Specific treatment:**

Not determined or not applicable.

**Notes for the doctor:**

Not determined or not applicable.

### SECTION 5: Firefighting measures

**Extinguishing media****Suitable extinguishing media:**

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

**Unsuitable extinguishing media:**

Do not use water as an extinguisher

**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

**Special precautions:**

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols

Avoid contact with skin, eyes and clothing

### 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:**

Wear protective eye wear, gloves and clothing

**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.

**Conditions for safe storage, including any incompatibilities:**

Store in a cool, well-ventilated area.

### SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

**Occupational Exposure limit values:**

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
NIOSH	Hydrochloric acid	7647-01-0	NIOSH REL C 7.0 mg/m <sup>3</sup>
	Hydrochloric acid	7647-01-0	NIOSH REL C 5.0 ppm
ACGIH	Hydrochloric acid	7647-01-0	ACGIH TLV C 2.0 ppm
	Beryllium chloride	7787-47-5	ACGIH TLV 0.00005 mg/m <sup>3</sup> , as Be (inhalable fraction)
United States (OSHA)	Hydrochloric acid	7647-01-0	OSHA PEL C 5.0 ppm
	Hydrochloric acid	7647-01-0	OSHA PEL C 7.0 mg/m <sup>3</sup>
	Beryllium chloride	7787-47-5	OSHA PEL 0.002 mg/m <sup>3</sup> , as Be
	Beryllium chloride	7787-47-5	OSHA PEL C 0.005 mg/m <sup>3</sup> , as Be (0.025 mg/m <sup>3</sup> , as Be, for 30 minutes peak per 8 hour shift)

#### 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.

#### 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.

### SECTION 9: Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance	Colorless liquid
Odor	Mild odor
Odor threshold	Not determined
pH	<1
Melting point/freezing point	Not determined
Initial boiling point/range	Approx. 100°C (212°F)
Flash point (closed cup)	Not determined
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper flammability/explosive limit	Not determined
Lower flammability/explosive limit	Not determined
Vapor pressure	Not determined

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Vapor density	Not determined
Density	1.014 g/cm <sup>3</sup>
Relative density	Not determined
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined
Auto/Self-ignition temperature	Not determined
Decomposition temperature	Not determined
Dynamic viscosity	Not determined
Kinematic viscosity	Not determined
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

#### Other information

### SECTION 10: Stability and reactivity

#### Reactivity:

Nonreactive under normal conditions.

#### Chemical stability:

Stable under normal conditions of use and storage.

#### Possibility of hazardous reactions:

Contact with oxidizing agents will liberate chlorine. Contact with aluminum or zinc and other metals will generate flammable hydrogen.

Contact with hypochlorites generates chlorine gas.

#### Conditions to avoid:

Incompatible materials.

#### Incompatible materials:

Avoid contact with strong oxidizing agents, bases, reducing agents and metals.

#### Hazardous decomposition products:

Thermal decomposition can lead to release of oxides of sulphur, carbon and hydrogen chloride.

### 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
Hydrochloric acid	inhalation	LC50 - Mouse - 1,108 ppm / 1h
Beryllium chloride	dermal	LD50 - Rat - 86 mg/kg

#### Skin corrosion/irritation

**Assessment:** Causes severe skin burns and eye damage

**Product data:** No data available.

#### Substance data:

Name	Result
Hydrochloric acid	Causes severe skin burns and eye damage.
Beryllium chloride	Causes skin irritation.

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#### Serious eye damage/irritation

**Assessment:** Causes serious eye damage

**Product data:** No data available.

**Substance data:**

Name	Result
Beryllium 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
Beryllium chloride	May cause an allergic skin reaction.

#### Carcinogenicity

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

**Product data:** No data available.

**Substance data:**

Name	Species	Result
Beryllium chloride	Beryllium chloride	May cause cancer.

#### International Agency for Research on Cancer (IARC):

Name	Classification
Hydrochloric acid	Group 3 - Not classifiable as to its carcinogenicity to humans
Beryllium chloride	Group 1 - Carcinogenic to humans

#### National Toxicology Program (NTP):

Name	Classification
Beryllium chloride	Known to be human carcinogens

#### 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:** May cause respiratory irritation

**Product data:** No data available.

**Substance data:**

Name	Result
Beryllium chloride	Specific Target Organ Toxicity, Single Exposure - May cause respiratory irritation.
	Specific Target Organ Toxicity, Repeated Exposure - Causes damage to organs through prolonged or repeated exposure.

#### Specific target organ toxicity (repeated 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.

#### 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
Beryllium chloride	LC50 - Daphnia magna (Water flea) - 0.400 mg/L - 96 h
	LC50 - Pimephales promelas (Fathead Minnow) - 0.150 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)

### SECTION 14: Transport information

#### United States Transportation of dangerous goods (49 CFR DOT)

UN number	1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (Hydrochloric Acid)
UN transport hazard class(es)	8
Packing group	II



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Environmental hazards	None
Special precautions for user	None

### International Maritime Dangerous Goods (IMDG)

UN number	1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (Hydrochloric Acid)
UN transport hazard class(es)	8
Packing group	II
Environmental hazards	None
Special precautions for user	None
Limited quantity	1L



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

UN number	1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (Hydrochloric Acid)
UN transport hazard class(es)	8
Packing group	II
Environmental hazards	None
Special precautions for user	None
Limited quantity	1L



### 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

### United States regulations

#### Inventory listing (TSCA):

7647-01-0	Hydrochloric acid	Listed
7732-18-5	Water	Listed
7787-47-5	Beryllium chloride	Listed

**Significant New Use Rule (TSCA Section 5):** Not determined.

**Export notification under TSCA Section 12(b):** Not determined.

#### SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
No	No	No	No	No

#### SARA Section 302 extremely hazardous substances:

7647-01-0	Hydrochloric acid	Listed
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#### SARA Section 313 toxic chemicals:



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7647-01-0	Hydrochloric acid	Listed
7787-47-5	Beryllium chloride	Listed

#### CERCLA:

7647-01-0	Hydrochloric acid	Listed	5000
7787-47-5	Beryllium chloride	Listed	1

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

#### Massachusetts Right to Know:

7647-01-0	Hydrochloric acid	Listed
7732-18-5	Water	Not Listed
7787-47-5	Beryllium chloride	Listed

#### New Jersey Right to Know:

7647-01-0	Hydrochloric acid	Listed
7732-18-5	Water	Not Listed
7787-47-5	Beryllium chloride	Not Listed

#### New York Right to Know:

7647-01-0	Hydrochloric acid	Listed
7732-18-5	Water	Not Listed
7787-47-5	Beryllium chloride	Listed

#### Pennsylvania Right to Know:

7647-01-0	Hydrochloric acid	Listed
7732-18-5	Water	Not Listed
7787-47-5	Beryllium chloride	Listed

#### California Proposition 65:

WARNING: This product contains a chemical known to the State of California to cause cancer.

7787-47-5	Beryllium chloride
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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:** 3-0-1-acid

**HMIS:** 3-0-1

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