

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Initial preparation date: : 01.12.2015**Phosphate Buffer Solution****SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Phosphate Buffer Solution**Manufacturer/Supplier Article number:** PB4500SS**Recommended uses of the product and restrictions on use:****Manufacturer Details:**

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

Emergency telephone number:**ChemTel: (24-hour)**

+1(800)255-3924

+1(813)248-0585 (International)

SECTION 2: Hazards identification**Classification of the substance or mixture:****Corrosive**

Corrosive to metals, category 1

Skin corrosion, category 1B

Serious eye damage, category 1

**Irritant**

Specific target organ toxicity following single exposure, category 3

Corr. Metals 1.

Skin Corr. 1B.

Eye Damage 1.

Stot SE. 3.

Signal word: Danger**Hazard statements:**

May be corrosive to metals.

Causes severe skin burns and eye damage.

May cause respiratory irritation.

Causes serious eye damage.

Precautionary statements:

If medical advice is needed have product container or label at hand.

Keep out of reach of children.

Read label before use.

Keep only in original container.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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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.
 Specific treatment (see supplemental first aid instructions on this label).
 Wash contaminated clothing before reuse.
 Absorb spillage to prevent material damage.
 Store in a well ventilated place. Keep container tightly closed.
 Store locked up.
 Store in a corrosive resistant container with a resistant inner liner.
 Dispose of contents/container.

Other Non-GHS Classification: None**SECTION 3: Composition/information on ingredients****Ingredients:**

Ingredients:		
CAS 7647-01-0	Hydrochloric Acid	97.5 %
CAS 12027-67-7	Ammonium Molybdate	3.762 %
CAS 7732-18-5	Water	1.262 %
CAS 10043-35-3	Boric Acid	<6 %
Percentages are by weight		

SECTION 4: First aid measures**Description of first aid measures****After inhalation:**

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Consult a physician.

After skin contact:

Remove contaminated clothing and shoes immediately. Wash hands and exposed skin with soap and plenty of water. Rinse or flush skin/hair gently with water for at least 20 minutes. Seek immediate medical attention.

After eye contact:

Protect unexposed eye. Remove contact lenses, if present and easy to do, and continue rinsing. Consult a physician. Continue rinsing eyes during transport to hospital. Rinse or flush eye gently with water for at least 30 minutes, lifting upper and lower lids.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.

Most important symptoms and effects, both acute and delayed:

Headache. Nausea. Shortness of breath. Irritation/burns, all routes of exposure.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

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Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None**Special hazards arising from the substance or mixture:**

Hydrogen chloride gas may be released.

Advice for firefighters:**Protective equipment:**

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes and clothing. Dust deposits should not be allowed to accumulate on surfaces.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Ensure adequate ventilation. Use under fume hood.

Environmental precautions:

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

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Follow advice and precautions. If necessary use trained response staff or contractor. Absorb with suitable absorbent material such as sand or earth and containerize for disposal. Refer to Section 13. Sweep up and containerize for disposal. Avoid generating dust. Refer to Section 8. Refer to Section 5.

Reference to other sections: None**SECTION 7: Handling and storage****Precautions for safe handling:**

Avoid contact with skin, eyes and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Wash hands after handling. Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice. Wear protective equipment. See Section 8. Refer to Section 13.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Store with like hazards. Keep away from open flames, hot surfaces, and sources of ignition. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly closed. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection**Control parameters:**

7647-01-0, Hydrochloric Acid, 2 ppm USA. ACGIH Threshold Limit Values (TLV).

7647-01-0, Hydrochloric Acid, 5 ppm 7 mg/m³ USA. NIOSH Recommended Exposure Limits.

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Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Use under fume hood designed for hazardous chemicals with an average face velocity of 100 feet per minute or greater. Ensure that evacuation/ventilation systems are designed to prevent the escape of dust/mist/aerosols into the work area.

Respiratory protection: Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin: Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing. Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Eye protection: Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Wear tightly fitting safety goggles and a faceshield (8-inch minimum).

General hygienic measures: Wash hands before breaks and at the end of work. Perform routine housekeeping to prevent dust generation. Avoid contact with skin, eyes and clothing. Before re-wearing, wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless to greenish yellow liquid	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Pungent	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	<1	Relative density:	Not determined
Melting/Freezing point:	Not determined	Solubilities:	Soluble in water.
Boiling point/Boiling range:	Not determined	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity**Reactivity:**

Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions: None

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Incompatible materials.

Incompatible materials:

Bases. Amines. Alkali metals. Metals. Permanganates (potassium permanganate). Fluorine. Metal acetylides. Hexalithium disilicide.

Hazardous decomposition products:

Hydrogen chloride gas.

SECTION 11: Toxicological information**Acute Toxicity:** No additional information.**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:**

Skin - rabbit Result: Causes burns. 7647-01-0.

Serious eye damage/irritation:

Eyes - rabbit (Hydrochloric acid) Result: Corrosive to eyes 7647-01-0.

Respiratory or skin sensitization: No additional information.**Carcinogenicity:****Acid mists, strong inorganic:** IARC Class 1 Carcinogen**Germ cell mutagenicity:** No additional information.**Reproductive Toxicity:** No additional information.**STOT-single and repeated exposure:** No additional information.**Additional toxicological information:**

No additional information.

SECTION 12: Ecological information**Ecotoxicity:**Toxicity to fish LC50 - *Gambusia affinis* (Mosquito fish) - 282 mg/l - 96 h (Hydrochloric acid), 7647-01-0.Toxicity to fish LC0 - *Oncorhynchus mykiss* (rainbow trout) - 320 mg/l - 96 h., 12027-67-7.**Persistence and degradability:** No additional information.**Bioaccumulative potential:** No additional information.**Mobility in soil:** No additional information.**Other adverse effects:** No additional information.**SECTION 13: Disposal considerations****Waste disposal recommendations:**

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

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Phosphate Buffer Solution**SECTION 14: Transport information****US DOT****UN Number:**

ADR, ADN, DOT, IMDG, IATA 1789

Limited Quantity Exception: None**Bulk:****RQ (if applicable):** None**Proper shipping Name:** Hydrochloric Acid Solution.**Hazard Class:** 8**Packing Group:** III.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Hydrochloric Acid Solution.**Hazard Class:** 8**Packing Group:** III.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**SECTION 15: Regulatory information****United States (USA)****SARA Section 311/312 (Specific toxic chemical listings):**

Acute

SARA Section 313 (Specific toxic chemical listings):

7647-01-0 Hydrochloric acid.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7647-01-0 Hydrochloric Acid 5000 Lbs.

Proposition 65 (California):**Chemicals known to cause cancer:**

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

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All ingredients are listed.

SECTION 16: Other information

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. Note. 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**HMIS:** 3-0-0**GHS Full Text Phrases:** None**Abbreviations and Acronyms:**

IMDG	International Maritime Code for Dangerous Goods.
PNEC.	Predicted No-Effect Concentration (REACH).
CFR	Code of Federal Regulations (USA)
SARA	Superfund Amendments and Reauthorization Act (USA).
RCRA.	Resource Conservation and Recovery Act (USA).
TSCA.	Toxic Substances Control Act (USA).
NPRI	National Pollutant Release Inventory (Canada).
DOT	US Department of Transportation.
IATA	International Air Transport Association.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service (division of the American Chemical Society).
NFPA	National Fire Protection Association (USA).
HMIS	Hazardous Materials Identification System (USA).
WHMIS	Workplace Hazardous Materials Information System (Canada).
DNEL	Derived No-Effect Level (REACH).