Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: April 01, 2020

1 Identification

· **Product identifier**

· **Trade name: pH Buffer Solution, pH 2**
· **Product code:** S25208A

· **Recommended use and restriction on use**
· **Recommended use:** Laboratory chemicals
· **Restrictions on use:** No relevant information available.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331
Phone: (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
· **Distributor:**
Fisher Science Education
6771 Silver Crest Road,
Nazareth, PA 18064
(800) 955-1177

· **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

· **Classification of the substance or mixture**
The substance is not classified as hazardous according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Not regulated.
· **Hazard pictograms:** None.
· **Signal word:** None
· **Hazard statements:** None.
· **Precautionary statements:** None.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **Components:**		
7732-18-5	Water	99.458%
7447-40-7	Potassium chloride Eye Irrit. 2B, H320	0.37%
110-44-1	hexa-2,4-dienoic acid Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	0.10%

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7647-01-0	hydrochloric acid Met. Corr.1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318 Acute Tox. 4, H302; STOT SE 3, H335	0.072%

· **Additional information:** For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **General information:** No special measures required.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Immediately rinse with water.
· **After eye contact:**
Remove contact lenses if worn.
If eye irritation occurs, consult a physician.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
· **Most important symptoms and effects, both acute and delayed:**
Gastric or intestinal disorders when ingested.
· **Danger:** No relevant information available.
· **Indication of any immediate medical attention and special treatment needed:**
No relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **For safety reasons unsuitable extinguishing agents:** No relevant information available.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation.
· **Environmental precautions**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Methods and material for containment and cleaning up**
Use limestone to neutralize and/or absorb spill.
Send for recovery or disposal in suitable receptacles.

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· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**
· **Precautions for safe handling:**
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with alkalis (caustic solutions).
· **Further information about storage conditions:**
Keep containers tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

7647-01-0 hydrochloric acid	
PEL (USA)	Ceiling limit value: 7 mg/m³, 5 ppm
REL (USA)	Ceiling limit value: 7 mg/m³, 5 ppm
TLV (USA)	Ceiling limit value: 2.98 mg/m³, 2 ppm
EL (Canada)	Ceiling limit value: 2 ppm
EV (Canada)	Ceiling limit value: 2 ppm
LMPE (Mexico)	Ceiling limit value: 2 ppm A4

· **Exposure controls**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Engineering controls:** Provide adequate ventilation.
· **Breathing equipment:**
Not required under normal conditions of use.

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Use suitable respiratory protective device when high concentrations are present.

· **Protection of hands:**

Protective gloves

· **Material of gloves**
Butyl rubber, BR
Nitrile rubber, NBR
Fluorocarbon rubber (Viton)
Natural rubber, NR
Neoprene gloves
Sensibilization by the components in the glove materials is possible.

· **Not suitable are gloves made of the following materials:** Chloroprene rubber, CR

· **Eye protection:**

Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Acid resistant protective clothing.

· **Limitation and supervision of exposure into the environment**
No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **Appearance:**	
Form:	Liquid
Color:	Clear
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	2.0 (low reserve)
· **Melting point/Melting range:**	Not determined.
· **Boiling point/Boiling range:**	105-110 °C (221-166 °F)
· **Flash point:**	The product is not flammable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Not determined.

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· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17.3 mm Hg)
· **Density at 20 °C (68 °F):**	>1.01 g/cm³ (>8.43 lbs/gal)
· **Relative density:**	Not determined.
· **Vapor density:**	Not determined.
· **Evaporation rate:**	Not determined.
· **Solubility in / Miscibility with Water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions**
Corrosive action on metals.
Reacts with alkali (lyes).
Toxic fumes may be released if heated above the decomposition point.
Reacts with light alloys to form hydrogen.
· **Conditions to avoid** No relevant information available.
· **Incompatible materials** No relevant information available.
· **Hazardous decomposition products**
Under fire conditions only:
Chlorine compounds
Hydrogen

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.
· **LD/LC50 values that are relevant for classification:** None.
· **Primary irritant effect:**
· **On the skin:** Based on available data, the classification criteria are not met.
· **On the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**

7647-01-0	hydrochloric acid	3

· **NTP (National Toxicology Program):**

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None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Acute effects (acute toxicity, irritation and corrosivity):** No relevant information available.
· **Repeated dose toxicity:** No relevant information available.
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** No relevant information available.
· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Additional ecological information**
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

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· **UN-Number**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	Not regulated.
· **UN proper shipping name**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	Not regulated.
· **Transport hazard class(es)**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	
· **Class**	Not regulated.
· **Packing group**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	Not regulated.
· **Environmental hazards**	Not applicable.
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7647-01-0	hydrochloric acid

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

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None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
OSHA: Occupational Safety & Health Administration
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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