

**Safety Data Sheet**

according to 29CFR1910/1200 and GHS Rev. 3

**Initial preparation date:** : 01.08.2015**Phosphoric Acid,40% v/v****SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Phosphoric Acid,40% v/v**Manufacturer/Supplier Article number:** PH7500SS**Recommended uses of the product and restrictions on use:** Laboratory**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**

Skin corrosion, category 1B

Corrosive to metals, category 1

Corrosive to Metals 1.

Skin Corrosion 1B.

Serious eye damage 1.

**Signal word:** Danger**Hazard statements:**

May be corrosive to metals.

Causes severe skin burns and 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.

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

Wash thoroughly after handling.

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

Keep only in original container.

Do not eat, drink or smoke when using this product.

Immediately call a POISON CENTER or doctor/physician.

Specific treatment (see ... on this label).

Wash contaminated clothing before reuse.

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.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

Continue rinsing.

Store locked up.

Store in a corrosive resistant container with a resistant inner liner.

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Dispose of contents/container.

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

Ingredients:		
CAS 7664-38-2	Phosphoric Acid	75.2 %
CAS 7732-18-5	Water	24.8 %
Percentages are by weight		

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

Seek medical attention immediately. Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position.

**After skin contact:**

Remove contaminated clothing and wash before reuse or discard. Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical attention if irritation persists or if concerned.

**After eye contact:**

Rinse immediately with plenty of water, also under the eyelids, for at least 30 minutes. Remove contact lens(es) if able to do so during rinsing. Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes.

**After swallowing:**

Seek medical attention immediately. Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water.

**Most important symptoms and effects, both acute and delayed:**

Irritation. Nausea. Headache. Shortness of breath.

**Indication of any immediate medical attention and special treatment needed:**

If seeking medical attention, provide SDS document to physician.

**SECTION 5: Firefighting measures****Extinguishing media****Suitable extinguishing agents:**

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

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

Hydrogen gas is released in contact with most metals.

**Advice for firefighters:**

**Protective equipment:** None

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Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

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

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

**Environmental precautions:**

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

**Methods and material for containment and cleaning up:**

Absorb spillage to prevent material damage due to corrosiveness to metal. If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor.

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

Wash hands after handling. Avoid splashes or spray in enclosed areas. Avoid contact with eyes, skin, and clothing. Do not mix with bases. Use in a chemical fume hood. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas.

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

Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Store with like hazards. Do not store under direct sun light. Do not pile up the containers. Container materials should be made of stainless steel 316-L, high-density polyethylene, or glass. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs.

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

7664-38-2, Phosphoric Acid., ACGIH TLV: 1 mg/m<sup>3</sup> as TWA.  
 7664-38-2, Phosphoric Acid., ACGIH TLV 3 mg/m<sup>3</sup> as STEL.  
 7664-38-2, Phosphoric Acid., OSHA PEL: TWA 1 mg/m<sup>3</sup>.  
 7664-38-2, Phosphoric Acid., NIOSH REL: TWA 1 mg/m<sup>3</sup>.  
 7664-38-2, Phosphoric Acid., NIOSH REL ST: 3 mg/m<sup>3</sup>.  
 7664-38-2, Phosphoric Acid., NIOSH IDLH: 1000 mg/m<sup>3</sup>.  
 7664-38-2, Phosphoric Acid., (See 29 CFR 1910 1000 Appendix G).

**Appropriate engineering controls:**

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

**Respiratory protection:**

Use NIOSH approved respirator if not being used in a fume hood.

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<b>Protection of skin:</b>	The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
<b>Eye protection:</b>	Safety glasses with side shields or goggles.
<b>General hygienic measures:</b>	The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

**SECTION 9: Physical and chemical properties**

<b>Appearance (physical state, color):</b>	Clear, colorless liquid	<b>Explosion limit lower:</b> <b>Explosion limit upper:</b>	Not determined Not determined
<b>Odor:</b>	Odorless	<b>Vapor pressure at 20°C:</b>	Not determined
<b>Odor threshold:</b>	Not determined	<b>Vapor density:</b>	3.4
<b>pH-value:</b>	Not determined	<b>Relative density:</b>	Approx. 1
<b>Melting/Freezing point:</b>	Approx. 0°C	<b>Solubilities:</b>	Soluble in water.
<b>Boiling point/Boiling range:</b>	Approx. 100°C	<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Flash point (closed cup):</b>	Not determined	<b>Auto/Self-ignition temperature:</b>	Not determined
<b>Evaporation rate:</b>	Not determined	<b>Decomposition temperature:</b>	300 °C
<b>Flammability (solid, gaseous):</b>	Not determined	<b>Viscosity:</b>	a. Kinematic: Not determined b. Dynamic: Not determined
<b>Density at 20°C:</b>	Not determined		
<b>Phosphoric Acid.</b>	Molecular Weight: 98 .00		
<b>Phosphoric Acid.</b>	Hygroscopic		

**SECTION 10: Stability and reactivity****Reactivity:** None**Chemical stability:**

This hygroscopic substance pulls moisture from air. No decomposition if used and stored according to specifications.

**Possible hazardous reactions:** None**Conditions to avoid:**

Metals. Exposure to moist air or water. Incompatible materials. Excess heat. Store away from oxidizing agents, strong acids or bases.

**Incompatible materials:**

Metals. Bases. Alcohols. Amines. Halogenated agents. Organic peroxides. Amides. Azo. Diazo. Hydrazines. Chlorates. Carbamates. Esters. Fluorides. Phenols. Cresols. Organophosphates. Phosphothioates. Epoxides. Combustible and flammable materials. Explosives. Alkalines. Nitromethane. Sodium tetrahydroborate. Mercaptans. Aldehydes. Ketones. Glycols. Cyanides. Sulfides. Caustics. Strong acids. Carbides. Strong bases. Fulminates. Reducing agents. Nitrates. Acetic acid. Oxidizing agents.

**Hazardous decomposition products:**

Phosphine. Oxides of phosphorus. Hydrogen gas is released in contact with most metals. Carbon oxides (CO,

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CO2).

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

Classified as a skin corrosion. Section 2.

**Serious eye damage/irritation:**

Eye Damage Section 2 (eye damage is presumed with Skin 1 classification).

**Respiratory or skin sensitization:** No additional information.**Carcinogenicity:****NTP:** Not listed.**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:**

Do not release to water., May release phosphates which will result in algae growth, increased turbidity, and depleted oxygen in the marine environment; at extremely high concentrations and/or quantities, this may be hazardous to fish or other marine organisms.

LpH50 (median lethal pH) (96h) phosphoric acid (bluegill sunfish), 3-3.25.

Adult brook trout survived 5 months exposure to pH levels of 5.0 and above. Total egg production was not affected, but viability was significantly less at pH 5.0. Hatchability was significantly less at levels below pH 6.5.

Growth and survival of alevins was reduced at the lower pH levels. , The data indicate that continuous exposure to pH levels below 6.5 result in significant reductions in egg hatchability and growth.

Algae: NOEC (EC50 >100 mg/l, the upper limit of toxic range) *D. subspicatus* , 100 mg/l.

**Persistence and degradability:**

Readily degradable in the environment.

**Bioaccumulative potential:**

The phosphorus element is an essential nutrient for flora and fauna.

**Mobility in soil:**

Aqueous solution has high mobility in soil.

**Other adverse effects:** No additional information.**SECTION 13: Disposal considerations****Waste disposal recommendations:**

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this

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**SECTION 14: Transport information****US DOT****UN Number:**

ADR, ADN, DOT, IMDG, IATA

1805

**Limited Quantity Exception:**

None

**Bulk:****RQ (if applicable):** None**Proper shipping Name:** Phosphoric 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:** Phosphoric 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,Chronic

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

None of the ingredients are listed.

**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):**

7664-38-2 Phosphoric acid 5000.

**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:**

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None of the ingredients are listed.

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

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:** 3-0-0**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).