Phosphoric Acid, ACS

SECTION 1: Identification

Product identifier

Product name: Phosphoric Acid, ACS
Product code: PH1015

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:

United States
ChemTel Inc
+1(800)255-3924
+1(813)248-0585

SECTION 2: Hazard identification

GHS classification:

Skin corrosion, category 1B
Serious eye damage, category 1
Corrosive to metals, category 1

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage.

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray
P264 Wash skin thoroughly after handling
P280 Wear protective gloves/protective clothing/eye protection/face protection
P234 Keep only in original container.
P321 Specific treatment (see supplemental first aid instructions on this label).

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.
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.
P301 IF SWALLOWED:
P303 IF ON SKIN (or hair):
P304 IF INHALED:
P305 IF IN EYES:
P310 Immediately call a POISON CENTER or doctor/physician.
P330 Rinse mouth
P331 Do NOT induce vomiting.
P338 Remove contact lenses if present and easy to do. Continue rinsing
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing
P351 Rinse cautiously with water for several minutes
P353 Rinse skin with water/shower
P361 Remove/Take off immediately all contaminated clothing.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P390 Absorb spillage to prevent material damage
P405 Store locked up
P406 Store in corrosive resistant container with a resistant inner liner.
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: 7664-38-2	Phosphoric Acid	>85
CAS number: 7732-18-5	Water	<15

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
Move exposed individual to fresh air
Immediately call a POISON CONTROL CENTER or seek medical attention

After skin contact:

Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention
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
If symptoms develop or persist, seek medical attention
Remove contact lens(es) if able to do so during rinsing
Immediately call a POISON CONTROL CENTER or seek medical attention

After ingestion:

Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists
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 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:

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:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
United States (OSHA)	Phosphoric Acid	7664-38-2	OSHA PEL TWA 1.0 mg/m³
ACGIH	Phosphoric Acid	7664-38-2	ACGIH TLV TWA 1.0 mg/m³
	Phosphoric Acid	7664-38-2	ACGIH TLV STEL 3.0 mg/m³
NIOSH	Phosphoric Acid	7664-38-2	NIOSH REL TWA 1.0 mg/m³
	Phosphoric Acid	7664-38-2	NIOSH REL ST 3.0 mg/m³

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.

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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 (physical state, color):	Clear, colorless liquid
Odor:	Odorless
Odor threshold:	Not determined
pH-value:	Not determined
Melting/Freezing point:	21° C
Boiling point/range:	158° C
Flash point:	Not determined
Evaporation rate:	Not determined
Flammability (solid, gaseous):	Not applicable
Explosion limit upper:	Not determined
Explosion limit lower:	Not determined
Vapor pressure:	Not determined
Vapor density:	3.4
Density:	Not determined
Relative density:	1.680
Solubilities:	Soluble in water
Partition coefficient (n-octanol/water):	Not determined
Auto/Self-ignition temperature:	Not determined
Decomposition temperature:	300° C
Dynamic viscosity:	Not determined
Kinematic viscosity:	Not determined
Explosive properties	Not determined
Oxidizing properties	Not determined

Other information

Molecular weight	98.00 g/mol
Specific Gravity	1.680

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.

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

specifications.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

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.

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
Phosphoric Acid	oral	LD50 Rat: 1,530 mg/kg
	dermal	LD50 Rabbit: 2,740 mg/kg
	inhalation	LC50 Rabbit: 1.689 mg/L (1 hr)

Skin corrosion/irritation

Assessment: Causes severe skin burns and eye damage

Product data: No data available.

Substance data:

Name	Result
Phosphoric Acid	Causes severe skin burns and eye damage.

Serious eye damage/irritation

Assessment: Causes serious eye damage

Product data: No data available.

Substance data: No data available.

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.

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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: 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
Phosphoric Acid	EC50 (48 h): 100 mg/L
	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.

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.

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Substance data:

Name	Result
Phosphoric Acid	The phosphorus element is an essential nutrient for flora and fauna.

Mobility in soil

Product data: No data available.
Substance data: No data available.

Other adverse effects:

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

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) Do not allow product to reach sewage system or open water Product/containers must not be disposed together with household garbage

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	1805
UN proper shipping name	PHOSPHORIC ACID, SOLUTION
UN transport hazard class(es)	8 
Packing group	III
Environmental hazards	None
Special precautions for user	None
Excepted quantities	30g/30mL
Limited quantity	5 L

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

UN number	1805
UN proper shipping name	PHOSPHORIC ACID, SOLUTION

Phosphoric Acid, ACS

UN transport hazard class(es)	8 
Packing group	III
Environmental hazards	None
Special precautions for user	None
Excepted quantities	30g/30mL
Passenger and cargo	5L
Cargo aircraft only	60L
Limited quantity	5L

SECTION 15: Regulatory information

Canada regulations

Domestic substances list (DSL):

7732-18-5	Water	Listed
7664-38-2	Phosphoric Acid	Listed

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

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: 3-0-0

HMIS: 3-0-0

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End of Safety Data Sheet