

# Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 01.20.2018

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## Phosphoric Acid, Concentrated, ACS Grade

### SECTION 1: Identification

#### Product identifier

**Product name:** Phosphoric Acid, Concentrated, ACS Grade

**Product code:** S25470

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

**Relevant identified uses:** Not determined or not applicable.

**Uses advised against:** Not determined or not applicable.

**Reasons why uses advised against:** Not determined or not applicable.

#### Manufacturer or supplier details

**Manufacturer:**

AquaPhoenix Scientific  
860 Gitts Run Road  
Hanover  
PA 17331  
(717) 632-1291

**Supplier:**

Fisher Science Education  
6771 Silver Crest Road  
Nazareth  
PA 18064  
800 955-1177

#### Emergency telephone number:

**United States**

Emergency Telephone No.: 800-255-3924

### 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).

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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.  
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:

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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

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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/m <sup>3</sup>
ACGIH	Phosphoric Acid	7664-38-2	ACGIH TLV TWA 1.0 mg/m <sup>3</sup>
	Phosphoric Acid	7664-38-2	ACGIH TLV STEL 3.0 mg/m <sup>3</sup>
NIOSH	Phosphoric Acid	7664-38-2	NIOSH REL TWA 1.0 mg/m <sup>3</sup>
	Phosphoric Acid	7664-38-2	NIOSH REL ST 3.0 mg/m <sup>3</sup>

#### 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

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

### Other information

<b>Molecular weight</b>	98.00 g/mol
<b>Specific Gravity</b>	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

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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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## Phosphoric Acid, Concentrated, ACS Grade

### 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




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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

**Initial preparation date:** 01.20.2018

**End of Safety Data Sheet**