



Safety Data Sheet

Phosphoric Acid 85%

SECTION 1: Identification

1.1 GHS Product identifier

Product name Phosphoric Acid 85%

1.2 Other means of identification

Orthophosphoric acid

1.3 Recommended use of the chemical and restrictions on use

For manufacturers and labs use only.

1.4 Supplier's details

Name High Purity Products
Address 14546 N. Lombard St.
Portland, OR 97203
USA

Telephone 503-227-1616
Fax 503-221-6410
email quality@highpp.com

1.5 Emergency phone number

CHEMTREC 1-800-424-9300

SECTION 2: Hazard identification

General hazard statement

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)

Safety Data Sheet

Phosphoric Acid 85%

- Corrosive to metals, Cat. 1
- Acute toxicity, oral, Cat. 4
- Eye damage/irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1B
- Respiratory tract irritation, Cat. 3

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H290 May be corrosive to metals
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H335 May cause respiratory irritation

Precautionary statement(s)

P234 Keep only in original container/packaging.
P260 Do not breathe mist, vapors, or spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection/face protection.
P284 Wear respiratory protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep 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.
P273 Avoid release to the environment.

SECTION 3: Composition/information on ingredients

3.1 Mixture

Components	CAS #	Percent (weight)
Phosphoric Acid	7664-38-2	83 - 86%
Water	7732-18-5	14 – 17%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. Acute and delayed symptoms and effects: May cause

Safety Data Sheet

Phosphoric Acid 85%

respiratory irritation. Signs/symptoms may include burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

In case of skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Wash contaminated clothing before reuse. Acute and delayed symptoms and effects: Causes severe skin burns. Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

In case of eye contact

Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor. Acute and delayed symptoms and effects: Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

If swallowed

Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person. Acute and delayed symptoms and effects: Harmful if swallowed. Causes burns to nose, mouth, throat, and digestive tract. Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea, blood in the feces and/or vomitus may also be seen.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.

5.2 Specific hazards arising from the chemical

May be corrosive to metals. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction. May release phosphorus oxides.

5.3 Special protective actions for fire-fighters

Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA).

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Stop leak if you can do it without risk. Sweep up and shovel into suitable containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

7.2 Conditions for safe storage, including any incompatibilities

Safety Data Sheet

Phosphoric Acid 85%

Store locked up. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical	Cas Number	NIOSH REL TWA
Phosphoric Acid	7664-38-2	1 mg/m ³

8.2 Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH. Ensure that eyewash stations and/or safety showers are close to the workstation location if working with concentrated product.

Skin protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Appearance	Clear oily Liquid
Color	Clear, Cloudy
Odor	Odorless
Odor threshold	No data available.
pH	<1.0
Melting point/freezing point	21°C (70 °F)
Boiling point or initial boiling point and boiling range	158 °C (316 °F)
Flash point	Not Flammable.
Evaporation rate	No data available.
Flammability	Not Flammable.
Vapor pressure	2.250 mmHg 20 °C
Relative vapor density	3.4
Density and/or relative density	1.685
Solubility	Completely soluble
Partition coefficient n-octanol/water (log value)	No data available.
Auto-ignition temperature	No data available.
Kinematic viscosity	No data available.

Safety Data Sheet

Phosphoric Acid 85%

Particle characteristics

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Will not occur.

10.2 Chemical stability

Stable under normal storage conditions.

10.3 Possibility of hazardous reactions

None established.

10.4 Conditions to avoid

Extremely high or low temperatures and incompatible materials. Avoid low temperatures.

10.5 Incompatible materials

Strong Bases and powdered metals.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Phosphorus oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Phosphoric Acid:

LD50 Oral - Rat - 1,530 mg/kg

LD50 – Dermal – rabbit - 2740 mg/kg

LC50 Inhalation - Rat - >850 mg/m³/1H

Skin corrosion/irritation

Causes severe skin burns. Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Serious eye damage/irritation

Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Respiratory or skin sensitization

Cough. Sore throat. Burning sensation. Shortness of breath. Labored breathing.

Germ cell mutagenicity

No data available.

Carcinogenicity

The International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong inorganic-acid mists containing sulfuric acid is carcinogenic to humans (group 1).

Reproductive toxicity

No data available.

Safety Data Sheet

Phosphoric Acid 85%

STOT-single exposure

Causes damage to the respiratory system

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

No data available.

SECTION 12: Ecological information

Toxicity

Phosphoric acid:

LC50 fish 1 - 138 mg/l (LC50)

Persistence and degradability

the phosphate may persist indefinitely.

Bioaccumulative potential

Unlikely to bioaccumulate in most aquatic species.

Mobility in soil

phosphoric acid will infiltrate downward, the rate being greater with lower concentration because of reduced viscosity.
significant amounts of acid will remain for transport.

SECTION 13: Disposal considerations

Product disposal

Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

EPA Waste Code: **D002**

SECTION 14: Transport information

DOT (US)

UN Number: UN1805

Class: 8

Packing Group: III

Proper Shipping Name: Phosphoric Acid Solution

Reportable Quantity: 5,000 lbs

Marine pollutant: No

IMDG

UN Number: UN1805

Class: 8

Packing Group: III

Proper Shipping Name: Phosphoric Acid Solution

IATA

UN Number: UN1805

Safety Data Sheet
Phosphoric Acid 85%

Class: 8
Packing Group: III
Proper Shipping Name: Phosphoric Acid Solution

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

California Prop. 65 Components
This product does not contain chemicals known to the State of California to cause cancer.

Rhode Island: Hazardous Substance List Listed
Phosphoric Acid

Massachusetts: Toxic or Hazardous Substance List, Right to Know
Phosphoric Acid

Pennsylvania: Hazardous Substance List
Phosphoric Acid

New Jersey: Right to Know Hazardous Substance List
Phosphoric Acid

Canadian Domestic Substances List (DSL)
Chemical name: Phosphoric Acid

CERCLA RQ Hazardous Substances
Phosphoric Acid: 5,000 lbs.

HMIS Rating

Phosphoric Acid 85%	
HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

Disclaimer:

High Purity Products provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the

Safety Data Sheet
Phosphoric Acid 85%

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