SAFETY DATA SHEET

Phosphoric Acid 75% USP Food Grade

Revised: 07/01/2026

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Phosphoric Acid 75% USP Food Grade
Synonyms: phosphoric acid
CAS Number: 7664-38-2
Grade/Purity: Food Grade
Product Type: Acids
Product Use: Industrial, Manufacturing or Laboratory use
Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574
Information: 512-365-6838 | www.alliancechemical.com
Emergency: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Danger
GHS Pictograms:

Hazard Statements:

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

Precautionary Statements:

P234	Keep only in original packaging.
P260	Do not breathe dust, fume, gas, mist, vapours or spray.
P264	Wash hands and face thoroughly after handling.
P280	Wear protective gloves, protective clothing, and eye/face 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 or 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.
P310	Immediately call a POISON CENTER or doctor.
P321	Specific treatment (see first-aid information on this label).
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents and container in accordance with local, regional, national, and international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
Phosphoric Acid	75% w/w	75% w/w	7664-38-2	231-633-2	H_3O_4P	97.995 g/mol

Water	25	25	7732-18-5	231-791-2	H_2O	18.02 g/mol

4. FIRST-AID MEASURES

Eyes	Eye: IRRIGATE IMMEDIATELY - If this chemical contacts the eyes, immediately wash (irrigate) the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately.
Skin	Wear protective gloves when administering first aid. Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer immediately for medical attention .
Inhalation	Breathing: RESPIRATORY SUPPORT - If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.
Ingestion	Swallow: MEDICAL ATTENTION IMMEDIATELY - If this chemical has been swallowed, get medical attention immediately. (NIOSH, 2024)

5. FIRE-FIGHTING MEASURES

Suitable Media	Dry chemical, CO2, water spray. Use water spray to cool containers.
Unsuitable Media	Do not use a solid water stream as it may scatter and spread fire.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Combustion Products	May include carbon oxides and other toxic fumes. See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7. HANDLING AND STORAGE

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Use corrosion-resistant containers. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

AGENCY	EXPOSURE LIMIT
OSHA PEL	1 mg/m³ TWA
NIOSH REL	1 mg/m³ TWA / 3 mg/m³ STEL
IDLH	1000 mg/m³

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	For mist or aerosol applications (e.g., spray, atomization, pressure washing), use a NIOSH-approved half-face air-purifying respirator with combination acid gas / P100 cartridges. For dust exposure, an N95 or P100 particulate filter is acceptable. Ensure local exhaust ventilation.

Exposure limits sourced from NIOSH Pocket Guide and OSHA 29 CFR 1910.1000. Hazard classification from ECHA Classification and Labelling Inventory (CLP Annex VI).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, pale yellow liquid, translucent viscous

Odor	Characteristic
Median Particle Size	Not Applicable
Particle Size Distribution	Not Applicable
Particle Shape	Not Applicable
Surface Area	Not Applicable
Dustiness	Not Applicable
Hygroscopicity	Not Applicable
pH	Not Available
Melting Point	−17 to 21 °C
Boiling Point	135–158 °C
Flash Point	Non-flammable
Vapor Pressure	Not Available
Specific Gravity	Not Available
Solubility	Completely miscible with water, excellent polar solvent compatibility
Molecular Formula	H_3O_4P
Molecular Weight	97.995 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, and incompatible materials.
Incompatible Materials	Strong acids, strong bases, reactive metals, water (for some concentrated forms).
Decomposition Products	May produce carbon oxides and other toxic fumes when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: See Section 2 for GHS hazard classification.

IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Algae ErC50: 77.9 mg/L (72 h, Pseudokirchneriella subcapitata — pH-driven; ErC50 (growth rate)); Daphnia EC50: > 376 mg/L (48 h, Daphnia magna — pH-driven; >376 mg/L WITH pH adjustment (pH 7.53–7.95)); Fish LC50: 75.1 mg/L (96 h, Oryzias latipes — pH-driven (pH 3.39–4.45, no pH adjustment))
Persistence	Not applicable (inorganic; dissociates to phosphate ions). Phosphate may persist and contribute to eutrophication.
Bioaccumulation	log Kow −2.15 (measured); −0.77 (estimated)
Mobility in Soil	High (miscible with water)

13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

14. TRANSPORT INFORMATION

US DOT	UN1805, PHOSPHORIC ACID SOLUTION, 8, PG III
IMDG	UN1805, PHOSPHORIC ACID SOLUTION, 8, PG III
IATA/ICAO	UN1805, PHOSPHORIC ACID SOLUTION, 8, PG III
Marine Pollutant	No

15. REGULATORY INFORMATION

Regulatory listings not yet on file in this system; consult OSHA, EPA TSCA, EPCRA TRI, and California OEHHA directly.	
SARA 311/312	See Section 2 for hazard classifications.

16. OTHER INFORMATION

Revision Date: 07/01/2026

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