

PRODUCT IDENTIFICATION



Product Name: Phosphoric Acid 75 ACS Grade

CAS Number: 7664-38-2

Molecular Formula: $\text{H}_3\text{O}_4\text{P}$

Molecular Weight: 97.995 g/mol

Grade: ACS Grade

Purity / Concentration: 75%

Synonyms: Orthophosphoric Acid, Phosphoric Acid 75%

PRODUCT OVERVIEW

Phosphoric Acid 75% is a clear, colorless liquid with a high degree of purity, commonly used in various industrial applications. It is a triprotic acid, meaning it can donate three protons (H^+ ions), making it useful for pH adjustment and as a reagent in chemical synthesis.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	75	74.5	75.5	Titration
Color (APHA/Hazen)	APHA	5	—	15	Spectrophotometry
Specific Gravity (20°C)	g/mL	1.579	1.577	1.581	Hydrometer @ 20°C
Non-Volatile Residue	%	0.01	—	0.01	Residue on Ignition
Heavy Metals As Pb	ppm	2	—	5	ICP-MS (as Pb)
Iron (Fe)	ppm	2.7	0	9	ICP-MS
Lead Pb	ppm	≤ 0.88 ppm	—	—	ICP-MS
Chloride Cl	ppm	8.82	—	17.65	ICP
Sulfate SO_4	ppm	≤ 44.12 ppm	—	—	ICP
Acidity	%	≤ 0.01 %	—	—	Titration
Cadmium Cd	ppm	≤ 0.88 ppm	—	—	ICP-MS
Mercury Hg	ppm	≤ 0.88 ppm	—	—	ICP-MS

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Transparent, mobile liquid with water-like clarity	Odor	Odorless
Form	Liquid	Boiling Point	~135–158 °C
Melting / Freezing Point	~ -17 to 21 °C (freezing point)	Flash Point	Non-flammable
Specific Gravity	1.575	Solubility	High water solubility, miscible with polar solvents, excellent aqueous dispersibility
Molecular Formula	H ₃ O ₄ P	Molecular Weight	97.995 g/mol
Vapor Pressure (20°C)	0.1 mmHg	Viscosity (25°C)	1.5 cP
Refractive Index (20°C)	1.333	Density (25°C)	1.685 g/mL
Partition Coefficient (log P)	-3.0	Decomposition Temp.	Not defined for simple inorganic acid; stable under recommended storage

APPLICATIONS

1. **Water Treatment** — Used to adjust the pH of water in various treatment processes.
2. **Agriculture** — Serves as a key ingredient in the production of phosphate fertilizers.
3. **Food Processing** — Utilized as an acidity regulator in food products.
4. **Chemical Manufacturing** — Acts as a reagent in the synthesis of various chemicals.
5. **Industrial Cleaning** — Used in cleaning formulations for metal surfaces.

STORAGE & HANDLING

- Store in a cool, dry, well-ventilated area away from incompatible materials.
- Use containers made of HDPE or glass to prevent reactions.
- Avoid contact with strong bases and oxidizing agents.
- Ensure proper personal protective equipment (PPE) is worn when handling.
- Keep container tightly closed when not in use to prevent moisture absorption.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

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

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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