

PRODUCT IDENTIFICATION



Product Name: Phosphoric Acid 75%

CAS Number: 7664-38-2

Molecular Formula: H_3O_4P

Molecular Weight: 97.995 g/mol

Grade: Technical

Purity / Concentration: 75%

Synonyms: Orthophosphoric Acid, Phosphoric Acid Solution

PRODUCT OVERVIEW

Alliance Chemical offers high-quality Technical grade Phosphoric Acid 75%, a clear, syrupy liquid essential for industrial pH control and chemical synthesis. With a precise assay of 75.3% and minimal impurity levels, such as 0.2 ppm of Iron, this product provides the consistency required for demanding manufacturing environments.

Grade Significance: Technical grade signifies that this product is manufactured to meet industrial performance standards, offering an optimal balance of purity and cost-effectiveness for non-pharmaceutical manufacturing processes.

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	1.577	1.574	1.58	Hydrometer @ 25°C
Non-Volatile Residue	%	≤ 0.01 %	—	—	Residue on Ignition
Water Karl Fischer	%	≤ 0.01 %	—	—	Karl Fischer
Arsenic Antimony As As	ppm	≤ 0.44 ppm	—	—	ICP-MS
Heavy Metals As Pb	ppm	2	—	4	ICP-MS (as Pb)
Iron (Fe)	ppm	3	0	9	ICP-MS
Lead Pb	ppm	≤ 0.88 ppm	—	—	ICP-MS
Chloride Cl	ppm	8.82	—	17.65	ICP
Nitrate No3	ppm	≤ 4.41 ppm	—	—	ICP
Sulfate So4	ppm	≤ 44.12 ppm	—	—	ICP
Acidity	%	≤ 0.01 %	—	—	Titration
Cadmium Cd	ppm	≤ 0.88 ppm	—	—	ICP-MS
Fluoride F	ppm	7.94	—	8.82	Ion Chromatography
Mercury Hg	ppm	≤ 0.88 ppm	—	—	ICP-MS

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear yellowish liquid, syrupy consistency	Odor	Odorless
Form	Liquid	Boiling Point	~135–158 °C
Melting / Freezing Point	~ -17 to 21 °C (freezing point)	Flash Point	210°C (410°F)
Specific Gravity	1.575	Solubility	Complete water miscibility, dissolves in polar organic solvents
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)	1.336	Density (25°C)	1.685 g/mL

APPLICATIONS

1. **Water Treatment** — Used as a reliable agent to adjust pH levels, ensuring water quality meets strict regulatory and operational standards.
2. **Agriculture** — Serves as a fundamental raw material in the production of high-efficiency phosphate fertilizers for crop nutrition.
3. **Food Processing** — Acts as an effective acidity regulator to balance flavor profiles and ensure product stability in various food applications.
4. **Chemical Manufacturing** — Utilized as a versatile reagent in the synthesis of complex chemical compounds and industrial additives.
5. **Metal Finishing** — Employed in metal surface treatment processes to remove rust and prepare substrates for protective coatings.

STORAGE & HANDLING

Proper storage is critical because Phosphoric Acid 75% is highly corrosive and causes severe skin burns and eye damage. Containers must be kept in a cool, well-ventilated area to maintain chemical integrity and prevent the risk of hazardous leaks or container degradation.

- Store in a cool, dry place away from incompatible materials.
- Use materials compatible with phosphoric acid, such as HDPE or glass containers.
- Avoid contact with strong bases and oxidizing agents.
- Ensure proper ventilation in storage areas to minimize vapor accumulation.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.

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:

- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]

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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