

PRODUCT IDENTIFICATION



Product Name: Phosphoric Acid 75% USP Food Grade

CAS Number: 7664-38-2

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

Molecular Weight: 97.995 g/mol

Grade: Food Grade

Purity / Concentration: 75%

Synonyms: Orthophosphoric Acid, Phosphoric Acid 75%

PRODUCT OVERVIEW

Phosphoric Acid (H_3PO_4) is a colorless, odorless liquid that is widely used in food processing and various industrial applications. This 75% concentration is suitable for food-grade applications, providing essential acidity and acting as a pH adjuster in various formulations.

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	1.6141	—	—	Hydrometer @ 25°C
Non-Volatile Residue	%	≤ 0.01 %	—	—	Residue on Ignition
Water Karl Fischer	%	≤ 0.01 %	—	—	Karl Fischer
Arsenic (As)	ppm	≤ 0.44 ppm	—	—	Per specification
Arsenic Antimony As As	ppm	0.5	0	1	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
Cadmium Cd	ppm	≤ 0.88 ppm	—	—	ICP-MS
Fluoride	ppm	7.94	—	8.82	Per specification
Fluoride F	ppm	5	0	10	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, pale yellow liquid, translucent viscous	Odor	Odorless
Form	Liquid	Boiling Point	~135–158 °C
Melting / Freezing Point	~ -17 to 21 °C (freezing point)	Flash Point	Non-flammable
Solubility	Completely miscible with water, excellent solvent compatibility	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)	1.334
Density (25°C)	1.685 g/mL		

APPLICATIONS

1. **Food Processing** — Used to adjust the acidity levels in various food products, enhancing flavor and preservation.
2. **Beverage Industry** — Acts as an acidulant in soft drinks and other beverages to provide a tangy flavor.
3. **Agriculture** — Serves as a source of phosphorus in fertilizers, promoting plant growth.
4. **Industrial Cleaning** — Utilized in cleaning formulations for its ability to remove rust and mineral deposits.
5. **Pharmaceutical** — Used in formulations to maintain stable pH levels in various pharmaceutical products.

STORAGE & HANDLING

- Store in a cool, dry place away from incompatible materials.
- Use containers made of HDPE or glass to prevent reactions.
- Avoid exposure to light and heat to maintain product integrity.
- Wear appropriate personal protective equipment (PPE) such as gloves and goggles when handling.
- Ensure adequate ventilation in storage areas to prevent accumulation of vapors.

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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