

PRODUCT IDENTIFICATION



Product Name: Phosphoric Acid 75% USP Food Grade

CAS Number: 7664-38-2

Molecular Formula: H₃O₄P

Molecular Weight: 97.995 g/mol

Grade: Food Grade

Purity / Concentration: 75%

Synonyms: Orthophosphoric Acid, Phosphoric Acid 75%

PRODUCT OVERVIEW

Phosphoric Acid 75% Food Grade from Alliance Chemical is a high-purity acid, boasting an assay of 75.1% and a color of 5 APHA. This translucent, viscous liquid is primarily used in the food and beverage industry to adjust acidity and enhance flavor.

Grade Significance: Food Grade Phosphoric Acid signifies that the product meets stringent purity standards and is safe for use in food and beverage applications. This ensures that the acid does not introduce harmful contaminants into the final product, safeguarding consumer health and product quality.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	75.1	75	85	Titration
Color (APHA)	APHA	5	—	10	APHA 2120B
Specific Gravity (20°C)	g/mL	1.578	—	—	USP <841>
Residue After Ignition	%	0.0050	—	0.02	USP <281>
Arsenic (As)	ppm	0.05	—	3	USP <211>
Heavy Metals (as Pb)	ppm	0.1	—	3	USP <231>
Iron (Fe)	ppm	0.1	—	20	USP <231>
Chloride (Cl ⁻)	ppm	0.2	—	5	USP <231>
Sulfate (SO ₄ ²⁻)	ppm	1	—	150.0	USP <231>
Fluoride	ppm	1.5	—	10	Ion Selective Electrode

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	158°C (316°F)
Melting / Freezing Point	42°C (108°F)	Flash Point	Non-flammable
Solubility	Completely miscible with water, excellent polar 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

- Food and Beverage** — Used as an acidity regulator in various food products, ensuring consistent pH levels and enhancing flavor profiles. It also acts as a preservative, extending the shelf life of certain food items.
- Beverage Industry** — Functions as an acidulant in soft drinks and other beverages, providing a tangy or tart flavor. It contributes to the overall taste and appeal of the final product.
- Agriculture** — Serves as a source of phosphorus in fertilizers, promoting healthy plant growth and development. Phosphorus is an essential nutrient for root development and overall plant vigor.
- Cleaning** — Utilized in cleaning formulations for its ability to effectively remove rust, mineral deposits, and hard water stains. Its acidic properties make it a powerful cleaning agent for various surfaces.
- Pharmaceuticals** — Used as a reagent and pH adjuster in the production of various pharmaceutical products. Its high purity ensures it meets the stringent requirements of the pharmaceutical industry.
- Water Treatment** — Used for pH adjustment and scale control in industrial water treatment systems. It helps to prevent corrosion and maintain the efficiency of water systems.

STORAGE & HANDLING

Proper storage of Phosphoric Acid 75% is crucial to maintain its purity and prevent degradation. It should be stored in tightly sealed, corrosion-resistant containers in a cool, dry, and well-ventilated area, away from incompatible materials. As Phosphoric Acid is corrosive, following proper storage procedures mitigates the risk of container damage and potential exposure, preventing severe skin burns and eye damage.

- 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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