

PRODUCT IDENTIFICATION



Product Name: Phosphoric Acid 85% 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: 85%
Synonyms: Orthophosphoric Acid, Phosphoric Acid 85%

PRODUCT OVERVIEW

Phosphoric Acid (H_3PO_4) is a clear, colorless liquid that is widely used in various industrial applications. This ACS Grade phosphoric acid is characterized by its high purity and is essential for applications requiring precise chemical composition and minimal impurities.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	85	84.5	85.5	Titration
Color (APHA/Hazen)	APHA	5	—	15	Spectrophotometry
Specific Gravity (20°C)	g/mL	1.696	1.685	1.7808	Hydrometer @ 25°C
Non-Volatile Residue	%	ND	—	0.01	Residue on Ignition
Water Karl Fischer	%	ND	—	0.01	Karl Fischer
Arsenic (As)	ppm	≤ 0.5 ppm	—	—	Per specification
Heavy Metals As Pb	ppm	2	—	5	ICP-MS (as Pb)
Iron (Fe)	ppm	5	0	10	ICP-MS
Lead Pb	ppm	≤ 1 ppm	—	—	ICP-MS
Chloride Cl	ppm	10	—	20	ICP
Nitrate (NO_3^-)	ppm	≤ 5 ppm	—	—	Per specification
Sulfate So_4	ppm	≤ 50 ppm	—	—	ICP
Acidity	%	ND	—	0.01	Titration
Cadmium Cd	ppm	≤ 1 ppm	—	—	ICP-MS
Fluoride F	ppm	9	—	10	Ion Chromatography
Mercury Hg	ppm	≤ 1 ppm	—	—	ICP-MS

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Odorless
Form	Liquid	Boiling Point	158 °C (316 °F)
Melting / Freezing Point	21 °C (70 °F)	Flash Point	Non-flammable
Specific Gravity	1.685	Solubility	Soluble in water, alcohols, and 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)	1.331	Density (25°C)	1.685 g/mL

APPLICATIONS

1. **Water Treatment** — Used to adjust the pH levels in various water treatment processes.
2. **Agriculture** — A key ingredient in the production of phosphate fertilizers.
3. **Food Industry** — Utilized as an acidity regulator in food processing.
4. **Pharmaceutical** — Serves as a reagent in the synthesis of various pharmaceutical compounds.
5. **Industrial Cleaning** — Effective in removing rust and scale from metal surfaces.

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 moisture to maintain product integrity.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.
- 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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com

Disclaimer: The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.