

PRODUCT IDENTIFICATION

**Product Name:** Phosphoric Acid 45% 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:** 45%**Synonyms:** Not Available

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Phosphoric Acid 45% in an ACS grade, ensuring consistent performance for critical laboratory and industrial processes. This clear, slightly viscous liquid is formulated to meet rigorous standards, making it a reliable reagent for precise chemical applications.

Grade Significance: ACS Grade signifies that the product meets the stringent purity standards set by the American Chemical Society, ensuring it is suitable for demanding analytical and laboratory applications where chemical consistency is paramount.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

Certificate of Analysis data not available for this product.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, slightly viscous liquid	Form	Liquid
Boiling Point	158°C (85%)	Melting / Freezing Point	21°C (pure)
Specific Gravity	1.289	Solubility	Fully miscible with water
Molecular Formula	$\text{H}_3\text{O}_4\text{P}$	Molecular Weight	97.995 g/mol

APPLICATIONS

- Laboratory Research** — Used as a high-purity reagent for analytical chemistry and pH adjustment in sensitive experimental procedures.
- Metal Finishing** — Utilized in surface treatment processes to clean, etch, or passivate metal components, ensuring optimal surface integrity.
- Water Treatment** — Applied as a sequestering agent to control scale and corrosion within industrial water systems and cooling towers.
- Chemical Manufacturing** — Serves as a fundamental precursor in the synthesis of various phosphate-based chemicals and industrial compounds.
- Electronics** — Employed in specialized cleaning and etching processes to prepare semiconductor surfaces for manufacturing.

STORAGE & HANDLING

Proper storage is essential because Phosphoric Acid 45% is corrosive to many metals, necessitating the use of compatible containers to prevent structural failure or contamination. Maintaining a secure, climate-controlled environment is vital to mitigate the risk of severe skin burns and eye damage associated with accidental exposure.

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.

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

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