

## PRODUCT IDENTIFICATION

**Product Name:** Phosphoric Acid 50% 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:** 50%**Synonyms:** Not Available

## PRODUCT OVERVIEW

Phosphoric Acid 50% ACS Grade is a high-purity, clear, and viscous liquid essential for precise laboratory and industrial applications. This grade ensures rigorous quality standards, providing the reliability required for sensitive chemical processes.

**Grade Significance:** ACS Grade indicates that the product meets the stringent analytical specifications set by the American Chemical Society, ensuring the consistency and purity necessary for high-stakes research and testing.

## CERTIFICATE OF ANALYSIS — TYPICAL VALUES

Certificate of Analysis data not available for this product.

## PHYSICAL &amp; CHEMICAL PROPERTIES

|                          |                                |                                 |                           |
|--------------------------|--------------------------------|---------------------------------|---------------------------|
| <b>Appearance</b>        | Clear, viscous liquid          | <b>Form</b>                     | Liquid                    |
| <b>Boiling Point</b>     | 158°C (85%)                    | <b>Melting / Freezing Point</b> | 21°C (pure)               |
| <b>Specific Gravity</b>  | 1.329                          | <b>Solubility</b>               | Fully miscible with water |
| <b>Molecular Formula</b> | $\text{H}_3\text{O}_4\text{P}$ | <b>Molecular Weight</b>         | 97.995 g/mol              |

## APPLICATIONS

- Analytical Chemistry** — Used as a high-purity reagent for precise titrations and chemical analysis in controlled laboratory environments.
- Metal Finishing** — Functions as a critical agent in metal surface treatment, specifically for etching, cleaning, and rust removal processes.
- Pharmaceutical Manufacturing** — Utilized as a pH adjuster and buffering agent in the synthesis of various pharmaceutical intermediates.
- Water Treatment** — Applied as a sequestration agent to control mineral deposits and prevent corrosion in industrial water systems.
- Electronics** — Employed in the cleaning and etching of semiconductor components where high chemical purity is required.

## STORAGE &amp; HANDLING

Proper storage is critical because this acid is corrosive to metals and can cause severe skin burns or eye damage upon contact. It must be kept in original, compatible containers within a cool, well-ventilated area to prevent degradation and ensure the safety of your facility personnel.

## 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](http://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.