

## 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 viscous liquid widely utilized in critical laboratory and industrial applications. This concentration offers precise reactivity for chemical synthesis and analytical testing while maintaining strict adherence to quality standards.

**Grade Significance:** ACS Grade signifies that the product meets the rigorous purity standards established by the American Chemical Society, ensuring reliability and consistency for sensitive analytical applications.

## 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 in laboratory titrations and analytical procedures where precise chemical concentration is required.
- Metal Finishing** — Functions as a cleaning and etching agent to remove surface oxides and prepare metal substrates for coating or plating.
- Water Treatment** — Applied as a sequestering agent to control pH levels and prevent mineral scaling in industrial water systems.
- Chemical Manufacturing** — Serves as a vital precursor in the synthesis of phosphate-based chemicals and specialty compounds.
- Textile Industry** — Used in various dyeing and finishing processes to ensure consistent color adherence and fabric quality.

## STORAGE &amp; HANDLING

Due to its corrosive nature, this acid must be stored in a cool, well-ventilated area away from incompatible substances like bases and metals to prevent hazardous reactions. Proper containment is essential to mitigate the risk of severe skin burns and eye damage, ensuring both personnel safety and material integrity.

## 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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