



pH-Ree Fall - World Class Buffering Solution For PH Stability Made From Phosphoric Acid Technical Grade

Revised: 08/10/2026

PRODUCT IDENTIFICATION



Product Name: pH-Ree Fall - World Class Buffering Solution For PH Stability Made From Phosphoric Acid Technical Grade

CAS Number: 7664-38-2

Molecular Formula: $\text{H}_3\text{O}_4\text{P}$

Molecular Weight: 97.995 g/mol

Grade: Technical Grade

Purity / Concentration: 30%

Synonyms: pH Buffer Solution, Phosphoric Acid Buffer

PRODUCT OVERVIEW

pH-Ree Fall is a high-purity, Technical Grade phosphoric acid solution at 30% concentration, engineered for precise pH control and buffering stability. Featuring exceptional clarity with low impurity levels—including iron and heavy metals below 1 ppm—this solution is a reliable choice for critical industrial and analytical applications.

Grade Significance: Technical Grade indicates that this product is optimized for industrial and commercial utility, providing the reliable chemical consistency needed for large-scale operations while balancing purity and cost-effectiveness.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	30	29.5	30.5	Titration
Color (APHA/Hazen)	APHA	5	—	15	Spectrophotometry
Specific Gravity (20°C)	g/mL	1.1805	1.1785	1.1825	Hydrometer @ 20°C
Arsenic Antimony As As	ppm	≤ 0.18 ppm	—	—	ICP-MS
Heavy Metals As Pb	ppm	1	—	2	ICP-MS (as Pb)
Iron (Fe)	ppm	1	0	4	ICP-MS
Lead Pb	ppm	≤ 0.35 ppm	—	—	ICP-MS
Chloride Cl	ppm	3.53	—	7.06	ICP
Nitrate No3	ppm	≤ 1.76 ppm	—	—	ICP
Sulfate So4	ppm	≤ 17.65 ppm	—	—	ICP
Cadmium Cd	ppm	≤ 0.35 ppm	—	—	ICP-MS
Fluoride F	ppm	3.18	—	3.53	Ion Chromatography
Mercury Hg	ppm	≤ 0.35 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	Not characterized for the 30% aqueous solution (water-dominated, ~100 °C)
Melting / Freezing Point	Not characterized for the 30% aqueous solution	Specific Gravity	1.18
Solubility	Highly soluble in water	Molecular Formula	H ₃ O ₄ P
Molecular Weight	97.995 g/mol	Vapor Pressure (20°C)	0.1 mmHg
Viscosity (25°C)	1.0 cP	Refractive Index (20°C)	1.336
Density (25°C)	1.07 g/mL		

APPLICATIONS

1. **Water Treatment** — Utilized as a potent buffering agent to stabilize pH levels in industrial water systems, preventing corrosion and scaling.
2. **Food Processing** — Acts as an acidity regulator to enhance product shelf-life and maintain consistent flavor profiles in food manufacturing.
3. **Laboratory Research** — Serves as a vital reagent in biochemical assays and titrations where maintaining a stable, controlled pH is essential for experimental accuracy.
4. **Metal Finishing** — Used in surface treatment processes to control bath acidity, ensuring uniform etching and cleaning results on metal components.
5. **Chemical Manufacturing** — Functions as a versatile catalyst or buffering component in the synthesis of various specialty chemicals.

STORAGE & HANDLING

Proper storage is critical because pH-Ree Fall is corrosive to many metals, necessitating the use of compatible containers like high-density polyethylene to prevent tank degradation. Maintaining a secure, climate-controlled environment ensures the stability of the 30% concentration and minimizes the risk of hazardous leaks or skin contact.

- Store in a cool, dry place away from direct sunlight.
- Use HDPE or glass containers for storage to prevent chemical reactions.
- Avoid contact with strong bases and oxidizing agents.
- Ensure proper ventilation when handling to minimize inhalation risks.
- Wear appropriate personal protective equipment (PPE) such as gloves and goggles.

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.

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