

## Technical Data Sheet (TDS)

### 1. Product Overview

- Product Name: Phosphoric Acid (85% Aqueous Solution)
- English Name: Phosphoric Acid; Orthophosphoric Acid
- CAS Number:7664-38-2
- Formula:H<sub>3</sub>PO<sub>4</sub> (Aqueous Solution)
- Molecular Weight:98.00 g/mol (Pure Substance)
- Product Characteristics: Colorless clear viscous liquid with a faint acidic odor. High-purity strong acid with moderate corrosivity. Chemically stable, non-flammable, low-toxic. Suitable for chemical synthesis, fertilizer production, food industry, and laboratory research.

### 2. Technical Specifications

Item	Specification
Appearance	Colorless clear viscous liquid
Concentration (w/w)	85.0 ± 1.0%
Free Sulfuric Acid (as H <sub>2</sub> SO <sub>4</sub> )	≤ 0.05%
Chloride (Cl <sup>-</sup> )	≤ 0.005%
Heavy Metals (Pb)	≤ 0.5 ppm
Heavy Metals (As)	≤ 0.1 ppm
Iron (Fe)	≤ 1 ppm
Density (20°C)	1.685-1.690 g/cm <sup>3</sup>
Boiling Range	158°C (decomposes)
Viscosity (20°C)	25 mPa·s
Corrosivity	Moderately corrosive to metals and tissues

### 3. Product Advantages

1. High Purity: Meets food/industrial standards with low impurity content.
2. Moderate Reactivity: Ideal for neutralization, esterification, and fertilizer synthesis.
3. Chemical Stability: Stable under normal storage/use conditions.
4. Versatile Application: Suitable for multi-industry scenarios with controlled corrosivity.

### 4. Application Fields

- Fertilizer Industry: Production of phosphate fertilizers (ammonium phosphate).
- Chemical Synthesis: Precursor for phosphates, detergents, and pharmaceutical intermediates.
- Food Industry: Food additive (acidulant, pH adjuster) for beverages and processed foods.
- Laboratory Research: Analytical reagent and buffer component.

### 5. Usage Methods

- Dosage: 10-50% concentration (dilute with water for low-corrosivity use).
- Application: Use in corrosion-resistant equipment; add slowly to avoid heat release.
- Optimal Conditions: Operate in well-ventilated areas; avoid contact with strong bases.



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### 6. Packaging & Storage

- Packaging: 5L HDPE cans, 20L HDPE drums, 200L HDPE drums (UN-approved).
- Storage: Cool, dry, well-ventilated warehouse ( $\leq 30^{\circ}\text{C}$ ); sealed, away from heat/strong bases.
- Shelf Life: 12 months (unopened, specified conditions).
- Transportation: Classified as corrosive hazardous goods; transport per regulations.

### 7. Safety & Protection

- Moderately corrosive and irritating: No smoking near storage/use areas.
- Wear chemical safety goggles, nitrile rubber gloves, and protective clothing.
- Avoid inhalation, skin contact, and ingestion; ensure local exhaust ventilation.

### 8. Quality Assurance

- Manufactured under ISO 9001 and ISO 22000 (food-grade) standards.
- Each batch comes with a COA for compliance verification.
- Provide technical support for application optimization and corrosion control.



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