



## Phosphoric Acid Specification

### 1. PRODUCT INFORMATION

- **Product Name:** Phosphoric Acid
- **Chemical Formula:**  $H_3PO_4$
- **CAS Number:** 7664-38-2
- **Molecular Weight:** 98.00 g/mol
- **Appearance:** Clear, colorless to slightly yellowish liquid
- **Odor:** Odorless

### 2. CHEMICAL COMPOSITION

Component	CAS Number	Typical Concentration
Phosphoric Acid ( $H_3PO_4$ )	7664-38-2	85% (by weight)
Water ( $H_2O$ )	7732-18-5	15% (by weight)

### 3. TECHNICAL SPECIFICATIONS

Property	Unit	Specification
Phosphoric Acid Content ( $H_3PO_4$ )	% (w/w)	$\geq 85.0$
Specific Gravity (25°C)	-	1.685 - 1.690
pH (1% solution)	-	$< 1.0$
Chloride (Cl)	ppm	$\leq 10$
Sulfate ( $SO_4$ )	ppm	$\leq 50$
Iron (Fe)	ppm	$\leq 10$
Arsenic (As)	ppm	$\leq 1.0$
Heavy Metals (as Pb)	ppm	$\leq 5.0$
Fluoride (F)	ppm	$\leq 10$
Insoluble Matter	% (w/w)	$\leq 0.05$

### 4. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Clear, colorless to slightly yellow liquid
Boiling Point	158°C (316°F)
Melting Point	42°C (108°F) (pure)
Solubility in Water	Completely soluble
Vapor Pressure	0.03 mmHg @ 20°C
Flash Point	Non-flammable



## 5. APPLICATIONS

Phosphoric Acid is widely used in various industries, including:

- **Food Industry:** Acidulant in beverages and food additives.
- **Fertilizers:** Manufacturing phosphate fertilizers.
- **Metal Treatment:** Rust removal and surface conditioning.
- **Water Treatment:** pH control in water systems.
- **Detergents and Cleaners:** Formulations for industrial cleaning.

## 6. PACKAGING & STORAGE

- **Packaging:** Available in 35 kg, 330 kg HDPE drums, 1000 L IBC tanks, or bulk tankers.
- **Storage Conditions:** Store in a cool, dry, well-ventilated area away from incompatible materials such as strong bases and metals.
- **Shelf Life:** 2 years under recommended storage conditions.

## 7. SAFETY & HANDLING

- **Hazard Classification:** Corrosive (GHS, OSHA)
- **Personal Protective Equipment (PPE):**
  - Chemical-resistant gloves
  - Safety goggles or face shield
  - Protective clothing
  - Use in a well-ventilated area
- **First Aid Measures:**
  - **Inhalation:** Move to fresh air and seek medical attention.
  - **Skin Contact:** Wash immediately with water and remove contaminated clothing.
  - **Eye Contact:** Rinse eyes thoroughly for at least 15 minutes and seek medical attention.
  - **Ingestion:** Do not induce vomiting; seek immediate medical help.

## 8. REGULATORY INFORMATION

- **UN Number:** 1805
- **Hazard Class:** 8 (Corrosive)
- **Packing Group:** III
- **Regulatory Compliance:**
  - REACH Compliant
  - FDA (Food Grade) Approved (if applicable)
  - ISO 9001 & ISO 14001 Certified Production

## 9. QUALITY CONTROL & CERTIFICATIONS

- Produced under **ISO 9001:2015** and **GMP** standards.
- Each batch tested for compliance with specification limits before shipment.
- COA (Certificate of Analysis) provided with each shipment.