



MATERIAL SAFETY DATA SHEET (MSDS)

Phosphoric Acid

Supplier: ATDM

1. Identification of the Substance / Company

Product Name: Phosphoric Acid 85%

Chemical Name: Orthophosphoric Acid

Chemical Formula: H₃PO₄

CAS Number: 7664-38-2

EC Number: 231-633-2

Recommended Use:

Industrial chemical, fertilizer production, food additive (food grade), pH regulator, metal treatment

Supplier: ATDM

Emergency Contact: + (Insert Emergency Number)

2. Hazard Identification

GHS Classification:

- Skin Corrosion – Category 1B
- Serious Eye Damage – Category 1

Signal Word: DANGER

Hazard Statements:

- Causes severe skin burns and eye damage.
- May cause respiratory irritation (mist).

Precautionary Statements:

- Wear protective gloves, clothing, eye and face protection.
- Do not breathe mist or vapors.
- Wash thoroughly after handling.



3. Composition / Information on Ingredients

Component	Concentration	CAS No.
Phosphoric Acid	85% \pm 1%	7664-38-2
Water	Balance	7732-18-5

4. First Aid Measures

Inhalation:

Move person to fresh air immediately. If breathing difficulty occurs, seek medical attention.

Skin Contact:

Remove contaminated clothing. Rinse skin with plenty of water for at least 15 minutes. Seek medical advice.

Eye Contact:

Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present. Immediate medical attention required.

Ingestion:

Do NOT induce vomiting. Rinse mouth with water. Seek immediate medical assistance.

5. Fire Fighting Measures

Suitable Extinguishing Media:

Water spray, dry chemical, foam, CO₂

Specific Hazards:

Non-flammable but may release toxic phosphorus oxides under fire conditions.

Protective Equipment:

Self-contained breathing apparatus (SCBA) and full protective gear.

6. Accidental Release Measures

Personal Precautions:

Wear chemical resistant gloves, goggles, protective clothing.

**Environmental Precautions:**

Prevent entry into drains and waterways.

Containment and Cleanup:

Neutralize with sodium carbonate or lime. Absorb with inert material (sand, vermiculite).

Dispose according to regulations.

7. Handling and Storage

Handling:

- Use in well-ventilated area.
- Avoid contact with skin and eyes.
- Always add acid to water when diluting.

Storage:

- Store in corrosion-resistant containers (HDPE, stainless steel).
- Keep container tightly closed.
- Store away from strong bases and metals.

8. Exposure Controls / Personal Protection

Occupational Exposure Limits (OSHA PEL):

1 mg/m³ (TWA)

Engineering Controls:

Local exhaust ventilation recommended.

Personal Protective Equipment (PPE):

- Chemical-resistant gloves (PVC, neoprene)
- Safety goggles / Face shield
- Acid-resistant apron
- Respirator if mist exposure possible

9. Physical and Chemical Properties

Property	Value
Appearance	Clear, colorless to slightly yellow liquid
Odor	Odorless
pH (1% solution)	~1.5
Boiling Point	~158°C
Melting Point	~21°C
Density (20°C)	1.685 g/cm ³
Solubility	Completely miscible with water
Vapor Pressure	Low

10. Stability and Reactivity

Chemical Stability: Stable under normal conditions.

Reactivity: Reacts with bases and metals.

Hazardous Decomposition Products:
Phosphorus oxides when heated strongly.

Incompatible Materials:
Strong bases, metals (may release hydrogen gas), sulfides, cyanides.

11. Toxicological Information

Acute Toxicity (Oral, Rat): LD50 ~ 1250 mg/kg

Skin Corrosion/Irritation: Causes severe burns.

Eye Damage: Causes serious eye damage.

Chronic Effects: Prolonged exposure may cause dermatitis.

12. Ecological Information

Ecotoxicity:
May cause local pH changes harmful to aquatic life.



Persistence and Degradability:

Inorganic substance – does not biodegrade.

Mobility:

Highly soluble in water.

13. Disposal Considerations

Dispose in accordance with local, regional and international regulations.
Neutralization prior to disposal is recommended.

14. Transport Information

UN Number: UN 1805

Proper Shipping Name: Phosphoric Acid, Solution

Hazard Class: 8 (Corrosive)

Packing Group: III

Labels Required: Corrosive

15. Regulatory Information

Complies with:

- GHS Classification
- REACH (EU)
- OSHA Hazard Communication Standard

Check local regulations for specific compliance.

16. Other Information

The information provided in this MSDS is based on current knowledge and intended for safe handling, storage and transportation purposes only. It does not constitute a specification guarantee.



For technical specifications (TDS) or Certificate of Analysis (COA), contact ATDM technical department.