

Safety Data Sheet: Phosphoric Acid 70%

1. Identification

Product	Phosphoric Acid 70%; CAS 7664-38-2; EC 231-633-2
Use	Industrial metal treatment and phosphate manufacture.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Phosphoric Acid 70%. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Skin corrosion Category 1; serious eye damage Category 1; corrosive to metals Category 1.
Signal word / symbols	Danger; GHS05
Hazard statements	H290: metal corrosion hazard. H314: severe corrosive skin and eye injury. H318: serious eye damage.
Prevention	Use adequate ventilation; avoid inhaling mist. Prevent skin and eye contact. Wear suitable chemical-resistant gloves and eye protection. Wash after handling; keep food and drink out of the work area.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Reference solution: phosphoric acid CAS 7664-38-2 about 70% with water. Supply H ₃ PO ₄ ≥70%; exact delivered composition is not certified by the reference.
Supply grade	H ₃ PO ₄ ≥70%
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant.
Inhalation	Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to mist.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Obtain urgent treatment for chemical burns.
Eyes	Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Obtain urgent medical care.
Ingestion	Rinse the mouth. Do not induce vomiting. Give nothing by mouth to an unconscious person. Obtain emergency medical attention.
Effects / treatment	Corrosive skin and eye injury; acid mist exposure and ingestion can injure exposed tissues. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Use water spray, foam, dry chemical or carbon dioxide suited to the surrounding fire.
Hazards	Heating can produce irritating phosphorus-containing fumes; incompatible metal contact may release hydrogen.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personnel	Isolate the spill and provide ventilation. Use chemical-resistant gloves and eye protection; avoid contact and mist exposure.
Environment	Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority.
Cleanup	Stop the leak if safe. Absorb liquid with a compatible inert material and collect in closed labelled containers. Do not wash into drains.

7. Handling and Storage

Handling	Use controlled liquid transfer with suitable extraction where acid mist can form. Wear acid-resistant gloves, protective clothing and eye/face protection. For dilution, add acid slowly to water with cooling; prevent splashes and provide eyewash and emergency washing facilities.
Storage	Store tightly closed in compatible acid-resistant containers in a cool, ventilated area with secondary containment. Segregate alkalis, reactive metals and incompatible materials; protect closures from damage.
Incompatibilities	Strong alkalis and incompatible reactive metals. Dilution releases heat.

8. Exposure Controls / Personal Protection

Exposure limits	Reference acid-mist TWA 1 mg/m ³ and STEL 3 mg/m ³ . Assess current local limits and mist generation during transfer.
Engineering controls	Use local extraction where mist can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	Colorless liquid
Physical state	Colorless aqueous liquid
Water response	Miscible
Solute formula / molecular weight	H3PO4 / 97.99 g/mol

10. Stability and Reactivity

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	Strong alkalis and incompatible reactive metals. Dilution releases heat.
Decomposition	Heating can produce irritating phosphorus-containing fumes; incompatible metal contact may release hydrogen.

11. Toxicological Information

Exposure effects	Corrosive skin and eye injury; acid mist exposure and ingestion can injure exposed tissues.
Reference classification	Skin corrosion Category 1; serious eye damage Category 1; corrosive to metals Category 1.
Toxicological data	Corrosive injury is the principal classified endpoint of the matched 70% reference. Product-specific systemic toxicity is not established by an acid assay.

12. Ecological Information

Environmental effects	Prevent acidic discharge to soil, drains and waterways. Changes in water pH and phosphate loading can damage receiving systems; collect and treat wastes appropriately.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Class 8 — Corrosive
UN number	UN 1805
Shipping name	Phosphoric acid solution
Class / packing group	DOT and IATA: Class 8, packing group III. Bulk phosphoric-acid solution transport reference.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Phosphoric Acid 70%; CAS 7664-38-2; EC 231-633-2
HS reference	280920; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish finished-product authorization.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H290: metal corrosion hazard. H314: severe corrosive skin and eye injury. H318: serious eye damage.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.2; prepared 2026-10-06. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

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