

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Phosphoric Acid 50% ACS Grade

**Synonyms:** phosphoric acid

**CAS Number:** 7664-38-2

**Grade/Purity:** ACS Reagent Grade

**Product Type:** Acids

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer/Supplier:** Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574

**Information:** 512-365-6838 | [www.alliancechemical.com](http://www.alliancechemical.com)

**Emergency:** CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**Signal Word:** Danger

**GHS Pictograms:**



**Hazard Statements:**

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage

**Precautionary Statements:**

P234	Keep only in original packaging.
P260	Do not breathe dust, fume, gas, mist, vapours or spray.
P264	Wash hands and face thoroughly after handling.
P280	Wear protective gloves, protective clothing, and eye/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P321	Specific treatment (see first-aid information on this label).
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents and container in accordance with local, regional, national, and international regulations.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
Phosphoric Acid	50	50	7664-38-2	231-633-2	H <sub>3</sub> PO <sub>4</sub>	98.00 g/mol
Water	50	50	7732-18-5	231-791-2	H <sub>2</sub> O	18.02 g/mol

### 4. FIRST-AID MEASURES

<b>Eyes</b>	Eye: IRRIGATE IMMEDIATELY - If this chemical contacts the eyes, immediately wash (irrigate) the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately.
<b>Skin</b>	Wear protective gloves when administering first aid. Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer immediately for medical attention .
<b>Inhalation</b>	Breathing: RESPIRATORY SUPPORT - If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.
<b>Ingestion</b>	Swallow: MEDICAL ATTENTION IMMEDIATELY - If this chemical has been swallowed, get medical attention immediately. (NIOSH, 2024)

### 5. FIRE-FIGHTING MEASURES

<b>Suitable Media</b>	Dry chemical, CO2, water spray. Use water spray to cool containers.
<b>Unsuitable Media</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>Protective Equipment</b>	Wear self-contained breathing apparatus and full protective clothing.
<b>Combustion Products</b>	May include carbon oxides and other toxic fumes. See Section 10.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
<b>Environmental</b>	Prevent leakage or spillage from entering drains, sewers, or waterways.
<b>Containment &amp; Cleanup</b>	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

### 7. HANDLING AND STORAGE

<b>Safe Handling</b>	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
<b>Safe Storage</b>	Store in a cool, dry, well-ventilated area. Use corrosion-resistant containers. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

**Occupational Exposure Limits:**

AGENCY	EXPOSURE LIMIT
OSHA PEL	1 mg/m <sup>3</sup> TWA
NIOSH REL	1 mg/m <sup>3</sup> TWA / 3 mg/m <sup>3</sup> STEL
IDLH	1000 mg/m <sup>3</sup>

<b>Eyes</b>	Wear chemical safety goggles or face shield.
<b>Skin</b>	Wear chemical-resistant gloves and protective clothing.
<b>Inhalation</b>	For mist or aerosol applications (e.g., spray, atomization, pressure washing), use a NIOSH-approved half-face air-purifying respirator with combination acid gas / P100 cartridges. For dust exposure, an N95 or P100 particulate filter is acceptable. Ensure local exhaust ventilation.

Exposure limits sourced from NIOSH Pocket Guide and OSHA 29 CFR 1910.1000. Hazard classification from ECHA Classification and Labelling Inventory (CLP Annex VI).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear, viscous liquid
<b>Odor</b>	Characteristic
<b>Median Particle Size</b>	Not Applicable
<b>Particle Size Distribution</b>	Not Applicable
<b>Particle Shape</b>	Not Applicable
<b>Surface Area</b>	Not Applicable
<b>Dustiness</b>	Not Applicable
<b>Hygroscopicity</b>	Not Applicable
<b>pH</b>	Not Available
<b>Melting Point</b>	21°C (pure)
<b>Boiling Point</b>	158°C (85%)
<b>Flash Point</b>	Not Available
<b>Vapor Pressure</b>	Not Available
<b>Specific Gravity</b>	1.329
<b>Solubility</b>	Fully miscible with water
<b>Molecular Formula</b>	H <sub>3</sub> PO <sub>4</sub>
<b>Molecular Weight</b>	98.00 g/mol

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Hazardous Reactions</b>	None under normal processing conditions.
<b>Conditions to Avoid</b>	Heat, sparks, open flame, and incompatible materials.
<b>Incompatible Materials</b>	Strong acids, strong bases, reactive metals, water (for some concentrated forms).
<b>Decomposition Products</b>	May produce carbon oxides and other toxic fumes when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity:** See Section 2 for GHS hazard classification.

<b>IARC</b>	Not listed as carcinogen.
<b>NTP</b>	Not listed as carcinogen.
<b>OSHA</b>	Not listed as carcinogen.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Data not available. Avoid release to the environment.
<b>Persistence</b>	Not Available
<b>Bioaccumulation</b>	Not Available
<b>Mobility in Soil</b>	Not Available

## 13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

## 14. TRANSPORT INFORMATION

<b>US DOT</b>	UN1805, Phosphoric acid, liquid, 8, PG III
<b>IMDG</b>	UN1805, Phosphoric acid, liquid, 8, PG III
<b>IATA/ICAO</b>	UN1805, Phosphoric acid, liquid, 8, PG III
<b>Marine Pollutant</b>	No

## 15. REGULATORY INFORMATION

**Regulatory listings not yet on file in this system; consult OSHA, EPA TSCA, EPCRA TRI, and California OEHHA directly.**

<b>SARA 311/312</b>	See Section 2 for hazard classifications.
---------------------	-------------------------------------------

## 16. OTHER INFORMATION

**Revision Date:** 05/28/2026

**Disclaimer:** The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of publication. It relates only to the specific product identified and does not relate to its use in combination with other materials. ALLIANCE CHEMICAL MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLIANCE CHEMICAL DOES NOT ASSUME LIABILITY FOR LOSS, INJURY, DAMAGE, OR EXPENSE ARISING FROM THE HANDLING, STORAGE, USE, OR DISPOSAL OF THIS PRODUCT.