

Safety Data Sheet (SDS)

12-13-2021: File reviewed, more current MSDS/SDS not available. JMC

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

o-Phosphoric Acid

Signal Word
DANGER

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

Chemtrec Emergency Phone Number: (800) 424-10122

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).



Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314).



Hazard class: Acute toxicity, inhalation (Category 1). Fatal if inhaled (H330).

Industrial exposure to phosphoric acid vapors and mists is listed as a known human carcinogen by IARC (IARC-1).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

| Component Name | CAS Number | Formula | Formula Weight | Concentration |
|--------------------------------|------------|--------------------------------|----------------|---------------|
| o-Phosphoric acid | 7664-38-2 | H ₃ PO ₄ | 98 | |
| Synonyms: Orthophosphoric acid | | | | |

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).

If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin:** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).

If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable liquid.

NFPA Code

When heated to decomposition, may emit toxic fumes.

H-3

In case of fire: Use a tri-class dry chemical fire extinguisher.

F-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide and deposit in sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #9. Store with acids, except nitric acid.

Store in a dedicated acid cabinet and away from any source of water; if an acid cabinet is not available, store in Flinn Saf-Cube™.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

Exposure guidelines: PEL/TLV 1 mg/m³(OSHA/ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless viscous liquid. Odorless.

Boiling point: ~135 °C

Soluble: Water and alcohol

pH: <1 (1% solution)>

Specific gravity: 1.58

Vapor pressure: 2.2 mmHg

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, reducers, bases, and metals. Forms a detonable mixture with nitromethane.

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Harmful liquid, corrosive

ORL-RAT LD₅₀: 1530 mg/kg

Chronic effects: respiratory tract irritation

IHL-RAT LC₅₀: N.A.

Target organs: N.A.

SKN-RBT LD₅₀: 2740 mg/kg

SECTION 12 — ECOLOGICAL INFORMATION

Harmful to aquatic life at low concentrations. Toxicity is primarily associated with pH. TLm (24-hour): 138 ppm (mosquito fish)

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #24b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Phosphoric Acid. Hazard class: 8, Corrosive. UN number: UN1805.

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-633-2), RCRA code D002.

SECTION 16 — OTHER INFORMATION

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N.A. = Not available, not all health aspects of this substance have been fully investigated.

N/A = Not applicable

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

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