

FLINN SCIENTIFIC, INC.

Material Safety Data Sheet (MSDS)

MSDS #: 600.00

Revision Date: February 24, 2012

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

o-Phosphoric Acid

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

CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

o-Phosphoric acid

Synonym: Orthophosphoric acid

CAS#: 7664-38-2

SECTION 3 — HAZARDS IDENTIFICATION

Colorless viscous liquid. Odorless.

Moderately toxic by ingestion and inhalation; severe corrosive to body tissues.

Avoid all body tissue contact.

FLINN AT-A-GLANCE

Health-2

Flammability-0

Reactivity-2

Exposure-3

Storage-3

0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.

Eye or External: Immediately flush with fresh water for at least 15 minutes.

Internal: Do NOT induce vomiting. Rinse mouth. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable liquid.

When heated to decomposition, emits toxic fumes of POx.

Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE

H-3

F-0

R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. 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.

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

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire).

Exposure guidelines: PEL 1 mg/m³(OSHA)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, odorless, viscous liquid.

Solubility: Soluble in water and alcohol.

Formula: H₃PO₄

Formula weight: 98.00

Boiling point: ~135 °C

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

Chronic effects: respiratory tract irritation

Target organs: N.A.

ORL-RAT LD₅₀: 1530 mg/kg

IHL-RAT LC₅₀: N.A.

SKN-RBT LD₅₀: 2740 mg/kg

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

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

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

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

SECTION 16 — OTHER INFORMATION

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