

Material Safety Data Sheet

of

MONOPOTASSIUM PHOSPHATE

1. Product Identification

Synonyms: Phosphoric acid mono potassium salt; Mono Potassium Phosphate

CAS No.: 7778-77-0

Molecular Weight: 136.09

Chemical Formula: KH₂PO₄

2. Composition/Information on Ingredients

Ingredient	CAS No.
Mono potassium Phosphate Monobasic	7778-77-0
Percent	Hazardous
99 - 100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED OR INHALED.

Health Rating: 1 - Slight

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES

Potential Health Effects

Inhalation: Mono Potassium Phosphate may cause mild irritation to the respiratory tract.

Ingestion: Phosphates are slowly and incompletely absorbed when ingested, and seldom result in systemic effects. Such effects, however, have occurred. Symptoms may include vomiting, lethargy, diarrhea, blood chemistry effects, cardiac effects and central nervous system effects. The toxicity of phosphates is because of their ability to sequester calcium. Acute potassium intoxication by mouth is rare because large single doses usually induce vomiting and because in the absence of pre-existing kidney

damage, potassium is rapidly excreted. Potassium poisoning can result in heart effects, change in respiration rate, tingling in the extremities, heaviness in the limbs, nausea and diarrhea.

Skin Contact: Mono potassium Phosphate is irritant due to its acidic nature. Mono Potassium Phosphate may cause inflammation and pain on prolonged contact, especially with moist skin.

Eye Contact: Mono Potassium Phosphate may cause irritation, redness and pain.

Chronic Exposure: Mono potassium Phosphate may sequester calcium and cause calcium phosphate deposits in the kidneys.

Aggravation of Pre-existing Conditions: Persons with impaired kidney function may be more susceptible to the effects of Mono potassium Phosphate.

4. First Aid Measures

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: If Mono Potassium Phosphate is swallowed, give several glasses of water to drink to dilute. If large amounts were swallowed or symptoms occur, get medical advice. Never give anything by mouth to an unconscious person.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes.

Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire: **Mono potassium Phosphate** is not considered to be a fire hazard.

Explosion: Mono Potassium Phosphate is not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire over Mono Potassium Phosphate.

Special Information: In the event of a fire over Mono potassium Phosphate, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill of Mono Potassium Phosphate. Wear appropriate personal protective equipment as specified in Section 8. **Spills:** Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

7. Handling and Storage

Keep Mono potassium Phosphate in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of Mono Potassium Phosphate may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits: None established for Mono potassium Phosphate.

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Safety glasses. Maintain eye wash fountain and quick-drench facilities in work area of Mono potassium Phosphate.

9. Physical and Chemical Properties

Appearance: Mono potassium Phosphate is white granular powder.

Odor: Mono Potassium Phosphate is odorless.

Solubility: Mono Potassium Phosphate is soluble 22 g in 100 g of water.

Density: Mono Potassium Phosphate has specific gravity of 2.34

pH: No information found.

% Volatiles by volume @ 21C (70F): 0

Boiling Point: 400C (752F) Loses water and becomes meta phosphate

Melting Point: 253C (487F)

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information found on Mono potassium Phosphate.

10. Stability and Reactivity

Stability: Mono Potassium Phosphate is stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Phosphorus oxides may form when heated to decomposition.

Hazardous Polymerization: Will not occur.

Incompatibilities: No incompatibility data found for Mono potassium Phosphate.

Conditions to Avoid: No information found.

11. Toxicological Information

For Potassium Phosphate Monobasic or Mono potassium Phosphate: >4640 mg/kg skin rabbit LD50

12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found for Mono potassium Phosphate.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of Mono potassium Phosphate container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No

Reactivity: No (Pure / Solid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This Mono Potassium Phosphate MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 1 Flammability: 0 Reactivity: 0

Label Hazard Warning:

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED OR INHALED.

Label Precautions:

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Label First Aid:

If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. If swallowed, give several glasses of water to drink to dilute. If large amounts were swallowed or symptoms occur, get medical advice. Never give anything by mouth to an unconscious person.

Disclaimer:

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