

# MATERIAL SAFETY DATA SHEET (MSDS)

MONOPOTASSIUM PHOSPHATE (MKP)

## 1. Product Identification

Synonyms: Phosphoric acid, monopotassium salt; Potassium dihydrogen phosphate

CAS No.: 7778-77-0

Molecular Weight: 136.09

Chemical Formula:  $\text{KH}_2\text{PO}_4$

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Potassium Phosphate Monobasic	7778-77-0	99 - 100%	No

## 3. Hazards Identification

Emergency Overview -----

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

MAY BE HARMFUL IF SWALLOWED OR INHALED. Health Rating: 0 - None

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Orange (General Storage)

-----Potential

Health Effects

Inhalation: 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:

Irritant due to its acidic nature. May cause inflammation and pain on prolonged contact, especially with moist skin.

Eye Contact:

May cause irritation, redness and pain.

Chronic Exposure:

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 the substance.

---

#### 4. First Aid Measures

##### Inhalation:

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

##### Ingestion:

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.

##### 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:

Not considered to be a fire hazard.

##### Explosion:

Not considered to be an explosion hazard.

##### Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

##### Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

---

#### 6. Accidental Release Measures

Ventilate area of leak or spill. 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 in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material 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.

##### 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.

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.

---

## 9. Physical and Chemical Properties

Appearance: White granular powder.

Odor: Odorless.

Solubility: 22 g in 100 g of water.

Density: 2.34

pH: No information found.

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

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

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.

---

## 10. Stability and Reactivity

Stability:

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.

Conditions to Avoid:

No information found.

---

## 11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Potassium Phosphate Monobasic (7778-77-0)	No	No	None

---

## 12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found.

### 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 container and unused contents in accordance with federal, state and local requirements.

### 14. Transport Information

Not regulated.

### 15. Regulatory Information

#### -----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
------------	------	----	-------	-----------

Potassium Phosphate Monobasic (7778-77-0)	Yes	Yes	Yes	Yes
---	-----	-----	-----	-----

#### -----\Chemical Inventory Status - Part 2\-----

Ingredient	Korea	DSL	NDL	Phil.
------------	-------	-----	-----	-------

Potassium Phosphate Monobasic (7778-77-0)	Yes	Yes	No	Yes
---	-----	-----	----	-----

#### -----\Federal, State & International Regulations - Part 1\-----

Ingredient	SARA 302-RQ	TPQ	SARA 313-List	Chemical Catg.
------------	-------------	-----	---------------	----------------

Potassium Phosphate Monobasic (7778-77-0)	No	No	No	No
---	----	----	----	----

#### -----\Federal, State & International Regulations - Part 2\-----

Ingredient	CERCLA	-RCRA-261.33	-TSCA-8(d)
------------	--------	--------------	------------

Potassium Phosphate Monobasic	No	No	No	(7778-77-0)
-------------------------------	----	----	----	-------------

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)

Poison Schedule: None allocated.

### 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.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 8.

\*\*\*\*\*

Disclaimer:

\*\*\*\*\*

Shifang Yuda Chemicals Co.,Ltd. , provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Shifang Yuda Chemicals Co.,Ltd , makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, we Will not be responsible for damages resulting from use of or reliance upon this information.

\*\*\*\*\*

WWW.CHEMICALS.COM