

MATERIAL SAFETY DATA SHEET

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Date: January 2002
Page: 1 of 5

I. PRODUCT IDENTIFICATION

Trade Name: Monopotassium Phosphate

Chemical and common name: MKP, Potassium Dihydrogen Phosphate; Monobasic Potassium Phosphate

CAS Number: [7778-77-0]

Appearance and odor: White powder deliquescent; odorless

II. HAZARDS IDENTIFICATION

Emergency Overview

Continuous contact may cause skin, eye and respiratory tract irritation.

Potential Health Effects

Eye: Minimally to moderately irritating to unwashed eyes.

Skin: Irritation from continuous contact has been reported during manufacturing when protective measures for contact or personal hygiene procedures are not followed.

Inhalation: No significant inhalation hazard when exposures are properly controlled.

Chronic: Not available

III. FIRST AID

EYES: Flush eyes with large amounts of water. If irritation develops or persists, get medical attention.

SKIN: Get medical attention if irritation develops or persists. Flush skin with plenty of soap and water.

INGESTION: If victim is conscious and alert, give 2-3 glasses of water to drink and induce vomiting by touching back of throat with a finger. Do not induce vomiting or give anything by mouth to an unconscious person. Seek immediate medical attention. Do not

leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

INHALATION: Remove from exposure to fresh air immediately. If breathing difficulty or discomfort occurs, get medical attention.

NOTES TO PHYSICIAN: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Ingestion of large quantities of phosphate salts (over 1.0 grams for an adult) may cause an osmotic catharsis resulting in diarrhea and probable abdominal cramps. Larger doses such as 4-8 grams will almost certainly cause these effects in everyone. In healthy individuals most of the ingested salt will be excreted in the feces with the diarrhea and, thus, not cause any systemic toxicity. Doses greater than 10 grams hypothetically may cause systemic toxicity. Treatment should take into consideration both anionic and cation portion of the molecule.

The following treatments should be considered for the specific group(s) of phosphate salts found in this product:

--All phosphate salts, except calcium salts, have a hypothetical risk of hypocalcemia, so calcium levels should be monitored.

--Ammonium salts have a hypothetical risk of ammonia toxicity. In addition to calcium levels, ammonia and phosphate levels should be monitored.

--Potassium salts have a hypothetical risk of hyperkalemia which can cause cardiac arrhythmia. In addition to calcium levels, potassium and phosphate levels should be monitored. Also consider continuous EKG monitoring to detect hyperkalemia.

IV. FIRE FIGHTING MEASURES

General Information: Monopotassium Phosphate and its solutions do not burn or support combustion.

Extinguishing Media: This material does not burn. Extinguish fire using appropriate extinguishing media for the surrounding fire.

V. ACCIDENTAL RELEASE MEASURES

Spills/Leaks: Material should be swept up for salvage or disposal.

VI. HANDLING AND STORAGE

Handling: Exposure to the product may result in eye or skin irritation under normal conditions of use. In the event of contact, immediately flush eyes with water; wash off skin.

Ventilation: Control measures such as local exhaust ventilation may be required where excessive airborne dust loading may be present

Storing: This product should be stored in a clean dry area to maintain product quality and to prevent possible contamination by other chemicals.

VII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Measures:

Prevention of eye and skin contact may be required under normal use conditions. However, severe agitation or dispersion into the work environment may require enclosure or the process and local exhaust ventilation at the source to prevent release into air. If work environment controls are not implemented, the personal protection for inhalation, skin and eye may be required.

Personal Protective Equipment

Eyes: Wear chemical safety goggles when airborne dust is expected

Skin: Wear impervious gloves when continuous contact is expected.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Use approved dust respiratory protection if release of the product into the work area is expected.

VIII. PHYSICAL AND CHEMICAL PROPERTIES.

Physical state: Powder, Granules or Solution

Color: White

Odor: Odorless

Boiling Point: Not available

Freezing/Melting Point: 253 C (487 F)

Autoignition Temperature: Non Combustible

Flash Point: Non Combustible

Vapor pressure: Not available

pH: 4.5 at 1 wt/wt%

Explosion Limits, lower: Not applicable

Explosion Limits, upper: Not applicable

Solubility in water: 20% @ 25° C

Specific Gravity/Density: 1.25 G/ML

IX. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: None

Incompatibilities with Other Materials: None

Hazardous Decomposition Products: Decomposition Type: thermal
Oxides of phosphorus
Oxides of Potassium

Hazardous Polymerization: Will not occur.

X. TOXICOLOGY INFORMATION

Eye Contact: Mildly irritating to unwashed eyes (rabbit)

Skin Contact: Minimally irritating at 300 MG/KG; Non-irritating at 20 MG/KG (rabbit)

Skin Absorption: LD50 – lethal dose 50% of test species, >7950 MG/KG, rabbit.

Inhalation: No published data

Ingestion: LD50 – lethal dose 50% of test species, > 4640 MG/KG (rat)

XI. ECOLOGICAL INFORMATION

Ecotoxicological Information: No data found for product.

Chemical Fate Information: No data found for product

XII. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

XIII. TRANSPORTATION INFORMATION

US DOT:

Proper shipping Name: None, not regulated

Classification: Not Regulated

Labels: Not Required

Marking: Not Required

Placard: Not Required

IMDG: None, Not Regulated
IATA: None, Not Regulated
UN Number: None
Hazardous Substance/RQ: Not Listed
49 STCC Number: None
Canadian TDG: No information available

XIV. REGULATORY INFORMATION

U.S. FEDERAL:

TSCA – CAS# 7758-11-4 is listed on the TSCA inventory.

CANADA

CAS# 7758-11-4 is listed on Canada's DSL List

XV: OTHER INFORMATION

National Fire Protection Association Hazard Ratings--NFPA(R):

1 Health Hazard Rating--Slight
0 Flammability Rating--Minimal
0 Instability Rating--Minimal

National Paint & Coating Hazardous Materials Identification System--HMIS(R):

1 Health Hazard Rating--Slight
0 Flammability Rating--Minimal
0 Reactivity Rating--Minimal