

1. Product and Company Identification

Material name	POTASSIUM PHOSPHATE MONOBASIC
Version #	03
Revision date	08-09-2012
CAS #	7778-77-0
Synonym(s)	POTASSIUM DIHYDROGEN PHOSPHATE * Phosphoric acid, monopotassium salt
Manufacturer information	Mallinckrodt 675 McDonnell Blvd. Hazelwood, MO 63042 24 Hour Emergency 314-654-1600 Chemtrec 800-424-9300 Customer Service 888-744-1414
Item code	2929, 7096, 7097, 7100, 7746, 9096

2. Hazards Identification

Emergency overview	CAUTION May cause skin and eye irritation. May cause irritation to the respiratory system. May be harmful if swallowed. May be harmful if inhaled.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Dust or powder may irritate eye tissue.
Skin	May cause skin irritation. Prolonged or repeated exposure may cause severe irritation. Avoid contact with the skin.
Inhalation	Inhalation of dusts may cause respiratory irritation. Coughing. Difficulty in breathing.
Ingestion	Ingestion of this product may cause nausea, vomiting and diarrhea. Heart problems. Changes in blood picture. Drowsiness. May cause central nervous system effects.
Target organs	Kidneys. Central nervous system. Heart and cardiovascular system.
Chronic effects	Chronic ingestion may result in systemic toxicity including calcium imbalance, increased pH and kidney damage.
Potential environmental effects	Ecological injuries are not known or expected under normal use.

3. Composition / Information on Ingredients

Components	CAS #	Percent
POTASSIUM PHOSPHATE MONOBASIC	7778-77-0	99 - 100

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation	If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

General advice

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties

Not flammable by OSHA criteria. No unusual fire or explosion hazards noted.

Extinguishing media**Suitable extinguishing media**

Water. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Protection of firefighters**Specific hazards arising from the chemical**

In the event of fire and/or explosion do not breathe fumes.

Fire fighting equipment/instructions

In the event of fire, cool tanks with water spray. Move containers from fire area if you can do it without risk. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific methods

Cool containers exposed to flames with water until well after the fire is out.

6. Accidental Release Measures

Personal precautions

Ensure adequate ventilation. Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear appropriate protective equipment and clothing during clean-up. Avoid contact with spilled material. Avoid inhalation of dust from the spilled material. Ventilate closed spaces before entering them.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods for containment

Stop leak if you can do so without risk. Collect spillage. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product.

Methods for cleaning up

Small Dry Spills: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Collect dust using a vacuum cleaner equipped with HEPA filter. Following product recovery, flush area with water. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling

Do not use in areas without adequate ventilation. Keep formation of airborne dusts to a minimum. Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid contact with skin. Avoid contact with eyes. Do not ingest. In case of insufficient ventilation, wear suitable respiratory equipment. Wash hands thoroughly after handling. Avoid prolonged exposure. Handle and open container with care.

Storage

Keep container tightly closed. Store in a cool, dry place. Store in a well-ventilated place. Guard against dust accumulation of this material. Use care in handling/storage. Store in accordance with local/regional/national/international regulation.

8. Exposure Controls / Personal Protection

Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye / face protection**

Safety glasses. Use tight fitting goggles if dust is generated. Provide eyewash station and safety shower.

Skin protection	Wear suitable protective clothing. Chemical resistant gloves.
Respiratory protection	Particulate air-purifying respirator approved for dust or oil mist is recommended. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.
General hygiene considerations	Do not breathe dust. Avoid contact with eyes. Avoid contact with skin. Wash hands after handling and before eating. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Granular. Powder.
Physical state	Solid.
Form	Powder.
Color	White
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	< 0 kPa at 25 °C
Vapor density	Not available.
Boiling point	752 °F (400 °C) Loses water and becomes metaphosphate.
Melting point/Freezing point	487.4 °F (253 °C)
Solubility (water)	Slight
Specific gravity	2.34
Relative density	Not available.
Flash point	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.
Molecular weight	136.09 g/mol
Molecular formula	H3-O4-P.K
Other data	
Density	2.34 g/cm3
Specific activity	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	None under normal conditions.
Incompatible materials	None known.
Hazardous decomposition products	Oxides of phosphorus.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data	
Product	Test Results
POTASSIUM PHOSPHATE MONOBASIC (7778-77-0)	Acute Dermal LD50 Rabbit: > 4640 mg/kg Acute Oral LD50 Mouse: 1700 mg/kg

Sensitization	Not a skin sensitizer.
Acute effects	May be harmful if swallowed.
Local effects	Inhalation of dusts may cause respiratory irritation.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Skin corrosion/irritation	Not available.
Epidemiology	Not available.
Neurological effects	Not available.

12. Ecological Information

Ecotoxicity	Not expected to be harmful to aquatic organisms.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	No data is available on the degradability of this product.

13. Disposal Considerations

Disposal instructions	This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
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CERCLA/SARA Hazardous Substances - Not applicable.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))

Not regulated

DEA Essential Chemical Code Number

Not regulated

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated

DEA Exempt Chemical Mixtures Code Number

Not regulated

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Labeling Info

Label Hazard Warning	CAUTION May cause skin and eye irritation. May cause irritation to the respiratory system. May be harmful if swallowed. May be harmful if inhaled.
Label Precautions	Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Keep container closed. Wash thoroughly after handling. Use only with adequate ventilation.
Label First Aid	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

17. Other Information

NFPA ratings	Health: 1 Flammability: 0 Instability: 0
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This data sheet contains changes from the previous version in section(s):	Physical & Chemical Properties: Multiple Properties Other Information: Disclaimer Labeling Info: Label First Aid