



Potassium Phosphate Monobasic

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SECTION 1: Identification

1.1. Identification

Product form : Substance
Substance name : Potassium Phosphate Monobasic
CAS-No. : 7778-77-0
Formula : KH_2PO_4

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Laboratory Reagent
Buffering Agent
Nutritional Supplements; Pharmaceutical Buffers

1.3. Supplier

Manufacturer

Jost Chemical Co.
8150 Lackland Rd.
Saint Louis, Missouri 63114
T 314-428-4300 - F 314-428-4366
sds@jostchemical.com - www.jostchemical.com

1.4. Emergency telephone number

Emergency number : For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
United States and Canada: 1-800-424-9300 / +1 703-527-3887
Global: +1 703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

| Name | Product identifier | % | GHS-US classification |
|---|---------------------|-----|-----------------------|
| Potassium Phosphate Monobasic (Main constituent) | (CAS-No.) 7778-77-0 | 100 | Not classified |

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

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| | |
|---------------------------------------|---|
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. |
| First-aid measures after skin contact | : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists. Wash skin with plenty of water. |
| First-aid measures after eye contact | : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution. |
| First-aid measures after ingestion | : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Call a poison center/doctor/physician if you feel unwell. |

4.2. Most important symptoms and effects (acute and delayed)

| | |
|---|---|
| Potential Adverse human health effects and symptoms | : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Practically non-toxic through skin (LD50 skin 2000/5000 mg/kg). Slightly harmful by inhalation. Slightly irritant to respiratory organs. Slightly irritant to eyes. |
| Symptoms/effects | : Not expected to present a significant hazard under anticipated conditions of normal use. |
| Symptoms/effects after inhalation | : AFTER INHALATION OF DUST: Slight irritation. |
| Symptoms/effects after skin contact | : Slight irritation. |
| Symptoms/effects after eye contact | : Slight irritation. |
| Symptoms/effects after ingestion | : No specific information available. SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS: AFTER INGESTION OF HIGH QUANTITIES: Feeling of weakness. Vomiting. Nausea. Abdominal pain. Diarrhoea. Disturbances of heart rate. Sensorial disturbances. |

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

| | |
|------------------------------|--|
| Suitable extinguishing media | : Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam. |
|------------------------------|--|

5.2. Specific hazards arising from the chemical

| | |
|------------------|--|
| Fire hazard | : DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard". |
| Explosion hazard | : DIRECT EXPLOSION HAZARD: No direct explosion hazard. |
| Reactivity | : Reacts violently with (strong) acids/bases. |

5.3. Special protective equipment and precautions for fire-fighters

| | |
|--------------------------------|---|
| Precautionary measures fire | : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighborhood close doors and windows. |
| Firefighting instructions | : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray. |
| Protection during firefighting | : Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

| | |
|----------------------------------|---|
| Protective equipment | : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. |
| Emergency procedures | : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. |
| Measures in case of dust release | : In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows. |

6.1.2. For emergency responders

| | |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|---|

6.2. Environmental precautions

Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. On heating: dilute combustible/toxic gases/vapors.
- Methods for cleaning up : Mechanically recover the product. Stop dust cloud by humidifying. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use.
- Hygiene measures : Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a clean, dry warehouse in the original unopened containers. Store in a well-ventilated place. Keep cool.
- Storage temperature : 20 °C
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) acids. (strong) bases. oxidizing agents. water/moisture.
- Storage area : Store in a dry area. Store at room temperature. Keep container in a well-ventilated place. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: paper. cardboard. polyethylene. textile. synthetic material. MATERIAL TO AVOID: steel. aluminum.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Dust production: dust mask with filter type P1. Gloves. Safety glasses.

Materials for protective clothing:

GIVE GOOD RESISTANCE: synthetic material. rubber. nitrile rubber

Hand protection:

Gloves

Eye protection:

Safety glasses. In case of dust production: protective goggles. Safety glasses

Skin and body protection:

Protective clothing

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Respiratory protection:

Dust production: dust mask with filter type P1

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--|
| Physical state | : Solid |
| Appearance | : Powder. Crystals. |
| Color | : Colorless or white |
| Odor | : Odorless |
| Odor threshold | : No data available |
| pH | : 4.5 (1 %) |
| Melting point | : 253 °C |
| Freezing point | : Not applicable |
| Boiling point | : Not applicable |
| Flash point | : Not applicable |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : Non flammable. |
| Vapor pressure | : No data available |
| Relative vapor density at 20 °C | : Not applicable |
| Relative density | : 2.34 (20 °C) |
| Specific gravity / density | : 2338 kg/m ³ |
| Molecular mass | : 136.09 g/mol |
| Solubility | : Soluble in water. Water: 22 g/100ml |
| Log Pow | : No data available |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : 400 °C |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosion limits | : Not applicable |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |

9.2. Other information

| | |
|-------------------------|---|
| Minimum ignition energy | : Not applicable |
| VOC content | : 0 % |
| Other properties | : Hygroscopic. Substance has acid reaction. |

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with (strong) acids/bases.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Decomposes on exposure to temperature rise: release of toxic/corrosive/combustible gases/vapors (phosphine).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

| Potassium Phosphate Monobasic (7778-77-0) | |
|---|------------------------|
| LD50 oral rat | 7100 mg/kg (Rat) |
| LD50 dermal rabbit | > 4640 mg/kg (Rabbit) |
| ATE US (oral) | 7100 mg/kg body weight |

Skin corrosion/irritation : Not classified (No skin irritation)
pH: 4.5 (1 %)

Serious eye damage/irritation : Not classified (No eye irritation)
pH: 4.5 (1 %)

Respiratory or skin sensitization : Not classified (Lack of data)

Germ cell mutagenicity : Not classified (Lack of data)

Carcinogenicity : Not classified

Reproductive toxicity : Not classified (Lack of data)

Specific target organ toxicity – single exposure : Not classified (Lack of data)

Specific target organ toxicity – repeated exposure : Not classified (Lack of data)

Aspiration hazard : Not classified
(Not applicable)

Viscosity, kinematic : No data available

Potential Adverse human health effects and symptoms : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Practically non-toxic through skin (LD50 skin 2000/5000 mg/kg). Slightly harmful by inhalation. Slightly irritant to respiratory organs. Slightly irritant to eyes.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Slight irritation.

Symptoms/effects after skin contact : Slight irritation.

Symptoms/effects after eye contact : Slight irritation.

Symptoms/effects after ingestion : No specific information available. SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS: AFTER INGESTION OF HIGH QUANTITIES: Feeling of weakness. Vomiting. Nausea. Abdominal pain. Diarrhoea. Disturbances of heart rate. Sensorial disturbances.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Slightly harmful to fishes. Mild water pollutant (surface water). May cause eutrophication. pH shift.

| Potassium Phosphate Monobasic (7778-77-0) | |
|---|-----------------------------------|
| LC50 fish 1 | > 900 mg/l (48 h, Leuciscus idus) |

12.2. Persistence and degradability

| Potassium Phosphate Monobasic (7778-77-0) | |
|---|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |
| Biochemical oxygen demand (BOD) | Not applicable |

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| Potassium Phosphate Monobasic (7778-77-0) | |
|---|----------------|
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |
| BOD (% of ThOD) | Not applicable |

12.3. Bioaccumulative potential

| Potassium Phosphate Monobasic (7778-77-0) | |
|---|------------------------------------|
| Bioaccumulative potential | No bioaccumulation data available. |

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

| | |
|--|---|
| Regional legislation (waste) | : LWCA (the Netherlands): KGA category 05. |
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Product/Packaging disposal recommendations | : Do not discharge into surface water. Remove waste in accordance with local and/or national regulations. Remove to an authorized dump. Precipitate/make insoluble. |
| Additional information | : Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. |

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Proper Shipping Name (Transportation of Dangerous Goods) : Not regulated for transport

Transport by sea

Proper Shipping Name (IMDG) : Not regulated for transport

Air transport

Proper Shipping Name (IATA) : Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

| Potassium Phosphate Monobasic (7778-77-0) |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

| Potassium Phosphate Monobasic (7778-77-0) |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

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EU-Regulations

Potassium Phosphate Monobasic (7778-77-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Potassium Phosphate Monobasic (7778-77-0)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

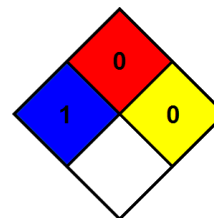
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NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product