

MATERIAL SAFETY DATA SHEET**POTASSIUM PHOSPHATE, MONOBASIC**

PRODUCT CODE NUMBER(S): 6660-1

PRODUCT IDENTIFICATION

Chemical Name and Synonyms: *Potassium phosphate, monobasic; Potassium dihydrogen phosphate*
Chemical Family: *Inorganic potassium salt*
Chemical Formula: KH_2PO_4
Product Use: *Laboratory chemical*
Manufacturer's Name and Address:
Caledon Laboratories Ltd.
40 Armstrong Avenue
Georgetown, Ontario L7G 4R9
Telephone No: (905) 877-0101
Fax No: (905) 877-6666
Emergency Telephone No: CANUTEC (613) 996-6666

HAZARDOUS INGREDIENTS OF MATERIALS

<i>Ingredients</i>	<i>%</i>	<i>TLV Units</i>	<i>CAS No.</i>
<i>Potassium phosphate monobasic</i>	<i>98</i>	<i>Not established</i>	<i>7778-77-0</i>

PHYSICAL DATA

Physical State: *Solid*
Odour and Appearance: *White or colourless granules or powder; odourless*
Odour Threshold (ppm): *Not applicable*
Vapour Pressure (mm Hg): *Does not form vapour*
Vapour Density (Air = 1): *Not applicable*
Evaporation Rate: *Not applicable*
Boiling Point (°C): *Loses water at 400°C, and forms metaphosphate*
Melting Point (°C): *252.6°C*
pH: *4.5 (1%, aqueous)*
Specific Gravity: *2.338*
Coefficient of Water/Oil distribution: *Not available*

SHIPPING DESCRIPTION

UN: *Not regulated*
T.D.G. Class: *Not regulated*
Pkg. Group: *Not regulated*

REACTIVITY DATA

Chemical Stability: *Stable. Deliquescent; absorbs moisture from air and forms wet solid or solution.*
Incompatibility with other substances: *May react violently with strong oxidizing agents, strong bases, or strong acids. May be mildly corrosive to aluminum.*
Reactivity: *Deliquescent. Protect from moisture. Avoid heat, incompatible materials, and generation of dust.*
Hazardous Decomposition Products: *Phosphorous oxides, pyrophosphates.*

FIRE AND EXPLOSION DATA

Flammability: *Not combustible. Will not burn. Decomposes at high temperatures forming toxic phosphorus oxides.*
Extinguishing Media: *Use extinguishing media appropriate to the material that is burning. Fight fire from upwind, from a safe distance. Because of release of toxic products, firefighters must wear protective equipment (self-contained breathing apparatus) and clothing sufficient to prevent inhalation and contact with skin and eyes. Bunker Gear will not be adequate.*
Flash Point (Method Used): *Not applicable*
Autoignition Temperature: *Not applicable*
Upper Flammable Limit (% by volume): *Not applicable*
Lower Flammable Limit (% by volume): *Not applicable*
Hazardous Combustion Products: *Phosphorous oxides*
Sensitivity to Impact: *None*
Sensitivity to Static discharge: *None*

TOXICOLOGICAL PROPERTIES AND HEALTH DATA**Toxicological Data:**

LD₅₀: *(skin, rabbit) >4,640 mg/kg*
LC₅₀: *Not available*

Effects of Acute Exposure to Product:

Inhaled: *No human or animal information available. Inhalation of dust may cause mild transitory irritation of upper respiratory tract with wheezing, coughing, and shortness of breath.*

In contact with skin: *No human or animal information available. Not expected to be irritating, based on pH.*

In contact with eyes: *No human or animal information available. Dusts or solutions may cause mild, temporary mechanical irritation, with redness, tearing, itching, pain.*

Ingested: *Animal testing indicates low oral toxicity. Large doses may cause vomiting, nausea, tingling sensations in the hands and feet, and disturbance in heart rhythms. Ingestion is not a typical route of industrial exposure.*

Effects of Chronic Exposure to Product:

Prolonged or repeated skin exposure will probably cause dermatitis. Prolonged or repeated inhalation may cause increased mucous flow which will disappear when exposure is terminated. May contribute to chronic bronchitis, but air pollution and smoking have greater effects. Prolonged ingestion caused kidney damage in animals. Ingestion is not a typical route of industrial exposure.

Carcinogenicity: *Probably not carcinogenic. No human or animal information available.*

Teratogenicity: *No human or animal information available*

Reproductive Effects: *No human or animal information available*

CODE: 6660-1

Mutagenicity: *No information available***Synergistic Products:** *None known***PREVENTIVE MEASURES****Engineering Controls:** *Local exhaust ventilation recommended.***Respiratory Protection:** *Dust/mist mask. For conditions where dust or mist is present, to the maximum use specified by the respirator supplier, NIOSH/MSHA approved half-face high-efficiency dust/mist filter respirator, or NIOSH/MSHA approved full-face-piece high-efficiency dust/mist filter respirator. Higher or unknown concentrations, or for fire or spill conditions, self-contained breathing apparatus, or full-face-piece, positive-pressure supplied-air respirator.***Eye Protection:** *Chemical safety goggles.***Skin Protection:** *Protective gloves and other protective clothing sufficient to limit contact.***Other Personal Protective Equipment:** *Safety shower and eye wash in work area.***Leak and Spill Procedure:** *Ventilate area of spill. If spill is large, and dust is present, clean-up personnel should be trained in the handling of hazardous materials, and should wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes. Dampen material and collect into suitable containers for disposal. Wash area of spill thoroughly with water.***Waste Disposal:** *Follow all federal, provincial, and local regulations***Handling Procedures and Equipment:** *Workers using this chemical should be properly trained in its hazards and its safe use, and should wear appropriate protective equipment and clothing. Keep work areas free of incompatible materials. Use the smallest amounts possible for the purpose, in designated areas with adequate ventilation. Avoid generating dusts. Avoid all contact and inhalation. Wash thoroughly after working with this chemical. Keep containers closed when not in use.***Storage Requirements:** *Store in a suitable, labelled containers, in a cool, dry, well-ventilated place out of direct sunlight and away from incompatible materials. Keep containers tightly closed.***FIRST AID MEASURES****Specific Measures:****Eyes:** *Flush eyes thoroughly with gently running water, holding eyelids open while flushing, for five to ten (5-10) minutes, or until no trace of chemical remains. If irritation persists, get medical attention.***Skin:** *Remove contaminated clothing. Brush or wipe off dry material. Wash skin with plenty of water until no evidence of chemical remains. If irritation persists, get medical attention.***Inhalation:** *Remove to fresh air. Give oxygen and get medical attention for any breathing difficulty.***Ingestion:** *If victim is alert and NOT convulsing, rinse mouth, give several glasses of water to drink to dilute. If discomfort occurs, or if a large amount has been ingested, get medical attention.***REFERENCES USED***CCINFO disc: MSDS's, April 2007**Budavari: The Merck Index, 12th ed., 1997**Sax, Lewis: Hawley's Condensed Chemical Dictionary, 11th ed., 1987**Suppliers' Material Safety Data Sheets***ADDITIONAL INFORMATION****Date Issued:** *December 1, 1988***Revision:** *April 2010***MSDS:** *6660-1***Proposed WHMIS Designation:** *Not a controlled product. Not required to be updated every three years (WHMIS 1992, B-40, Section 29,2)*

*Prepared by: Caledon Laboratories Ltd. (905) 877-0101
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