

**MATERIAL SAFETY DATA SHEET****SODIUM PHOSPHATE MONOBASIC****PRODUCT CODE NUMBER(S):** 8180-1**PRODUCT IDENTIFICATION****Chemical Name and Synonyms:** *Sodium phosphate, monobasic; Sodium dihydrogen phosphate***Chemical Family:** *Inorganic salt***Chemical Formula:** *NaH<sub>2</sub>PO<sub>4</sub>·H<sub>2</sub>O***Product Use:** *Laboratory reagent***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>Sodium phosphate monobasic</i>	<i>&gt;98</i>	<i>Not established</i>	<i>10049-21-5</i>

**PHYSICAL DATA****Physical State:** *Solid***Odour and Appearance:** *White crystalline powder; odourless***Odour Threshold (ppm):** *Not applicable***Vapour Pressure (mm Hg):** *Not applicable (does not form vapour)***Vapour Density (Air = 1):** *Not applicable***Evaporation Rate:** *Not applicable***Boiling Point (°C):** *Not applicable (decomposes)***Melting Point (°C):** *169-240°C (decomposes); 100°C (loses water)***pH:** *4.5 (1% aqueous)***Specific Gravity:** *2.04***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, slightly hygroscopic.***Incompatibility with other substances:** *May react violently with strong acids, strong bases, magnesium. Methenamine causes slow evolution of formaldehyde. May be corrosive to steel, gray cast iron, aluminum.***Reactivity:** *Starts to decompose at 169°C. Avoid high temperatures, ignition sources, generation of dust.***Hazardous Decomposition Products:** *When heated to decomposition, emits toxic fumes of phosphine and phosphorus and sodium oxides.***FIRE AND EXPLOSION DATA****Flammability:** *Non combustible. Does not burn.***Extinguishing Media:** *Use any means suitable for surrounding fire. Fight fire from upwind, from a safe distance. Firefighters must wear protective equipment (positive-pressure, full face-piece self-contained breathing apparatus) and clothing sufficient to prevent inhalation of dust or fumes and contact with skin and eyes. Bunker Gear may 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:** *Toxic fumes of phosphorus and sodium oxides, phosphine.***Sensitivity to Impact:** *None identified***Sensitivity to Static discharge:** *None identified***TOXICOLOGICAL PROPERTIES AND HEALTH DATA****Toxicological Data:****LD<sub>50</sub>:** *(oral, rat) 8,290 mg/kg***LC<sub>50</sub>:** *Not available***Effects of Acute Exposure to Product:****Inhaled:** *Dust or mists may have a slightly acidic irritating effect on the nasal and respiratory passages. High concentrations of dust may cause coughing, temporary irritation.***In contact with skin:** *Dust or mists are not expected to be irritating, based on pH. No human or animal information available.***In contact with eyes:** *Dusts or mists are mildly irritating.***Ingested:** *Not considered toxic, but may cause gastrointestinal upset, possible vomiting and diarrhea if large amounts are ingested.***Effects of Chronic Exposure to Product:***Prolonged or repeated exposure to high concentrations of dust may cause increased mucous flow in upper respiratory tract which disappears when exposure is stopped. May contribute to development of chronic bronchitis, but air pollution and smoking are more important. High oral doses (1% in the diet) of inorganic phosphates have produced toxic effects on the bones, kidneys and parathyroid glands. This is not considered relevant to occupational settings.***Carcinogenicity:** *Not listed as a carcinogen by NTP, IARC or OSHA***Teratogenicity:** *No human or animal information available*

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**Reproductive Effects:** No human or animal information available

**Mutagenicity:** No human or animal information available. Negative in one bacterial test.

**Synergistic Products:** None known

## PREVENTIVE MEASURES

**Engineering Controls:** Local exhaust ventilation recommended.

**Respiratory Protection:** Dust/mist mask, fumehood. For conditions where 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. Other protective, body-covering clothing sufficient to limit contact.

**Other Personal Protective Equipment:** Safety shower and eye-wash fountain in work area.

**Leak and Spill Procedure:** Ventilate area. Cleanup personnel should be thoroughly trained in the hazards of this material and must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes. Mix with sand or inert absorbent, collect in a manner that does not raise dust, and transfer carefully into labelled, covered container(s) for removal by disposal company. Wash site of spillage thoroughly with water and detergent.

**Waste Disposal:** Dispose of in compliance with local, provincial and federal regulations.

**Handling Procedures and Equipment:** Workers using this chemical must be trained in its hazards and its safe use. Follow routine safe handling procedures and good house-keeping procedures. Avoid generating dust. Avoid contact with skin and eyes. Use the smallest amount possible for the purpose, in designated areas with adequate ventilation. Keep containers closed when not in use and when empty.

**Storage Requirements:** Store in suitable, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight. Keep containers tightly closed when not in use and when empty. Protect from damage. Store away from incompatible materials.

## FIRST AID MEASURES

### Specific Measures:

**Eyes:** Flush eyes thoroughly with running water for five to ten (5-10) minutes, or until no trace of chemical remains, holding eyelids open while flushing. Get medical advice if irritation persists.

**Skin:** Brush or wipe off dry material. Flush skin thoroughly with running water until no trace of chemical remains. Get medical attention if irritation develops.

**Inhalation:** Remove to fresh air. Give oxygen and get medical attention for breathing difficulty.

**Ingestion:** If victim is alert and not convulsing, give 2 to 4 glasses of water to dilute material. If vomiting occurs, rinse mouth and give more water to drink. If victim feels unwell, or if a large amount has been ingested, get medical attention.

## REFERENCES USED

CINFO disc: MSDS's, April 2007

Budavari: The Merck Index, 12th ed., 1997

Sax, Lewis: Hawley's Condensed Chemical Dictionary, 11th ed., 1987

Sax: Dangerous Properties of Industrial Materials, 5th ed., 1979

Suppliers' Material Safety Data Sheets

## ADDITIONAL INFORMATION

**Date Issued:** December 1, 1988

**Revision:** April 2010

**MSDS:** 8180-1

**Proposed WHMIS Designation:** Not controlled. Not required to be updated every three years (WHMIS 1992, B-40, Section 29,2)

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