

MATERIAL SAFETY DATA SHEET**SODIUM PERIODATE**

PRODUCT CODE NUMBER(S): 8140-1

PRODUCT IDENTIFICATION**Chemical Name and Synonyms:** *Sodium periodate; Sodium metaperiodate***Chemical Family:** *Inorganic salt***Chemical Formula:** $NaIO_4$ **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 periodate</i>	<i>>99</i>	<i>Not established</i>	<i>7790-28-5</i>

PHYSICAL DATA**Physical State:** *Solid***Odour and Appearance:** *White or colourless tetragonal crystals, odourless***Odour Threshold (ppm):** *Not applicable***Vapour Pressure (mm Hg):** *Not available***Vapour Density (Air = 1):** *Not available***Evaporation Rate:** *Not available***Boiling Point (degrees C):** *Not applicable***Melting Point (degrees C):** *300°C (decomposes)***pH:** *5.5 - 7.0 (0.5M in water, 20°C)***Specific Gravity:** *3.865***Coefficient of Water/Oil distribution:** *Not available***SHIPPING DESCRIPTION****UN:** *1479***T.D.G. Class:** *5.1***Pkg. Group:** *II***REACTIVITY DATA****Chemical Stability:** *Stable at room temperature. Avoid higher temperatures. Hygroscopic.***Incompatibility with other substances:** *May react violently or explosively with organic material, reducing agents, finely powdered aluminum or magnesium, hydrides, ammonium perchlorate. Oxidizes violently in presence of acids.***Reactivity:** *Avoid excessive heat and moisture, all ignition sources and incompatible materials. Avoid generation of dust. Prolonged exposure to fire or heat may result in explosion. Avoid shock or friction.***Hazardous Decomposition Products:** *Toxic fumes of iodine, sodium, hydrogen iodide***FIRE AND EXPLOSION DATA****Flammability:** *Not combustible, but substance is a strong oxidiser and it may increase the flammability of combustible materials and cause ignition, or accelerate combustion. May act as an initiation source for dust or vapour explosions.***Extinguishing Media:** *Use flooding amounts of water as spray or fog to blanket fire, cool exposed containers, and to flush solid or vapours away from fire. Firefighters must wear protective equipment (full face-piece, positive-pressure self-contained breathing apparatus) and clothing sufficient to prevent inhalation of dusts or vapours, and contact with skin and eyes.***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:** *Emits toxic fumes under fire conditions***Sensitivity to Impact:** *May explode when exposed to shock or friction.***Sensitivity to Static discharge:** *Mixtures of dust with air may be sensitive under certain conditions, particularly when contaminated with organic materials, when exposed to electrostatic or other high-voltage spark, or other ignition source.***TOXICOLOGICAL PROPERTIES AND HEALTH DATA****Toxicological Data:****LD₅₀:** *(ipr, mice) 58 mg/kg. No information relevant to occupational exposure available.***LC₅₀:** *Not available***Effects of Acute Exposure to Product:****Inhaled:** *Irritating to upper respiratory tract, causing coughing, possible shortness of breath.***In contact with skin:** *Irritating, particularly on moist skin. Causes redness, itching, pain. Extent of irritation depends on concentration and duration of exposure.***In contact with eyes:** *Irritating, causing temporary redness, tearing, and pain. Extent of irritation depends on concentration and duration of exposure.***Ingested:** *Irritating to gastrointestinal tract, causing abdominal pain, nausea and vomiting, diarrhea. May cause kidney and blood cell damage. Persons with impaired liver or kidney function may be more susceptible to the effects of this substance.***Effects of Chronic Exposure to Product:***Prolonged or repeated ingestion may cause kidney dysfunction or failure, hemolysis, central nervous system effects.*

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Carcinogenicity: No information available**Teratogenicity:** No information available**Reproductive Effects:** No information available**Mutagenicity:** No information available**Synergistic Products:** None known

PREVENTIVE MEASURES

Engineering Controls: Local exhaust ventilation required.**Respiratory Protection:** Dust mask. For dusty conditions, high efficiency particulate respirator; higher or unknown concentrations, as in fire or spill conditions, positive-pressure, full face-piece self-contained breathing apparatus. or positive-pressure full face-piece supplied-air respirator with auxiliary positive-pressure self-contained breathing apparatus**Eye Protection:** Chemical safety goggles and/or face shield.**Skin Protection:** Impervious gloves. Other impervious protective clothing, sleeves, apron, coverall, boots, sufficient to prevent contact.**Other Personal Protective Equipment:** Safety shower and eye-wash fountain in work area.**Leak and Spill Procedure:** Evacuate area. Eliminate all sources of ignition. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Do not touch spilled material. Remove all sources of ignition and all combustible material. Use non-sparking tools. Cleanup personnel must be thoroughly trained in the handling of hazardous chemicals, and must wear protective equipment and clothing sufficient to prevent inhalation of dust or mists and contact with skin and eyes. Wet if necessary to reduce dust, mix with inert adsorbent and transfer carefully into container for disposal. Handle contaminated material with the same caution as you do the chemical itself. Site of spillage should be washed thoroughly to remove all traces of oxidant.**Waste Disposal:** Follow all federal, provincial and local regulations for disposal.**Handling Procedures and Equipment:** OXIDIZER, TOXIC, IRRITANT. Workers using this chemical must be thoroughly trained in its hazards and its safe use, and must wear protective equipment and clothing sufficient to prevent inhalation of dust or mists and contact with skin and eyes. Keep away from combustible or organic materials, and all sources of ignition. Avoid contact and inhalation of dust or mist. Do not shock. Use the smallest possible amount for the purpose, in designated areas with adequate ventilation. Keep work area clean and free of extraneous, particularly combustible, materials. Keep containers closed when not in use and when empty. Empty containers may contain hazardous residues; treat with caution.**Storage Requirements:** Store in suitable, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight and away from incompatible, combustible or organic materials. DO NOT SHOCK. Storage facilities (shelves, floors) should be constructed of non-combustible materials. Keep away from all ignition sources. Keep containers tightly closed when not in use and when empty. Protect from damage, and inspect frequently for signs of leaking; unattended spillage onto combustible materials (wood, paper, etc.) could result in fire.

FIRST AID MEASURES

Specific Measures:

Eyes: Immediately flush eyes with running water for at least fifteen (15) minutes, holding eyelids open during flushing. Take care not to flush contaminated water into unaffected eye. If irritation persists, repeat flushing and obtain medical attention.**Skin:** Remove contaminated clothing(including shoes, belts, watches, and rings). Wash affected areas with soap and running water for at least fifteen (15) minutes. If irritation persists, obtain medical advice. Decontaminate clothing completely before reuse, or discard. Clothing contaminated with oxidizing material can be dangerously and/or spontaneously flammable.**Inhalation:** Move victim to fresh air. Give oxygen and get medical attention for any breathing difficulty.**Ingestion:** If victim is alert and not convulsing, give 1 to 2 glasses of water to drink to dilute material. DO NOT induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Obtain medical attention.

REFERENCES USED

CCINFO disc

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: March 14, 1992**Revision:** June 2009**MSDS:** 8140-1**Proposed WHMIS Designation:** C; D2B

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