

MATERIAL SAFETY DATA SHEET**POTASSIUM IODIDE**

PRODUCT CODE NUMBER(S): 6260-1

PRODUCT IDENTIFICATION

Chemical Name and Synonyms: Potassium iodide
Chemical Family: Inorganic salt
Chemical Formula: KI
Product Use: Inorganic salt
Manufacturer's Name and Address:
Caledon Laboratories Ltd.
40 Armstrong Avenue
Georgetown, Ontario L7G 4R9
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HAZARDOUS INGREDIENTS OF MATERIALS

Ingredients	%	TLV Units	CAS No.
Potassium iodide	>98	Not established	7681-11-0

PHYSICAL DATA

Physical State: Solid
Odour and Appearance: Colourless to white, cubical granules or powder, odourless.
Odour Threshold (ppm): Not applicable
Vapour Pressure (mm Hg): 1 mm Hg @ 745°C
Vapour Density (Air = 1): Not available
Evaporation Rate: Not available
Boiling Point (degrees C): 1330°C
Melting Point (degrees C): 680°C
pH: 7,0-9.2 (5% solution, 20°C)
Specific Gravity: 3.123 @ 20°C
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, hygroscopic, slightly deliquescent, absorbs moisture from air, forming wet solid or solution.

Incompatibility with other substances: Alkali metals - violent reaction; bromine pentafluoride, chlorine trifluoride - violent reaction, often with ignition at ambient or slightly elevated temperatures; diazonium salts - formation of an unstable and explosive product; 2-diisopropyl peroxydicarbonate - instant decomposition; fluorine perchlorate - explosion on contact with potassium iodide; metals - corrosive in all concentrations to most metals, except stainless steel, titanium and tantalum; strong oxidants, perchloric acid - violent reaction; trifluoroacetyl hypofluorite - may react explosively on contact with aqueous potassium iodide unless greatly diluted with nitrogen.

Reactivity: Normally stable; may decompose on exposure to light, air, or moisture. Avoid exposure to light, air, moisture, all incompatible materials; prevent generation of dust.

Hazardous Decomposition Products: Toxic fumes of iodine compounds, oxides

FIRE AND EXPLOSION DATA

Flammability: Not combustible

Extinguishing Media: Use any means suitable for surrounding fire. Fight fire from upwind, from a safe distance. Fire fighters must wear protective equipment (positive-pressure, full face-piece self-contained breathing apparatus) and clothing (Bunker Gear or chemical splash suit) sufficient to prevent inhalation of dust or fumes 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: Hydrogen iodide, oxides

Sensitivity to Impact: None Identified

Sensitivity to Static discharge: None Identified

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

LD₅₀: (ivn. rat) 285 mg/kg

LD_{Lo}: (ivn, rat) 167 mg/kg; (oral, mouse) 1,862 mg/kg

LC₅₀: Not available

Effects of Acute Exposure to Product:

Inhaled: Irritant to mucous membranes. May cause coughing, shortness of breath. Severity of effects depends on concentration of dust or mist, and duration of exposure. May be harmful.

In contact with skin: Contact with the dust may be irritating; solutions may be corrosive. Iodides may cause sensitization in persons previously exposed. Severity of effects depends on concentration of dust or mist, and duration of exposure.

In contact with eyes: Dust causes irritation, redness, itching and pain; solutions can be corrosive, causing corneal burns and damage to eye tissue. Severity of effects depends on concentration of dust or mist, and duration of exposure.

Ingested: The reported lethal dose for potassium iodide in mice is 1,862 mg/kg. Iodide salts act principally as expectorants and diuretics. Hypersensitivity to iodides may be manifested by angioneurotic edema, cutaneous and mucosal haemorrhages, and symptoms resembling serum sickness, such as fever, arthralgia, lymph node enlargement and eosinophilia.

Effects of Chronic Exposure to Product:

Inhaled: Repeated or prolonged exposure may result in "Iodism" as in "Ingested", below.

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In contact with skin: Hypersensitivity to iodides may develop characterized by skin rashes, rhinitis, asthma, laryngeal edema, serum sickness with fever, joint pain, and swelling and lymph node enlargement.

In contact with eyes: Repeated or prolonged exposure may cause conjunctivitis. Ingestion of iodides may lead to "Iodism" and affect the eyes with lacrimation, edema of the eyelids, and conjunctival hyperemia.

Ingested: Chronic ingestion of potassium iodide may result in thyroid adenoma, goiter, myxedema, and thrombocytopenia. "Iodism" may occur with symptoms of an unpleasant brassy taste in the mouth, salivation, coryza, lacrimation, edema of the eyelids, conjunctivitis, sneezing, bronchitis, stomatitis, parotitis, laryngitis, glottal edema, headache, and fever. Various skin rashes, possibly with erythema, acne, and urticaria are possible. Anorexia, weight loss, sleeplessness, and nervous symptoms may occur.

The use of iodides for asthma in pregnancy has resulted in fetal death, severe goiter and cretinoid appearance of the newborn. Effects on the newborn, fertility and the reproductive system of females have been reported from chronic feeding to animals.

Carcinogenicity: Not considered carcinogenic

Teratogenicity: See chronic exposure from ingestion

Reproductive Effects: See chronic exposure from ingestion

Mutagenicity: No information available

Synergistic Products: None known

PREVENTIVE MEASURES

Engineering Controls: Local exhaust ventilation required.

Respiratory Protection: Dust mask. Fumehood. For dusty conditions, NIOSH/MSHA approved respirator with a high-efficiency particulate filter. For high or unknown concentrations, as in fire or spill conditions, positive-pressure, full face-piece self-contained breathing apparatus.

Eye Protection: Chemical safety goggles, face shield.

Skin Protection: Natural or nitrile rubber, or neoprene gloves. Other protective body-covering clothing sufficient to prevent contact.

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

Leak and Spill Procedure: Ventilate area of spill. Clean-up personnel must be thoroughly trained in the handling of hazardous materials, and must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes. Avoid contact and inhalation. Prevent from entering sewers or waterways. Gather up in a manner that does not generate dust, and collect in suitable containers for reclamation or disposal.

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

Handling Procedures and Equipment: TOXIC; REPRODUCTIVE HAZARD, IRRITANT. Workers must be thoroughly trained in the hazards of this substance and its safe use, and must wear appropriate protective equipment and clothing. Use good housekeeping practices to prevent accumulations of dust. Use the smallest amount possible for the purpose, in an area with adequate ventilation. Avoid all contact and inhalation. Wash thoroughly after handling. 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. Store away from incompatible materials. Keep containers

tightly closed when not in use and when empty. Protect from exposure to air, light, and moisture. Protect from damage, and inspect frequently for signs of leaking.

FIRST AID MEASURES

Specific Measures:

Eyes: Wash thoroughly with water for a least fifteen (15) minutes, holding eyelids open while flushing, until no evidence of chemical remains. Take care not to flush contaminated water into unaffected eye. Wear gloves to avoid contact during first aid procedures. If exposure was severe, continue irrigating with normal saline until the pH has returned to normal (30-60 minutes). Cover with sterile bandages. Get medical attention immediately.

Skin: Remove contaminated clothing. Brush or wipe off dry material. Wash skin with plenty of water until no evidence of chemical remains. In case of chemical burns, cover area with sterile, dry dressing, bandage securely, but not too tightly. Get medical attention immediately. Decontaminate clothing before reuse, or discard.

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

Ingestion: If victim is alert and not convulsing, give 1/2 to 1 glass of milk, absorb remaining iodine with starch solution made by adding 15 grams of cornstarch or flour to 500 ml of water. Do not induce vomiting. Get medical attention. Milk every 15 minutes may relieve gastric irritation. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing of emesis.

REFERENCES USED

CCINFO disc: MSDS's, May 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: March 10, 1989

Revision: May 2010

MSDS: 6260-1

Proposed WHMIS Designation: D2A; D2B

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