

SODIUM IODATE**PRODUCT IDENTIFICATION****Chemical Name and Synonyms:**

Sodium iodate; Iodic acid, sodium salt

Chemical Family:

Inorganic salt

Chemical Formula:

NaIO₃

Product Use:

Laboratory reagent

Manufacturer's Name and Address:

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HAZARDOUS INGREDIENTS OF MATERIALS

Ingredients	%	TLV Units	CAS No.
Sodium iodate	>99	Not established	7681-55-2

PHYSICAL DATA**Physical State:**

Solid

Odour and Appearance:

White crystalline powder, odourless.

Odour Threshold (ppm):

Not applicable

Vapour Pressure (mm Hg):

Not available

Vapour Density (Air = 1):

Not available

Evaporation Rate:

Not applicable

Boiling Point (degrees C):

Not applicable

Melting Point (degrees C):

Not available

pH:

Neutral

Specific Gravity:

4.277

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

Incompatibility with other substances:

Reacts violently or explosively, especially in the presence of moisture, friction impact, heat, or sparks, with combustible, organic or reducing materials, acids, finely powdered metals, phosphorus, aluminum, arsenic oxides, hydrogen peroxide,

sulphides.

Reactivity:

Avoid moisture, heat, shock, friction, generation of dust. Keep away from all ignition sources and incompatible materials.

Hazardous Decomposition Products:

When heated to decomposition, emits toxic fumes of hydrogen iodide, iodine, sodium, sodium oxides

FIRE AND EXPLOSION DATA**Flammability:**

Non combustible; however, substance is a strong oxidizer, and forms explosive mixtures with combustible organic or other easily oxidizable materials. Releases oxygen in fire situation, which promotes combustion. Can explode in contact with combustible materials, or by friction or shock. Containers may explode in heat of fire.

Extinguishing Media:

Use flooding amounts of water as spray or fog, to extinguish fire and to minimize dust, absorb heat, cool containers, and disperse vapours. Fight fire from upwind, from a safe distance. Do not allow runoff to enter sewers or waterways. 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 (full Bunker Gear).

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 hydrogen iodide, iodine, sodium, sodium oxides

Sensitivity to Impact:

May explode when shocked.

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:**

(oral, mouse) 505 mg/kg; (ipr, mouse) 119 mg/kg

LC₅₀:

Not available

Effects of Acute Exposure to Product:**Inhaled:**

Severe irritant to mucous membranes. May cause burning, coughing, wheezing, shortness of breath, headache, nausea and vomiting. May cause allergic reaction.

In contact with skin:

Very irritating, particularly on moist skin. Solutions may cause moderate to severe irritation, depending on concentration and duration of exposure. May cause allergic reaction.

In contact with eyes:

Irritant. May cause severe irritation, with redness, itching, tearing, pain, even corneal burns. Severity depends on concentration and duration of exposure.

Ingested:

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Harmful. Destructive to tissue of gastro-intestinal tract. May cause burning of mouth and throat, nausea and vomiting, abdominal pain. Probable lethal dose for humans 50 to 500 mg/kg.

Effects of Chronic Exposure to Product:

Prolonged or repeated exposure may cause damage to kidneys, liver, and spleen, and can lead to iodism characterized by headache, excess salivation, nasal discharge, conjunctivitis, laryngitis, bronchitis, stomatitis, enlarged submaxillary glands, and skin rashes. Persons with impaired kidney or liver function may be more susceptible to the effects of this chemical. Chronic ingestion may cause central nervous system failure.

Carcinogenicity:

Not considered carcinogenic

Teratogenicity:

No information available

Reproductive Effects:

Disorders have been produced in laboratory animals, but at doses not relevant to occupational exposure. (RTECS No. NN1400000)

Mutagenicity:

No information available

Synergistic Products:

None known

PREVENTIVE MEASURES

Engineering Controls:

Local exhaust ventilation required.

Respiratory Protection:

Dust/mist mask. Use only in chemical fumehood. For dusty conditions, to the maximum use specified by the respirator supplier, NIOSH approved half-face high-efficiency dust/mist filter respirator, or NIOSH 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 and/or face shield.

Skin Protection:

Chemical resistant gloves. Other chemical resistant 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:

Restrict access to area of spill. Eliminate all sources of ignition and remove all combustible materials from the area. Cleanup personnel must be thoroughly trained in the hazards of this chemical and its safe use, and must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes. Prevent from entering sewers and waterways. Contain spill with inert material (earth, sand, inert absorbent). Avoid generating dust; wet if necessary. Collect in suitable, labelled, covered containers for disposal. Contaminated absorbent may pose the same hazards as the chemical; treat with caution. Flush area of spill with large amounts of running water.

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 appropriate protective equipment and clothing. Keep away from combustible or organic materials, and all sources of

ignition. Use non-sparking tools. 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. Store away from incompatible, combustible or organic materials. 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.

FIRST AID MEASURES

Specific Measures:

Eyes:

Immediately flush eyes with gently running water for at least fifteen (15) minutes, holding eyelids open during flushing. Take care not to flush contaminated water into unaffected eye. Get medical attention.

Skin:

IMMEDIATELY remove contaminated clothing (including watches, rings, belts, and shoes). Wash affected areas with soap and running water for at least fifteen (15) minutes. Take care to completely clean folds, creases, groin, under fingernails. Get 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, rinse mouth thoroughly with water, give 2 to 4 glasses of water to drink to dilute, and induce vomiting under medical supervision. When vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Avoid contact with vomitus. Obtain medical attention immediately.

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:

February 18, 1992

Revision:

June 2009

MSDS:

7890-1

Proposed WHMIS Designation:

C; D2B

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