

MATERIAL SAFETY DATA SHEET**SODIUM DITHIONITE**

PRODUCT CODE NUMBER(S): 7790-1

PRODUCT IDENTIFICATION**Chemical Name and Synonyms:** *Sodium dithionite; Sodium hydrosulphite; Sodium sulfoxylate***Chemical Family:** *Metal salt/inorganic sodium compound***Chemical Formula:** $Na_2S_2O_4 \cdot H_2O$ **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 dithionite</i>	<i>>99</i>	<i>10 mg/m³ (nuisance dust)</i>	<i>7775-14-6</i>

PHYSICAL DATA**Physical State:** *Solid***Odour and Appearance:** *White powder, faint sulphurous odour***Odour Threshold (ppm):** *Not available***Vapour Pressure (mm Hg):** *Not available***Vapour Density (Air = 1):** *3.6***Evaporation Rate:** *Not available***Boiling Point (degrees C):** *Not available***Melting Point (degrees C):** *>130°C (decomposes)***pH:** *Not available***Specific Gravity:** *0.88***Coefficient of Water/Oil distribution:** *Not available***SHIPPING DESCRIPTION****UN:** *1384***T.D.G. Class:** *4.2***Pkg. Group:** *II***REACTIVITY DATA****Chemical Stability:** *Stable***Incompatibility with other substances:** *May react violently with strong oxidizing agents, strong acids, sodium chlorit. Reaction with water generates heat, may ignite nearby combustible materials. Contact with strong oxidizers may cause fire or explosion. Reaction with acids releases toxic gases (SO₂).***Reactivity:** *Avoid excessive heat, exposure to moisture, generation of dust. May generate enough heat when damp**or in contact with damp air, to ignite nearby combustible materials.***Hazardous Decomposition Products:** *Highly toxic fumes of SO_x, sulphur vapour.***FIRE AND EXPLOSION DATA****Flammability:** *Can ignite if exposed to high temperatures. Addition of catalytic amounts of water, and/or temperatures above 60°C can initiate exothermic decomposition, with enough heat generated to ignite combustible materials. During decomposition, sulphur vapour (which will burn under certain circumstances) may be released.***Extinguishing Media:** *Use water in flooding amounts to extinguish fire and stop decomposition. If water is not available, allow material to burn. Chemical extinguishers will not cool the decomposing material. If sealed containers are hot to touch or appear to bulge, vent by safest means possible, moving to safe, open area, flooding with water, containing all runoff. 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.***Flash Point (Method Used):** *Not available***Autoignition Temperature:** *Not available***Upper Flammable Limit (% by volume):** *Not available***Lower Flammable Limit (% by volume):** *Not available***Hazardous Combustion Products:** *Toxic fumes of sulphur vapour, SO_x***Sensitivity to Impact:** *None identified***Sensitivity to Static discharge:** *None identified***TOXICOLOGICAL PROPERTIES AND HEALTH DATA****Toxicological Data:****LD₅₀:** *(oral, rat) 650 mg/kg; (dermal, rabbit) 10,000 mg/kg***LD_{Lo}:** *(average human) 30 g (estimated)***LC₅₀:** *Not available***Effects of Acute Exposure to Product:****Inhaled:** *Toxic. May cause severe irritation to tissue of upper respiratory tract, with coughing, shortness of breath, chest pain. Extent of irritation depends on concentration and duration of exposure. Severe overexposure can cause circulatory disturbances, CNS depression, convulsions, cyanosis, respiratory and cardiovascular collapse and even death.***In contact with skin:** *May irritate, causing redness, pain. Extent of irritation depends on concentration and duration of exposure. Risk of absorption is minimal.***In contact with eyes:** *Irritates, causing redness, tearing, pain. Extent of irritation depends on concentration and duration of exposure.***Ingested:** *Toxic. Ingestion may cause abdominal pain, nausea, vomiting, diarrhea. Ingestion of large doses may cause circulatory disturbances, CNS depression, convul-*

CODE: 7790-1

sions, cyanosis, respiratory and cardiovascular collapse and even death.

Effects of Chronic Exposure to Product:

Prolonged or repeated exposure may cause damage to lung tissue.

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: Approved dust mask. For concentrations above 10 ppm, NIOSH/OSHA approved positive-pressure, full face-piece self-contained breathing apparatus.

Eye Protection: Chemical safety goggles.

Skin Protection: Rubber, neoprene or PVC gloves. Other protective clothing, apron, sleeves, boots sufficient to prevent contact.

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

Leak and Spill Procedure: Ventilate and evacuate area. Shut off all sources of ignition and remove any combustible materials from the area. Stop or contain leak. 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. Mix with DRY, INERT absorbent and transfer carefully into container for removal by disposal company. Keep away from combustible materials. Prevent from entering sewers or waterways. Wash site of spillage thoroughly with water and detergent.

Waste Disposal: Follow all federal, provincial and local regulations for disposal.

Handling Procedures and Equipment: COMBUSTIBLE IF WET, 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. Use non-sparking tools. Keep away from heat, sparks and flame and materials which can burn. Do not heat above 50°C. Prevent release of dusts into workplace air. Avoid contact with skin, eyes and clothing. 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. Wash thoroughly after handling.

Storage Requirements: Store in suitable, covered, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight. Protect from exposure to moisture and air. Store away from ignition sources and combustible materials. Keep containers tightly closed when not in use and when empty. Have appropriate fire extinguishers and spill cleanup equipment near the storage area. Storage facilities should be made of fire-resistant materials. Protect from damage, and inspect frequently for signs of leaking.

FIRST AID MEASURES**Specific Measures:**

Eyes: Flush eyes immediately with large amounts of gently running water or normal saline, holding eyelids open, until no evidence of chemical remains (at least 15-20 minutes). Take care not to flush contaminated water into unaffected eye. Get medical attention immediately.

Skin: Remove all contaminated clothing, including watches, rings, belts, and shoes. Brush off dry material. Flush skin with running water for 5 to 10 minutes, or until no evidence of chemical remains. If irritation persists, or if exposure has been severe, get medical attention. Decontaminate clothing before reuse, or discard.

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

Ingestion: If victim is alert and not convulsing, give 1 to 2 glasses of water to drink to dilute material, or, if it is available, give a solution of sodium bicarbonate, 1 teaspoon per 250 mg glass of water. 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 IMMEDIATELY.

REFERENCES USED

CCINFO disc

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: August 6, 1991

Revision: November 2009

MSDS: 7790-1

Proposed WHMIS Designation: B6; D2B (irritation); F

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