

STANNOUS CHLORIDE**PRODUCT IDENTIFICATION****Chemical Name and Synonyms:**

Stannous chloride dihydrate

Chemical Family:

Inorganic salt, tin compounds

Chemical Formula:

SnCl₂·2H₂O

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

Ingredients	%	TLV Units	CAS No.
<i>Stannous chloride dihydrate</i>		<i>~98 2 mg/m³ (Sn compounds)</i>	<i>10025-69-1</i>

PHYSICAL DATA**Physical State:**

Solid

Odour and Appearance:

White to gray crystals or flakes with faint HCl odour.

Odour Threshold (ppm):

Not available

Vapour Pressure (mm Hg):

Not applicable

Vapour Density (Air = 1):

Not applicable

Evaporation Rate:

Not applicable

Boiling Point (degrees C):

652°C

Melting Point (degrees C):

37.7°C (decomposes)

pH:

Not available

Specific Gravity:

2.71

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. Absorbs oxygen from air and forms insoluble oxychloride.

Incompatibility with other substances:

May react violently or explosively with bromine trifluoride and trichloride, alkalis, alcohols, calcium carbide, sodium metal, potassium metal, ethylene oxide, hydrazine hydrate, nitrates,

strong oxidizing agents. Reacts explosively when mixed with nitrates, or hydrogen peroxide (>3%).

Reactivity:

Avoid moisture, heat, flame, ignition sources, all incompatible materials, generation of dust.

Hazardous Decomposition Products:

Hydrogen chloride, tin 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. Firefighters must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes and contact with skin and eyes. Fire exposed containers may explode; use water to keep containers cool and to disperse fumes.

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 chloride, tin oxides

Sensitivity to Impact:

None identified

Sensitivity to Static discharge:

None identified

TOXICOLOGICAL PROPERTIES AND HEALTH DATA**Toxicological Data:****LD₅₀:**

(oral, rat) 700 mg/kg; (dermal, rabbit) >1,000 mg/kg

LC₅₀:

Not available

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

Irritant to mucous membranes. Can cause severe irritation, burning, shortness of breath, coughing, wheezing. Severity of effects will depend on the concentration of dust or mist, and the duration of exposure.

In contact with skin:

Can cause moderate irritation, with redness, itching, pain. Can be absorbed through skin. Severity of effects will depend on the concentration of dust or mist, and the duration of exposure. May cause sensitization by skin contact.

In contact with eyes:

Causes severe irritation and burns. May cause permanent damage. Severity of effects will depend on the concentration of dust or mist, and the duration of exposure.

Ingested:

Highly toxic by oral ingestion. Causes irritation and burns to mouth and stomach, headache, nausea, vomiting, dizziness, lowered blood pressure, stomach bleeding, convulsions, collapse. May cause liver and kidney damage.

Effects of Chronic Exposure to Product:

Prolonged or repeated exposure may cause skin sensitization.

STANNOUS CHLORIDE

Persons with pre-existing skin or eye disorders, or impaired liver, kidney, or respiratory function may be more susceptible to the toxic effects.

Carcinogenicity:

Some animal experiments indicate that this substance may be carcinogenic. No conclusive human data.

Teratogenicity:

Some adverse effects in animal testing

Reproductive Effects:

Some adverse effects in animal testing

Mutagenicity:

Some effects in human cells

Synergistic Products:

None known

PREVENTIVE MEASURES

Engineering Controls:

Local exhaust required.

Respiratory Protection:

Dust mask. Up to 50x TLV, or the maximum use specified by the respirator supplier, whichever is lowest, NIOSH/OSHA approved full face-piece 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:

Neoprene gloves. Other protective body-covering clothing as required to prevent contact.

Other Personal Protective Equipment:

Safety shower and eye-wash fountain in work area.

Leak and Spill Procedure:

Evacuate area. Ventilate area of spill. Clean-up personnel must be 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. Do not touch spilled product. Gather up, without generating dust, and place in clean, dry, covered containers for reclamation or disposal. Flush area of spill thoroughly with copious amounts of running water.

Waste Disposal:

Follow all federal, provincial, and local regulations

Handling Procedures and Equipment:

TOXIC, EYE IRRITANT, POSSIBLE TETATOGEN, MUTAGEN, and REPRODUCTIVE EFFECTOR.

Personnel working with this material must be thoroughly trained regarding its hazards, and its safe use, and must wear appropriate protective equipment and clothing. Avoid generating dust. Use the smallest possible amount for the purpose, in designated areas with adequate ventilation. Wash thoroughly after handling. Follow routine safe handling and good housekeeping procedures to prevent generation of dust. Aqueous solutions are acidic; store in corrosion-resistant containers. Empty containers may contain hazardous residues; treat with caution.

Storage Requirements:

Store in suitable containers, in a cool, dry, well-ventilated area, out of direct sunlight and away from sources of heat and ignition. Keep tightly closed. Protect from physical damage, and inspect frequently for signs of leaking. Isolate from incompatible substances.

FIRST AID MEASURES

Specific Measures:

Eyes:

Flush eyes thoroughly with gently running water for at least fifteen (15) minutes, holding eyelids open while flushing. Take care not to flush contaminated water into unaffected eye. Aqueous solutions are acidic; wear gloves to avoid contact during first aid procedures. Get medical attention immediately.

Skin:

Remove contaminated clothing, including rings, watches, belts, shoes. Flush skin with plenty of running water for at least fifteen (15) minutes. Wear gloves to avoid contact. Get medical attention. 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, rinse mouth thoroughly with water and give 2 to 4 glasses of water or milk to drink to dilute. DO NOT INDUCE VOMITING. Get medical attention immediately.

REFERENCES USED

CCINFO disc: Cheminfo

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 20, 1990

Revision:

March 2012

MSDS:

8520-1

Proposed WHMIS Designation:

D2B

Prepared by: Caledon Laboratories Ltd. (905)

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