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Material Safety Data Sheet

Stannous chloride MSDS

Section 1: Chemical Product and Company Identification

Product Name: Stannous chloride

Catalog Codes: SLS3331, SLS1114

CAS#: 10025-69-1

RTECS: XP8850000

TSCA: TSCA 8(b) inventory: No products were found.

CI#: Not available.

Synonym: Tin (II) chloride dihydrate; Stannous dichloride dihydrate

Chemical Name: Stannous Chloride dihydrate

Chemical Formula: $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Stannous chloride dihydrate	10025-69-1	100

Toxicological Data on Ingredients: Stannous chloride (CAS no. 7772-99-8): ORAL (LD50): Acute: 700 mg/kg [Rat] (Registry of Toxic Effects of Chemical Substances). 1200 mg/kg [Mouse] (Hazardous Substance Data Bank). 250 mg/kg [Mouse] (Registry of Toxic Effects of Chemical Substances).

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, lungs, liver, upper respiratory tract, skin. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the

eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:

Bromine trifluoride and stannous chloride react with flame. A mixture of stannous chloride and calcium carbide can be ignited with a match and the reaction proceeds with incandescence. When heated to decomposition it emits toxic fumes of hydrogen chloride.

Special Remarks on Explosion Hazards:

A mixture of stannous chloride and nitrates may cause explosion. A mixture of sodium and stannous chloride produces strong explosion on impact.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:

Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep container dry. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals, acids, alkalis.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Moisture sensitive.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 2 (mg/m³) from OSHA (PEL) [United States] TWA: 2 (mg/m³) from ACGIH (TLV) [United States] TWA: 2 (mg/m³) from NIOSH Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Odorless.

Taste: Not available.

Molecular Weight: 225.63 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: 38°C (100.4°F)

Critical Temperature: Not available.

Specific Gravity: 2.71 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol.

Solubility:

Soluble in methanol. Soluble in less than its own weight of water. In dilute aqueous solutions it will form insoluble oxychloride. Very soluble in dilute or concentrated hydrochloric acid, alcohol, ethyl acetate, glacial acetic acid, sodium hydroxide solution. Decomposed by hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials, moisture. May decompose on contact with moist air or water.

Incompatibility with various substances: Reactive with oxidizing agents, metals, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Incompatible with sodium, potassium, bromine trifluoride, calcium carbide, calcium acetylide, ethylene oxide, chlorine, turpentine, nitrates. Reacts with hydrazine to form dihydrazine chloride which decomposes explosively when heated. Contact with strong oxidizing agents or alkalis will generate heat and fumes. Stannous Chloride dihydrate is a strong reducing agent and will absorb oxygen from the air and forms insoluble oxychloride. It decomposes on strong heating.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 250 mg/kg [Mouse] (Registry of Toxic Effects of Chemical Substances).

Chronic Effects on Humans: May cause damage to the following organs: blood, kidneys, lungs, liver, upper respiratory tract, skin.

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (irritant), of ingestion, . Hazardous in case of inhalation (lung corrosive). Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

May affect genetic material (mutagenic). May cause adverse reproductive effects and birth defects (teratogenic)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Stannous chloride forms dilute HCl on contact with moisture or moist membranes (skin, eyes, nose, mouth, etc.) Skin: Causes severe skin irritation or skin burns particularly on contact with moist or wet skin. The risk of absorption is slight. Eyes: Causes severe eye irritation or eye burns. Inhalation: Causes chemical burns or burning irritation to the upper respiratory tract, coughing, wheezing. Irritation may lead to chemical pneumonitis and pulmonary

edema. Ingestion: Harmful if swallowed. Causes nausea, abdominal pain(cramping), vomiting, and diarrhea. Can cause burning of the lips, mouth tongue, throat, and stomach, stomach bleeding, reduced blood pressure, collapse. May affect the liver and kidneys, behavior/central nervous system (headache, fatigue, somnolence, convulsions). Chronic Potential Health Effects: Skin: Repeated or prolonged contact causes skin irritation and dermatitis. Ingestion: Prolonged or repeated ingestion may cause decreased bone formation. It may also affect the blood, liver, kidneys, metabolism (weight loss). Inhalation: Repeated or prolonged inhalation may affect the brain, blood (changes in blood serum composition, pigmented or nucleated red blood cells, anemia), Repeated or prolonged inhalation of inorganic tin compounds may also result in Stannosis, a benign pneumonconiosis (dusty lung) producing distinctive changes in the lungs

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Class 8: Corrosive material

Identification: : Corrosive solid, n.o.s. (Stannous chloride) UNNA: 1759 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Connecticut hazardous material survey.: Stannous chloride (CAS no. 7772-99-8) Massachusetts RTK: Stannous chloride (CAS no. 7772-99-8) New Jersey: Stannous chloride (CAS no. 7772-99-8)

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

Classification of this product has not been validated yet by the Service du repertoire toxicologique. However, it would probably fall into the CLASS E classification: Corrosive solid.

DSCL (EEC):

R22- Harmful if swallowed. R34- Causes burns. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection: j

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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