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MSDS No.: TT0170
Effective Date: May 28, 2002

SECTION I	NAME	24 HOUR EMERGENCY ASSISTANCE
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Product	TIN METAL	CHEMTREC 800-424-9300 Day 585-226-6177 NFPA HAZARD RATING MINIMAL 0 SLIGHT 1 MODERATE 2 SEVERE 3 EXTREME 4 Health 0 Fire 0 Reactivity 0 HMIS *
Chemical Synonyms	Tin Metal, Powder, Granular, Mossy, Shot, Sheet, Foil	
Formula	Sn	
Unit Size	up to 2.5 Kg.	
C.A.S. No.	7440-31-5	

Principal Component(s)	%	TLV Units
Tin Metal	99.85%	TWA: 2 mg/m ³ (Air)
CAUTION! HARMFUL IF INHALED AS DUST OR FUME.		

Melting Point (°F)	231.9°C (449°F)	Specific Gravity (H ₂ O = 1)	7.31 at 20°C
Boiling Point (°F)	2270°C (4118°F)	Percent Volatile by Volume (%)	N/A
Vapor Pressure (mm Hg)	1 mm at 1492°C	Evaporation Rate (=1)	N/A
Vapor Density (Air=1)	4.11		
Solubility in Water	Insoluble in water.		
Appearance & Odor	Silvery white metallic powder, granular, mossy, shot, sheet, foil; no odor.		

Flash Point (Method Used)	Not flammable.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
Extinguisher Media	Use any media suitable for extinguishing supporting fire.				

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Slight fire hazard in powder form. Fire or excessive heat may produce hazardous dust or fume. In contact with acids, emits hydrogen gas. This gas is flammable and can cause explosion.

D.O.T.	NON-REGULATED.
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Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

0170

ACGIH 1992-93 Tin metal: TWA: 2 mg/m³.
Organic compounds as Sn: TWA: 0.1 mg/m³; STEL: 0.2 mg/m³.

INHALATION: Exposure to the fume or dust may lead to pneumoconiosis without symptoms of interference with pulmonary functions. **INGESTION:** May irritate stomach lining. **EYES:** May irritate eyes. **SKIN:** None expected. Target organs: None known.

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth. **EYES:** Check for and remove contact lenses. Flush thoroughly with water, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get medical attention.

Stability	Unstable		Conditions to Avoid	Contact with acid emits hydrogen gas.
	Stable	X		
Incompatibility (Materials to Avoid)		Strong oxidizers, chlorine, cupric nitrate, potassium, sodium peroxide, sulfur, Halogens, Sulfurous Chlorosulfuric and Pyrosulfuric acid.		
Hazardous Decomposition Products		Oxides of tin may be present. Reacts with acids; will cause evolution of flammable hydrogen gas.		
Hazardous Polymerization		Conditions to Avoid		Not applicable.
May Occur	Will Not Occur			
	X			

Sweep up and place in a suitable container for reclamation or disposal. Wash spill area with soap and water.

Discharge, treatment, or disposal may be subject to Federal, State or Local laws.
These disposal guidelines are intended for the disposal of catalog-size quantities only.

Dispose of in accordance with federal, state and local regulations.
Uncontaminated material may be disposed of in a sanitary landfill.

Respiration Protection (Specify Type)	None should be needed in normal laboratory handling at room temperature. If dusty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved dust mask
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Ventilation	Local Exhaust	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	No.

Protective Gloves	None should be needed.	Eye Protection	Chemical safety glasses.
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Other Protective Equipment	Lab coat, eye wash station, ventilation hood for fume on heating or dust.
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Precautions to be Taken in Handling & Storing

Keep container tightly closed when not in use.

Store in a cool, dry place away from fire hazards, oxidizing materials, acids and acid fumes. Wash thoroughly after handling.

Read label on container before using. Do not wear contact lenses when working with chemicals.
For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Avoid conditions which create fume. Use care in handling. Abrasive to skin. Remove and wash contaminated clothing.

Revision No. 8	Date 05/28/02	Approved Michael Raszeja	Chemical Safety Coordinator MR
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