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

# MATERIAL SAFETY DATA SHEET

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	TIN METAL	 <b>CHEMTREC</b> 800-424-9300 Day 585-226-6177 <b>NFPA</b> HAZARD RATING MINIMAL SLIGHT MODERATE SEVERE EXTREME 0 1 2 3 4 <b>HMIS*</b>
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	

## SECTION II INGREDIENTS OF MIXTURES

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

## SECTION III PHYSICAL DATA

Melting Point (°F)	231.9°C (449°F)	Specific Gravity (H <sub>2</sub> 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.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

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.				

## SPECIAL FIREFIGHTING PROCEDURES

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

## UNUSUAL FIRE AND EXPLOSION HAZARDS

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.

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

Lab. 4

## SECTION V HEALTH HAZARD DATA

Threshold Limited Value ACGIH 1992-93 Tin metal: TWA: 2 mg/m<sup>3</sup>  
Organic compounds as Sn: TWA: 0.1 mg/m<sup>3</sup>; STEL: 0.2 mg/m<sup>3</sup>.

Effects of Overexposure **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.

## Emergency and First Aid Procedures

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person. **EYES:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

## SECTION VI REACTIVITY DATA

Stability	Unstable	X	Conditions to Avoid	Contact with acid emits hydrogen gas.
	Stable			

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	May Occur	Will Not Occur	Conditions to Avoid	Not applicable.
		X		

## SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled Sweep up and place in a suitable container for reclamation or disposal. Wash spill area with soap and water.

Waste Disposal Method 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.

## SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection 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.

Ventilation	Local Exhaust	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	No.

Protective Gloves None should be needed. Eye Protection Chemical safety glasses.

## SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Store in a cool, dry place away from fire hazards, oxidizing materials, acids and acid fumes. Wash thoroughly after handling. Keep container tightly closed when not in use.

Other Precautions 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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