



MATERIAL SAFETY DATA SHEET
COMPLIES WITH 29 CFR 1910.1200.
OSHA HAZARD COMMUNICATION RULE

DATE OF LAST REVISION: 04-04-07

CHEMICAL IDENTITY

LABEL IDENTITY	TIN METAL
CALCULATED MOLECULAR WEIGHT	118.69
FORMULA	Sn
CHEMICAL FAMILY	METAL
HAZARDOUS INGREDIENTS	TIN
%: 100 CAS: 7440-31-5	TLV: 2 mg/m3 OSHA/PEL: 2 mg/m3

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR	Gray metallic powder, pieces; no odor
BOILING POINT	2270
DENSITY (gm/cc)	5.75
VAPOR PRESSURE @ 20°	NA
% VOLATILE BY VOLUME (%)	NA
REACTION WITH WATER	None
EVAPORATION RATE (H2O=1)	NA
SOLUBILITY IN WATER	Insoluble
MELTING POINT	231.9
OTHER	Oxidized in moist air

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	NA
AUTOIGNITION TEMPERATURE (° C)	NA
FLAMMABILITY	Slight as powder
EXTINGUISHING MEDIA	Agents for metal fires such as dry graphite, MET-L-X or TEC
SPECIAL FIRE FIGHTING PROCEDURES	None
UNUSUAL FIRE & EXPLOSION HAZARDS	None

HEALTH HAZARD INFORMATION

Toxicity Data: **No data**

HMIS RATING:

HEALTH: **3*** FLAMMABILITY: **3** REACTIVITY: **2** PERSONAL PROTECTION: **J**



TIN METAL MATERIAL SAFETY DATA SHEET

HEALTH HAZARD INFORMATION CONTINUED

ROUTES OF ENTRY	INHALATION:	Yes
	SKIN:	ND
	INGESTION:	ND
MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:		NO DATA

EFFECTS OF OVEREXPOSURE (acute and chronic):

INHALATION: **A mild pulmonary irritant. A mild, benign pneumoconiosis (stannosis) has been reported to result from chronic, long term exposure to tin fume.**

DERMAL/EYE: **A mild skin and eye irritant.**

OTHER: **Metallic tin is considered to be of low oral toxicity. Toxic effects result only from very large doses. Effects may include nausea, vomiting and diarrhea.**

CARCINOGENICITY: **ND** NTP: **ND** IARC MONOGRAPHS: **ND** OSHA REGULATE: **ND**

EMERGENCY FIRST AID PROCEDURES:

INGESTION: **Induce vomiting**

INHALATION: **Remove to fresh air**

SKIN CONTACT: **Brush off material**

EYE CONTACT: **Flush eyes with water to remove particles**

REACTIVITY DATA

STABILITY	Stable
CONDITIONS CONTRIBUTING TO UNSTABILITY	None
INCOMPATIBILITY (MATERIALS TO AVOID)	Strong oxidizers, chlorine
HAZARDOUS DECOMPOSITION PRODUCTS	Tin fume
HAZARDOUS POLYMERIZATION	Will Not Occur
CONDITIONS TO AVOID	None



TIN METAL MATERIAL SAFETY DATA SHEET

SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **Sweep or scoop up and remove.**

WASTE DISPOSAL METHOD: **In accordance with local, state and federal regulations.**

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION	Any respirator approved for dusts-mists-fumes
LOCAL EXHAUST	Maintain below TLV and control dusts
MECHANICAL (general)	Adequate for non-dusty work
SPECIAL	NA
OTHER	NA
PROTECTIVE GLOVES	Any glove that limits skin contact
EYE PROTECTION	Safety glasses
	OTHER PROTECTIVE EQUIPMENT
	None

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE: **Wash thoroughly after handling. Store in tightly closed container.**

TRANSPORTATION REQUIREMENTS	DOT CLASS:	Not Classified
	UN NUMBER:	NC
	IMCO CLASS:	NC
	OTHER:	---

PRECAUTIONARY LABELING **NONE**

THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, **ANGSTROM SCIENCES** MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR THE RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

NA= NOT APPLICABLE

ND= NO DATA FOUND