

# MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29CFR 1910.1200

Rev. 04/06/08

## TIN/LEAD ALLOYS

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**Infotrac Emergency: 1-800-535-5053**

### 1. PRODUCT INGREDIENTS

<u>Chemical Name</u>	<u>CAS No.</u>	<u>Weight %</u>	<u>Permissible Air Concen.(mg/cu.m.)</u>		<u>SARA Title III Sect.313Chem.</u>
			<u>OSHA</u>	<u>ACGIH</u>	
TIN	7440-31-5	0-100	2.0	2.0	NO
LEAD	7439-92-1	0-100	0.05	0.15	YES

No other hazardous material is present in concentration greater than 1%(.01% for carcinogens)

### 2. PHYSICAL DATA

<b>Material is SOLID</b>	<b>Appearance and Odor SILVER-WHITE METAL</b>		
<b>Melting Point METAL 179-312°F</b>	<b>Boiling Point &gt;1300°C</b>	<b>Specific Gravity 7.3-11.3</b>	<b>Vapor Density N/A</b>
<b>Solubility in Water INSOLUBLE</b>	<b>Vapor Pressure N/A</b>	<b>Evaporation Rate N/A</b>	<b>pH N/A</b>

### 3. FIRE AND EXPLOSION DATA

<b>Flash Point METAL N/A CORE - 300°F</b>	<b>Flammable Limits N/A</b>	<b>Auto Ignition Temp. N/A</b>
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#### Unusual Fire and Explosion Hazards

**MOLTEN METALS PRODUCE FUME OR VAPOR THAT MAY BE TOXIC AND/OR RESPIRATORY IRRITANTS. REACTS VIOLENTLY WITH OXIDIZING AGENTS.**

#### Fire Extinguishing Agents Recommended

**USE CO2 OR DRY CHEMICAL ON SURROUNDING FIRE**

#### Fire Extinguishing Agents to Avoid

**DO NOT USE WATER ON FIRE WHERE MOLTEN METAL IS PRESENT**

#### Special Fire Fighting Precautions

**USE NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS AND FULL BODY PROTECTIVE CLOTHING.**

<b>NFPA RATING</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>HEALTH 1, FLAMMABILITY 0, REACTIVITY 0, SPECIAL 0</b>
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#### **4. HEALTH HAZARD INFORMATION**

##### **Primary Routes of Entry**

**INGESTION                      X INHALATION                      ABSORPTION**

##### **Proposition 65**

**WARNING: THIS PRODUCT CONTAINS LEAD, WHICH IS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.**

##### **Acute Overexposure (symptoms and effects)**

**SEVERE SHORT-TERM OVEREXPOSURE MAY LEAD TO CENTRAL NERVOUS SYSTEM DISORDERS, CHARACTERIZED BY DROWSINESS, SEIZURES, COMA AND DEATH. IT SHOULD BE RECOGNIZED THAT EXPOSURES OF THIS MAGNITUDE IN AN INDUSTRIAL ENVIRONMENT ARE EXTREMELY UNLIKELY.**

##### **Chronic Overexposure (symptoms and effects)**

**PROLONGED OVEREXPOSURE OF LEAD CAN RESULT IN SYSTEMIC POISONING WITH SYMPTOMS OF METALLIC TASTE, ANEMIA, INSOMNIA, WEAKNESS, CONSTIPATION, ABDOMINAL PAIN, GASTROINTESTINAL DISORDERS, JOINT AND MUSCLE PAIN AND MUSCULAR WEAKNESS AND MAY CAUSE DAMAGE TO THE BLOOD-FORMING, NERVOUS, KIDNEYS AND REPRODUCTIVE SYSTEMS. DAMAGE MAY INCLUDE REDUCED FERTILITY IN BOTH MEN AND WOMEN, DAMAGE TO THE FETUS OF EXPOSED PREGNANT WOMEN, ANEMIA, MUSCULAR WEAKNESS AND KIDNEY DYSFUNCTION.**

##### **Medical Conditions Possibly Aggravated By Exposure**

**DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS, KIDNEYS, NERVOUS AND POSSIBLY REPRODUCTIVE SYSTEMS.**

##### **First Aid Procedures**

**INHALATION: REMOVE FROM EXPOSURE AND CALL A PHYSICIAN.**

**SKIN CONTACT: WASH AFFECTED AREAS WITH SOAP AND WATER. IF BURNS SHOULD OCCUR FROM MOLTEN METAL, TREAT FOR BURN AND GET IMMEDIATE MEDICAL ASSISTANCE.**

**EYE CONTACT: FLUSH EYES WITH WATER FOR 15 MINUTES, CALL A PHYSICIAN.**

**INGESTION: INGEST LARGE QUANTITIES OF WATER, CALL A PHYSICIAN.**

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#### **5. PRECAUTIONS/PROCEDURES**

**OVERHEATING OF ALLOY CAN PRODUCE METAL FUMES AND OXIDES. MACHINING OPERATIONS SUCH AS GRINDING, SAWING OR BUFFING CAN GENERATE AIRBORNE PARTICULATE IN THE WORK AREA. EXPOSURE LEVELS INDICATED IN SECTION 1 ARE RELEVANT TO THESE AND OTHER OPERATIONS.**

##### **Normal Handling**

**USE OF APPROVED RESPIRATORS IS REQUIRED FOR APPLICATIONS WHERE ADEQUATE VENTILATION CANNOT BE PROVIDED. ACTIVITIES WHICH GENERATE DUST OR FUMES SHOULD BE AVOIDED. WHEN MELTED, THE TEMPERATURE SHOULD BE KEPT AS LOW AS POSSIBLE.**

##### **Spill or Leak**

**ANY METHOD THAT KEEPS DUST TO A MINIMUM IS ACCEPTABLE. VACUUMING IS PREFERRED. USED OF APPROVED RESPIRATORY PROTECTION WHERE POSSIBILITY OF DUST/FUME EXPOSURE EXISTS. DO NOT USE COMPRESSED AIR FOR CLEANING.**

##### **Personal Hygiene**

**AVOID INHALATION OR INGESTION. PRACTICE GOOD HOUSEKEEPING AND PERSONAL HYGIENE PROCEDURES. A SHOWER IS RECOMMENDED IF SIGNIFICANT DUST EXPOSURE OCCURS.**

#### **Engineering Controls**

**LOCAL EXHAUST VENTILATION IS RECOMMENDED FOR DUST AND/OR FUME GENERATION OPERATIONS WHERE AIRBORNE EXPOSURES MAY EXCEED PERMISSIBLE AIR CONCENTRATIONS.**

#### **Storage**

**GENERAL STORAGE PROCEDURES ACCEPTABLE.**

#### **Special Precautions, Procedures, Label Instruction**

**SPECIAL ATTENTION IS DRAWN TO THE REQUIREMENTS OF THE OSHA LEAD STANDARD (1910.1025) AND RESPIRATOR STANDARD (1910.134) SHOULD AIRBORNE EXPOSURES EXCEED THE OSHA ACTION LEVEL OR PEL.**

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### **6. PERSONAL PROTECTIVE EQUIPMENT**

#### **Respiratory Protection**

**WHERE AIRBORNE EXPOSURES MAY EXCEED OSHA/ACGIH PERMISSIBLE AIR CONCENTRATIONS. THE MINIMUM RESPIRATORY PROTECTION RECOMMENDED IS A NEGATIVE PRESSURE AIR PURIFYING RESPIRATOR WITH CARTRIDGES THAT ARE NIOSH/MSHA APPROVED AGAINST DUST, FUMES AND MISTS HAVING A TWA NOT LESS THAN 0/05 MG/CU M.**

#### **Eyes and Face**

**SAFETY GLASSES RECOMMENDED WHERE THE POSSIBILITY OF GETTING DUST PARTICLES IN EYES EXISTS OR WHEN HANDLING MOLTEN METAL.**

#### **Other Clothing and Equipment**

**GLOVES AND OTHER PROTECTIVE CLOTHING RECOMMENDED IF SKIN CONTACT IS APPRECIABLE.**

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### **7. REACTIVITY DATA**

**Stability: STABLE**

**Conditions to Avoid: NOT APPLICABLE**

**Incompatibility: STRONG OXIDIZERS MAY CAUSE VIOLENT REACTION**

**Hazardous Decomposition Products: AT TEMPERATURES ABOVE THE MELTING POINT, TOXIC FUMES OR VAPORS MAY BE EMITTED.**

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### **8. ENVIRONMENTAL**

**Regulated by DOT? NO**

**Waste Disposal Method (DISPOSER MUST COMPLY WITH FEDERAL, STATE AND LOCAL DISPOSAL OR DISCHARGE LAWS)**

**IF HAZARDOUS UNDER 40 CFR261, SUBPARTS B AND C, MATERIAL MUST BE TREATED OR DISPOSED IN A FACILITY MEETING THE REQUIREMENTS OF 40 CFR254 OR 265. IF NON-HAZARDOUS, MATERIAL SHOULD BE DISPOSED IN A FACILITY MEETING THE REQUIREMENTS OF 40 CFR257.**

#### **RCRA Status of Unused Material**

**IF DISCARDED IN UNALTERED FORM, MATERIAL SHOULD BE TESTED TO DETERMINE IF IT MUST BE CLASSIFIED AS A HAZARDOUS WASTE FOR DISPOSAL PURPOSES. UNDER SPECIFIC CIRCUMSTANCES, APPLICATION CAN BE MADE TO THE EPA ADMINISTRATOR TO HAVE A PARTICULAR WASTE DESIGNATED NON-HAZARDOUS.**

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## 9. ADDITIONAL INFORMATION

Precautions to be taken in handling and storing: NONE

Other Precautions: NONE

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## 10. TRANSPORTATION REQUIREMENTS

D.O.T. HAZARD CLASS	N/A
D.O.T. PROPER SHIPPING NAME	*
D.O.T. LABELS REQUIRED	N/A
D.O.T. PLACARD REQUIRED	N/A
UN/NA CODE	N/A

**\*THIS PRODUCT IS NOT REGULATED BY THE D.O.T. AS SHIPPED. THIS MATERIAL IS ONLY REGULATED BY THE D.O.T. IF IN A POWDER FORM WITH A PARTICLE SIZE LESS THAN 100 MICROMETERS. (0.0040 INCHES)**

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## 11. CERCLA INFORMATION

**THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE RELEASE REQUIREMENTS OF SECTION 302:**

<b>CHEMICAL NAME:</b>	<b>LEAD</b>	
<b>REPORTABLE QUANTITY (LBS)</b>	<b>1.0</b>	<b>CERCLA STATUTORY RQ</b>

**SPILLS TO BE ENVIRONMENT EXCEEDING THE REPORTABLE QUANTITY IN ANY 24 HOUR PERIOD MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER (1-800-424-8802). NO REPORTING OF RELEASES OF THE HAZARDOUS SUBSTANCE IS REQUIRED IF THE DIAMETER OF THE PIECES OF THE SOLID METAL RELEASED IS EQUAL TO OR EXCEEDS 100 MICROMETERS (0.400 INCHES).**

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