



# AMES METAL PRODUCTS CO.

complies with OSHA Hazard Communication  
Standard 29 CFR 1910.1200

PRODUCT: TIN/SILVER SOLDER ALLOY (FABRICATIONS/FORMS)

CODE: 1004

COMMON NAME OR SYNONYMS: Tin /Silver formulation solders or alloys in the following forms: wire, ingot, pig, sheet, cake, rod, anodes, cast or extruded and ribbon.

**\*\*\*SECTION I\*\*\***

MANUFACTURERS NAME: **AMES METAL PRODUCTS CO.**  
2211 South Foster Ave  
Wheeling, Illinois 60090  
  
Phone: 847-749-1672  
Fax: 847-670-1092

INFORMATION PHONE: Toll Free/Outside IL: 1-800-255-6937  
EMERGENCY PHONE: CHEMTREC: 800-424-9300  
PREPARATION DATE: **JULY 1, 2012**

**\*\*\*SECTION II - HAZARDOUS INGREDIENTS\*\*\***

INGREDIENT	CAS NO.	OSHA PEL	ACGIH TLV	OTHER	WT. PERCENT
Tin	7440-31-5	2.0 mg/m <sup>3</sup>	2.0 mg/m <sup>3</sup>		90.0 - 98.0
Silver	7440-22-4	0.01 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>		2.0 - 10.0

Additional Information:  
Note: Product formulation is to customer specification and appears on product packaging or packing slip.

**\*\*\*SECTION III - PHYSICAL DATA\*\*\***

APPEARANCE & ODOR (AT NORMAL CONDITIONS) : Solid silver metallic to grey metallic metal – no odor.  
SPECIFIC GRAVITY (H<sub>2</sub>O = 1) : 10.26 – 11.56  
MELTING POINT (DEGREES C) : Tin - 232 Silver - 961  
BOILING POINT (DEGREES C) : Tin - 2260 Silver - 1950  
SOLUBILITY IN WATER : Insoluble  
EVAPORATION RATE (BUTYL ACETATE = 1) : Not Applicable  
VAPOR DENSITY (AIR = 1) : Not Applicable  
VAPOR PRESSURE (mmHg) : Not Applicable  
PH : Not Applicable

**\*\*\*SECTION IV - FIRE & EXPLOSION HAZARD DATA\*\*\***

FLASH POINT : Non-Flammable  
FLAMMABLE LIMITS : Not Applicable  
EXTINGUISHING MEDIA : No specific agents recommended  
SPECIAL FIRE FIGHTING PROCEDURES : If involved in fire, use full protective clothing and NIOSH/MSHA approved self-contained breathing apparatus operated in a positive-pressure mode.  
UNUSUAL FIRE & EXPLOSION HAZARDS : None

**\*\*\*SECTION V - REACTIVITY DATA\*\***

STABILITY : Stable  
CONDITIONS TO AVOID : Not Applicable  
INCOMPATIBILITY : Strong Oxidizers, Hydrogen Peroxide, Acetylene, Ammonia, Chlorine, Turpentine, Active Metals – Sodium, Potassium.  
HAZARDOUS POLYMERIZATION : Powdered lead fused with ammonium nitrate may cause a violent reaction.  
HAZARDOUS POLYMERIZATION : Will not occur.

\*\*\*SECTION VI – HEALTH HAZARD DATA\*\*\*

EXPOSURE TO THE SOLID FORM OF THIS PRODUCT PRESENTS FEW HEALTH HAZARDS IN ITSELF. HOWEVER, NORMAL HANDLING OR PROCESSING OF THIS MATERIAL MAY RESULT IN THE GENERATION OF TIN AND BISMUTH DUSTS AND/OR FUMES.

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ROUTES OF ENTRY : Inhalation of dust/fume & ingestion of dust.

SYMPTOMS OF EXPOSURE : Chronic (Prolonged) overexposure to tin can result in benign pneumoconiosis (stannosis). This form of pneumoconiosis produces progressive x-ray changes of the lungs as long as exposure exists, but there is no distinctive fibrosis, no evidence of disability and no special complicating factors. There are no reported or recognized ill effects from bismuth metal.

Acute (Severe short-term) overexposure to tin can cause irritation of the eyes, skin, mucous membranes and respiratory system. No recognized or reported ill effects in an industrial environment have been traced to Bismuth metal. All reported toxicity data has been determined on soluble bismuth pharmaceuticals that are no longer used.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE : Pre-existing conditions of the lungs.

CARCINOGENITY : Not listed as a carcinogen by NTP, IARC, OSHA

EMERGENCY & FIRST AID PROCEDURES :

SKIN : Normal hygiene procedures - wash with soap and water. If irritation or rash develops or persists get medical attention.

EYES : Flush well with running water to remove particulate. If Irritation persists get medical attention.

INHALATION: Remove from exposure. Get medical attention.

INGESTION: Give water; induce vomiting in a conscious individual; get medical attention.

\*\*\*SECTION VII – PROTECTION MEASURES\*\*

RESPIRATORY PROTECTION: Respiratory protection is required where airborne exposures exceed OSHA/ACGHI permissible air concentrations. Respirator selection shall be made in accordance with the Respiratory Protection Standard, 29CFR 1910.134.

VENTILATION : Ventilation, as described in "Industrial Ventilation, A manual of Recommended Practice", by the American Conference of Governmental Industrial Hygienists, is recommended to maintain exposure levels below the permissible exposure limits (PEL's) or threshold limit values (TLV's) specified by OSHA or other local or state regulations.

PROTECTIVE GLOVES : Recommended for prolonged contact/heat.

EYE PROTECTION : Safety glasses or goggles are recommended where the possibility exists of getting dust particles in the eyes.

OTHER PROTECTIVE EQUIPMENT : Safety glasses or goggles with faceshield are recommended around molten metal.

WORK/HYGENIC PRACTICES: Safety equipment should be worn as appropriate for the work environment.

Do not permit eating, drinking, or the use of cosmetics or tobacco products while handling or processing material or in work area. Practice good personal hygiene procedures. Wash hands and face thoroughly before eating, drinking, applying cosmetics or using tobacco products. Avoid inhalation and ingestion of product, and activities which generate dust or fume. Keep melting temperatures a low as possible to minimize the generation of fume.

\*\*\*SECTION VIII – PRECAUTIONS FOR SAFE HANDLING & USE\*\*\*

PRECAUTIONS TO BE TAKEN IF HANDLING & STORING : Practice good housekeeping procedures to prevent dust accumulations. Keep material dry. Avoid storage near incompatible materials (See Section V).

OTHER PRECAUTIONS : Special attention is drawn to the requirements of the Respirator Standard (1910.134) should airborne exposures exceed the OSHA PEL.

**\*\*\*SECTION IX – SPILL OR LEAK PROCEDURES\*\*\***

SPILL OR LEAK PROCEDURES: 1) Material in dust form - minimize exposure. Clean up using dustless methods (i.e. vacuum). Do not use compressed air. 2) Place in closed labeled containers for recycling or disposal. 3) Keep out of waterways.

Note: Cleanup personnel should wear protective clothing and respiratory protection where significant dust/fume exposure exists.

OTHER PROCEDURES : We recommend that the purchaser establish a spill prevention, control and counter measure plan. This plan should include procedures for proper storage as well as clean-up of spills or leaks. The procedure should conform to safe practices and provide for proper recovery and/or disposal. Depending on the quantity spilled, notification to the National Response Center (800-424-8802) may be required in case of hazardous substances.

(See EPI and O&F regulations; also various state and local regulations.)

WASTE DISPOSAL METHODS: May have value on a recycled basis. If disposed of, dispose of in a permitted disposal site in accordance with all federal, state and local disposal or discharge regulations.

**\*\*\*SECTION X – SARA TITLE III INFORMATION\*\*\***

THIS PRODUCT/MIXTURE CONTAINS THE FOLLOWING TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372. THE PERCENT BY WEIGHT OF EACH TOXIC CHEMICAL AND ITS ASSOCIATED CHEMICAL ABSTRACT SYSTEM (CAS) NUMBER ARE TO BE FOUND IN SECTION II OF THIS MATERIAL SAFETY DATA SHEET.

CHEMICAL NAME	EHS RQ (LBS) (*1)	EHS TPQ (LBS) (*2)	SEC. 313 (*3)	313 CATEGORY (*4)	311/312 CATEGORIES (*5)
Not Applicable	Not Applicable	Not Applicable	No	Not Applicable	Not Applicable

FOOTNOTES

\*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SECTION 302.

\*2 = THRESHHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SECTION 302.

\*3 = TOXIC CHEMICAL, SECTION 313

\*4 = CATEGORY AS REQUIRED BY SECTION 313 (40 CFR 372.42).

MUST BE USED ON TOXIC RELEASE FORM.

PHYSICAL P-3 = FIRE HAZARD

\*5 = HAZARD CATEGORY FOR SARA SECTION 311/312:

P-4 = SUDDEN RELEASE OF PRESSURE HAZARD

HEALTH H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD

P-5 = REACTIVE HAZARD

H-2 = DELAYED (CHRONIC) HEALTH HAZARD

**\*\*\*SECTION XI – CERCLA INFORMATION\*\*\***

THIS PRODUCT/MIXTURE CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE RELEASE REPORTING REQUIREMENTS OF SECTION 302.

CHEMICAL NAME	RQ (LBS) (*1)
Not Applicable	Not Applicable

FOOTNOTES

\*1 = REPORTABLE QUANTITY (RQ) UNDER CERCLA SECTION 302. SPILLS TO THE ENVIRONMENT EXCEEDING THE REPORTABLE QUANTITY IN ANY 24 HOUR PERIOD MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER (800-424-8802). NO REPORTING OF RELEASES OF THE HAZARDOUS SUBSTANCE(S) IS REQUIRED IF THE DIAMETER OF THE PIECES OF THE SOLID METAL(S) RELEASED IS EQUAL TO OR EXCEEDS 100 MICROMETERS (0.004 INCHES).

**\*\*\*SECTION XII - TRANSPORTATION INFORMATION (172.101)\*\*\***

DOT SHIPPING NAME : This product is not regulated by the DOT as shipped.

HAZARD CLASS : Not Applicable

**\*\*\*SECTION XII - TRANSPORTATION INFORMATION (172.101) (CONTINUED)\*\*\***

UN/D NO. : Not Applicable  
DOT LABEL(S): Not Applicable

**\*\*\*SECTION XIII - ADDITIONAL INFORMATION\*\*\***

No Additional Information

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This Material Safety Data Sheet is offered solely for your information, consideration and Investigation. AMES METAL PRODUCTS CO. provides no warranties, either express or implied, and assumes no responsibilities for the accuracy or completeness of the data contained in this document. The data in this Material Safety Data Sheet relates only to this product and does not relate to use in combination with any other material or in any process.