



AMES METAL PRODUCTS CO.

MATERIAL SAFETY DATA SHEET

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This Material Safety Data Sheet complies with the U.S. OSHA Hazard Communication Standard 29 CFR 1910, 1200 and the Hazardous Products Act of the Canada Labor Code.

PRODUCT: ANTIMONIAL LEAD (FABRICATIONS/FORMS)

COMMON NAME OR SYNONYMS: Antimonial Lead Alloys and Tellurium Lead with Antimony Alloys in the following forms: wire, ingot, pig, pipe, anodes, cast or extruded bar, sheet, brick, rod, strip, tubing, ribbon, tape, flake and miscellaneous extruded lines.

SECTION I

MANUFACTURERS NAME: AMES METAL PRODUCTS CO.
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SECTION II — HAZARDOUS INGREDIENTS

INGREDIENT	CAS NO.	OSHA PEL	ACGIH TLV	US-NIOSH RTECS NO.	WT. PERCENT
Lead	7439-92-1	0.05 mg/m ³	0.15 mg/m ³	OF7525000	65-99
Antimony	7440-36-0	0.5 mg/m ³	0.5 mg/m ³	CC4025000	1-35

Additional Information: OSHA Action Level for Lead 0.03 mg/m³ (See 29CFR 1910.1025).

NOTE: Product Formulation is to customer specification.

SECTION III — PHYSICAL DATA

APPEARANCE & ODOR (At Normal Conditions): Solid — Silver Metallic to Gray Metallic — No Odor
SPECIFIC GRAVITY (H₂O = 1): 9.71-11.29
MELTING POINT (DEGREES C): Lead – 328° Antimony – 630°
BOILING POINT (DEGREES C): Lead – 1744° Antimony – 1380°
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 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, Active Metals-Sodium, Potassium, Powdered lead fused with ammonium nitrate may cause a violent reaction. Strong acids, bases, nascent hydrogen, reducing agents, chlorine, fluorine and bromine.
HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures above the melting point metal oxide fumes may be evolved. Under reducing conditions, such as any strong acid or base plus an active metal, or in the presence of nascent hydrogen, highly toxic stibine gas (TLV = 0.10 ppm) may be evolved.
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 lead and antimony dusts and/or fumes.

ROUTES OF ENTRY:	Dust/fume inhalation, dust ingestion.
SYMPTOMS & EFFECT OF EXPOSURE:	<p><u>Chronic (prolonged)</u> overexposure to <u>lead</u> can result in systemic lead poisoning with symptoms of metallic taste, anemia, insomnia, weakness, constipation, abdominal pain, gastrointestinal disorders, joint and muscle pains, and muscular weakness, and may cause damage to the blood-forming, nervous, kidney, & reproductive systems. Damage may include reduced fertility in both men and women, damage to the fetus of exposed pregnant women, anemia, muscular weakness & kidney dysfunction. Chronic overexposure to <u>antimony</u> can lead to liver and kidney damage and central nervous system disorders. Antimony can cause eye and skin irritation, and dermatitis.</p> <p><u>Acute (severe short-term)</u> overexposure to <u>lead</u> may lead to central nervous system disorders, characterized by drowsiness, seizures, coma & death. It should be recognized that exposures of this magnitude in an industrial environment are extremely unlikely. Acute overexposure to <u>antimony</u> can cause upper respiratory tract irritation and systemic antimony poisoning with symptoms including abdominal cramps, nausea, dizziness, dry throat and various nervous complaints, such as sleeplessness, irritability and muscular pains. Repeated skin contact with antimony may result in dermatitis, and eye contact may cause severe eye irritation.</p>
MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE	Pre-existing conditions of the lungs, diseases of the blood and blood-forming organs, kidneys, nervous and possibly reproductive systems.
CARCINOGENICITY:	Not listed as a carcinogen by NTP, OSHA, ACGIH; IARC classifies "lead and its compounds" as a Group 2B carcinogen (possibly carcinogenic to humans).
ADDITIONAL INFORMATION:	<p>Pre-employment medical evaluations are recommended for large users of this product (required at contaminant exposure levels exceeding the Lead AL – See U.S. OSHA Lead Standard, 29 CFR 1910.1025). Attention should be directed to skin, eyes, respiratory tract, blood, kidneys, pulmonary function and neurological health.</p> <p>Periodic medical examinations should be repeated on an annual basis for those employees exposed to potentially hazardous levels of this product, Please consult the U.S. OSHA Lead Standard (29 CFR 1910.1025) for specific guidance; periodic medical examinations are required under certain circumstances.</p> <p>U.S. OSHA Biological Limit for Blood Lead Level is a 3 sample /6 month average of 50 mcg per 100g (or higher) of whole blood and/or two (2) consecutive samples of 60 mcg per 100g (or higher). See U.S. OSHA Standard 29 CFR 1910-1025 for further information.</p> <p>Lead and its compounds has tentatively been classed by the USEPA Carcinogen Assessment Group as a Group B2 Carcinogen (Probable human carcinogen – a combination of sufficient evidence in animals and inadequate data for humans). IARC lists lead and its compounds as a teratogen.</p> <p>Some animal studies indicate that inhalation of antimony trioxide may pose an increased risk of lung cancer. ACGIH identifies antimony trioxide as a Class A2 carcinogen (suspected human carcinogen). IARC classifies antimony trioxide as a Group 2B carcinogen (possibly carcinogenic to humans).</p>
EMERGENCY & FIRST AID PROCEDURES:	<p>SKIN: Normal hygiene and first aid procedures – wash with soap and water. If irritation or rash develops or persists get medical attention.</p> <p>EYES: Flush well with running water to remove particulate. If irritation persists get medical attention.</p> <p>ACUTE</p> <p>INHALATION: Remove from exposure. Obtain immediate medical attention. If breathing has stopped, initiate artificial resuscitation.</p> <p>INGESTION: Give water; induce vomiting only in a conscious non-convulsing individual; obtain immediate medical attention.</p>

SECTION VII — PROTECTION MEASURES

RESPIRATORY PROTECTION:	Respiratory protection is required where airborne exposures exceed U.S. OSHA/ACGIH permissible air concentrations. Respirator selection shall be made in accordance with the U.S. Occupational Exposure Standard for Lead, 29 CFR 1910-1025 and the Respiratory Protection Standard 29 CFR 1910.134.
VENTILATION:	Good general dilution ventilation, or ventilation, as described in "Industrial Ventilation, A Manual of Recommended Practice", by the American Conference of Governmental Industrial Hygienists, is recommended in order to maintain exposure levels below the permissible exposure limits (PEL's) or threshold limit values (TLV's) specified by U.S. OSHA or other local or state regulations.
PROTECTIVE GLOVES:	Recommended for prolonged contact/heat. Required above the Lead PEL.
EYE PROTECTION:	Safety glasses or goggles are recommended where the possibility exists of getting dust particles in the eyes. Safety glasses or goggles with faceshield are recommended around molten metal and where excessive metal dust exposure exists.
OTHER PROTECTIVE EQUIPMENT:	Full protective clothing and shoes are required for employee exposure above the Lead PEL. Other safety equipment should be worn as appropriate for the work environment. Keep work clothing separate from street clothes.
WORK/HYGIENIC PRACTICES:	Do not permit eating, drinking, or the use of cosmetics or tobacco products while handling or processing material or in product work areas. Practice good personal hygiene procedures. Wash hands and face thoroughly before eating, drinking, applying cosmetics or using tobacco products. Full protective clothing is to be worn by workers exposed to concentrations of lead dust/fume above the PEL, and showering is required before changing into street clothes. Keep work clothing separate from street clothes. Work clothes and equipment should remain in designated lead and antimony contaminated areas and never taken home or laundered with personal clothing. Avoid inhalation and ingestion of product, and activities which generate dust or fume. Keep melting/soldering temperatures as low as possible to minimize the generation of fumes.

SECTION VIII — PRECAUTIONS FOR SAFE HANDLING AND USE

PRECAUTIONS TO BE TAKEN

IN HANDLING & STORAGE: Practice good housekeeping procedures to prevent dust accumulations. Keep material dry. Avoid storage near incompatible materials (See Section V). Keep product away from children and their environment, feed products, food products and domestic animals. DO NOT put product, by-products, dust or product waste into galvanized or aluminum containers.

OTHER PRECAUTIONS: Special attention is drawn to the requirements of the U.S. OSHA Lead Standard (29 CFR 1910.1025) and Respirator Standard (29 CFR 1910.134) should airbourne exposures exceed the U.S. OSHA Action Level (AL) or PEL. Inadvertent contaminants to product such as moisture, ice, snow, grease or oil can cause an explosion when charged to a molten metal bath or melting furnace. (Preheating metal will remove moisture from product).

SECTION IX — SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCEDURES: 1) Material in dust form – minimize exposure. Clean up using dustless methods (e.g. HEPA vacuum). DO NOT use compressed air. 2) Place in closed labeled containers for recycling or disposal. 3) Keep out of waterways. NOTE: Clean-up personnel should wear protective clothing and respiratory protection where dust/fume exposure exists.

OTHER PROCEDURES: For large product users or involving large product quantities, 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 procedures should conform to safe practices and provide for proper recovery and/or disposal. Depending on the quantity spilled, notification to the U.S. National Response Center (800-424-8802) may be required in case of hazardous substances. (See USEPA and USDOT 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. Under the U.S. Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the Product to determine, at the time of disposal, whether the Product falls under the RCRA as a hazardous waste. This is because Product uses, transformations, synthesis, mixtures, etc. may cause the resulting end-product to be classified as hazardous.

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)
Lead	Not applicable	Not applicable	Yes	Lead	H-1, H-2
Antimony	Not applicable	Not applicable	Yes	Antimony	H-1, H-2

FOOTNOTES

*1 = Reportable quantity of extremely hazardous substance, Section 302.

*2 = Threshold 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.

*5 = Hazard category for Sara Section 311/312:

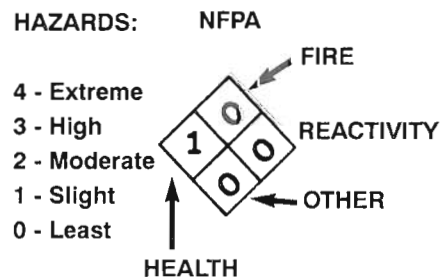
Health H-1 = Immediate (Acute) Health Hazard

H-2 - Delayed (Chronic) Health Hazard

Physical P-3 = Fire Hazard

P-4 = Sudden Release of Pressure Hazard

P-5 = Reactive 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)	
Lead	1.0	Cercla Statutory RQ
Antimony	5000	

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. This material is only regulated by the DOT if in a powder form with a particle size less than 100 micrometers. (0.0040 inches)

HAZARD CLASS: Not Applicable

UN/ID NO.: Not Applicable

DOT LABEL(S): Not Applicable

SECTION XIII — ADDITIONAL INFORMATION

OSHA Biological Limit for Blood Lead Level is a 3 sample/6 month average of 50 mcg per 100g (or higher) of whole blood and/or two (2) consecutive samples of 60 mcg per 100 g (or higher). See OSHA Standard 29 CFR 1910.1025 for further information.

Lead and its compounds has tentatively been found to be a class B-2 Carcinogen by the USEPA Carcinogen Assessment Group. IARC lists lead and its compounds as a teratogen. Some animal studies indicate that inhalation of antimony trioxide may pose an increased risk of lung cancer.

UNITED STATES – CLEAN WATER ACT: The use of lead containing pipes or lead containing sheet in making joints or fittings in any private or public potable water supply system is prohibited by the Clean Water Act.

UNITED STATES – STATE HAZARDOUS

SUBSTANCE LISTS: Lead and antimony appear on the state hazardous substance lists of MA and NJ. Lead appears on the California Safe Drinking Water and Toxic Enforcement Act of 1986 Chemical List.

CANADA – HPA WHMIS LIST: Lead and antimony appear on the Canadian HPA WHMIS Chemical List.

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.