SAFETY DATA SHEET

Vendee and third persons assume the risk of injury proximately caused by the material if reasonable safety procedures are not followed as provided for in the data sheet and vendor shall not be liable for such injury. Furthermore, vendor shall not be liable for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed.

All persons using this product, all persons working in an area where this product is used, and all persons handling this product should be familiar with the contents of this data sheet, posting this document for employee notification is recommended by the vendor.

I. Product Identification

Manufacturer's Name	Jamestown North America
Address	4550 Homestead Road, Houston, TX 77028
Telephone	713-672-6655
Emergency Phone	713-702-8850
Trade Names	Lead with 0-9% Antimony
Synonyms	Lead Products
Intended Use	Medical, Industrial and Commercial

II. Hazards Identification

Lead in sheet or massive form is not a significant hazard. However the following information is relevant if lead dust, fume or vapor is produced during use or storage.

GHS CLASSIFICATION

Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 3)
Carcinogenicity (Category 2)
Reproductive toxicity (Category 1A)
Specific target organ toxicity – repeated exposure (Category 1)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

GHS Label Elements, including precautionary statements

Signal Word: Danger

Hazard Statements

H302	Harmful if swallowed
H331	Toxic if inhaled
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
410	Very toxic to aquatic life with long lasting effects

Precautionary Statements	
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/respiratory protection.
P301, P312 + P330	If swallowed: Rinse mouth. Call a poison center/doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P304, P340 + P314	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal facility in accordance with local, state and federal regulations.

III. Composition and Information on Ingredients

MATERIAL OR COMPONENT (CAS #)	WEIGHT (%)
Lead CAS# 7439-92-1 EC # 231-100-4	91 - 99.9
Antimony CAS# 7440-36-0 EC # 231-146-5	0 - 9

IV. First Aid Measures

ROUTES OF EXPOSURE WHEN PROCESSING OR HANDLING	
Inhalation	Dust, vapors, and/or fumes may be irritating to the respiratory system and can result in both acute and chronic overexposure.
Skin Contact	Dust, vapors, and/or fumes may cause irritation.
Skin Absorption	Dust, vapors, and/or fumes are not readily absorbed through the skin.
Eye Contact	Dust, vapors, and/or fumes may cause irritation.
Ingestion	Dust, vapors, and/or fumes may be absorbed by the digestive system and can result in both acute and chronic overexposure.
EFFECTS OF OVEREXPOSURE	
Acute Overexposure	If left untreated, metallic taste in mouth, weakness, vomiting, colic, loss of appetite and weight, uncoordinated body movements, convulsions, stupor, diarrhea, bloody stools, and possible coma may occur.
Chronic Overexposure	If left untreated, weakness, insomnia, hypertension, slight irritation to skin and eyes, metallic taste in mouth, anemia, constipation, headache, muscle and joint pains, neuro-muscular dysfunction, possible paralysis and encephalopathy, metal fume fever, loss of appetite, nausea, and pneumoconiosis may ensue.
EMERGENCY AND FIRST AID PROCEDURES	
Inhalation	Remove from exposure and get medical attention if experiencing effects of overexposure.
Skin	Wash thoroughly with soap and water.
Eyes	Flush with copious quantities of water and get immediate medical attention.
Ingestion	Get immediate medical attention.

NOTES TO PHYSICIAN
Lead and its inorganic compounds are neurotoxins, which may produce peripheral neuropathy. For an overview of the effects of lead exposure, consult Occupational Safety and Health Administration Appendix A of Occupational Exposure to Lead (29CFR1910.1025).

V. Firefighting Measures

Flash Point (Test Method)	N/A
Auto Ignition Temperature	N/A
Flammable Limits in Air – Lower (% by Volume)	N/A
Flammable Limits in Air – Upper (% by Volume)	N/A
Extinguishing Media	Dry chemical or carbon dioxide, water fog or liquid foam should be used on surrounding fire. Do not use water on fires where molten metal is present. The rapid expansion of steam could cause an explosion.
Special Firefighting Procedures	Use full body protective clothing and full face piece, self-contained breathing apparatus operated in positive-pressure mode.
Unusual Fire and Explosion Hazard	Molten metals produce dust, vapors, and/or fumes that may be toxic and/or respiratory irritants. May release toxic fumes of antimony oxide or stibine gas under fire conditions. The product, or its dust, can react vigorously with strong oxidizing agents.

VI. Accidental Release Measures

If Material is Released or Spilled	Dust material should be vacuumed with high-efficiency particulate air filter vacuum or wet swept where vacuuming is not feasible. Particulate matter should be stored in dry containers for later disposal. Do not use compressed air or dry sweeping as a means of cleaning.
Neutralizing Chemicals	N/A
Waste Disposal Method	Dispose of toxic substances and hazardous wastes in accordance with local, state, and federal regulations.

VII. Handling and Storage

Precautions for Safe Handling	• There are two major routes of entry of inorganic lead: inhalation and ingestion. Most inhalation exposure can be prevented with adequate use of ventilation and respiratory protection. • Always exercise good personal hygiene prior to eating, smoking or applying cosmetics. These activities should be confined to non-contaminated areas. • Do not smoke while using product. • Work clothes and equipment should remain in designated lead contaminated areas and should never be taken home or laundered with personal clothing. • User should be careful not to inhale fumes from soldering, welding, cutting or brazing processes. • Launder contaminated clothing before reuse. • Wash hands, face, neck, and arms thoroughly before eating, smoking, or applying cosmetics. • The product is intended for industrial, commercial, and domestic use, and should be isolated from children and their environment.

Other Handling and Storage Requirements	• Store in dry area. • Avoid contact with acids. • Avoid skin contact. • Adhere to all personal protection equipment procedures when handling. • Adhere to all ventilation requirements when heavy metal exposure limits exceed permissible limits or threshold limit values. • *Before using this product, be familiar with the information contained in the* Federal OSHA Standard for Occupational Exposure to Lead (29CFR1910.1025 and 29CFR1926.62).

VIII. Exposure Controls and Personal Protective Equipment

Exposure Limits	
0.05 mg/m^3	Lead - OSHA Permissible Exposure Limit (PEL), 8-hour TWA 29CFR1910.1025 and 29CFR1926.62
0.05 mg/m^3	Lead - ACGIH Threshold Limit Value (TLV), 8-hour TWA Confirmed animal carcinogen with unknown relevance to humans
0.05 mg/m^3	Lead - NIOSH Recommended Exposure Limit (REL), 8-hour TWA Appendix C
0.5 mg/m^3	Antimony – OSHA Permissible Exposure Limit (PEL), 8-hour TWA
0.5 mg/m^3	Antimony – ACGIH Threshold Limit Value (TLV), 8-hour TWA
0.5 mg/m^3	Antimony - NIOSH Recommended Exposure Limit (REL), 8-hour TWA
Engineering Controls	
Ventilation Requirements	Ventilation, as described in the *Industrial Ventilation Manual* produced by the American Conference of Government Industrial Hygienists, shall be provided in areas where exposures exceed the permissible exposure limits or threshold limit values specified by OSHA or other local, state, and federal regulations.
Specific Personal Protection Equipment	
Respiratory	As specified by General Industry Standard 29CFR1910.1025(f) or Construction Industry Standard 29CFR1926.62(f) of the Federal Occupational Safety and Health Administration. Other local and state regulations may also apply.
Eye	Face shield or vented goggles should be used around molten metal.
Glove	Gloves should be worn when handling the product in order to protect against burns.
Other Clothing and Equipment	Coveralls, or other full body clothing, shall be worn during product use and properly laundered after use, with the wash water disposed of in accordance with the local, state, and federal regulations. A uniform rental service is recommended for individuals with regular exposure. Hardhat, safety boots, and other safety equipment should be worn as appropriate for the industrial environment. Personal clothing and shoes should be protected from contamination with this product.

IX. Physical Data

Boiling Point @ 760 MM HG	~ 3164º F
Melting Point	~ 621º F
Specific Gravity (H_20 = 1)	~ 11.3
Vapor Pressure	N/A
Vapor Density (AIR = 1)	N/A
Solubility in H_20 (% by weight)	Negligible
% Volatiles by Volume	N/A

Evaporation Rate (Buryl Acetate = 1)	N/A
Appearance	Silver-gray metal, tarnishes
Odor	No apparent odor

X. Stability and Reactivity

Conditions Contributing to Instability	N/A
Hazardous Decomposition Products	High temperatures may produce heavy metal dust, vapors, and/or fumes.
Conditions Contributing to Hazardous Polymerization	N/A
Incompatible Materials	Can react vigorously with oxidizing agents. Incompatible with acids, sodium carbide, trioxane, hydrogen peroxide, sodium azide, disodium acetylide, sodium acetylide, zirconium and ammonium salts. Antimony is spontaneously flammable with nitrates, halogens (fluorine, chlorine or bromine) and halogenated compounds. Antimony will react with nascent (freshly formed) hydrogen to form stibine (SbH3) gas which is extremely toxic.

XI. Toxicological Information

Lead product in sheet or massive form is not a significant health hazard. However the following information is relevant if lead dust, fume or vapor is produced during use or storage.	
RTECs Number	OF7525000 (Lead), CC4025000 (Antimony)
Specific Target Organ Toxicity – Acute Exposure	Gastrointestinal (Digestive), Neurological (Nervous System), Ocular (Eyes), Renal (Urinary System or Kidneys), Lungs
Specific Target Organ Toxicity – Chronic Exposure	Cardiovascular (Heart and Blood Vessels), Developmental (effects during periods when organs are developing) , Gastrointestinal (Digestive), Hematological (Blood Forming), Musculoskeletal (Muscles and Skeleton), Neurological (Nervous System), Ocular (Eyes), Renal (Urinary System or Kidneys), Reproductive (Producing Children), Lungs
Acute Toxicity to Animals	
LC50	Antimony – inhl – rat – 720 mg/m^3, Lead – N/A
LD50	Antimony – oral – rat – 7500 mg/kg, Lead – N/A
Other Information on Acute Toxicity	N/A
Skin Corrosion/Irritation	May cause irritation. Antimony exposure may cause antimony spots, which is a rash around sweat and sebaceous glands.
Serious Eye Damage/eye irritation	Particulate may cause mechanical injury. Antimony may cause ocular conjunctivitis.
Systemic Effects	
Respiratory or skin sensitization	N/A
Germ Cell Mutagenicity - Lead	
Cytotoxicity analysis	Inhalation – rat

Carcinogencity - Lead	
IARC	Group 2B – Possibly carcinogenic to humans
NTP	Reasonably anticipated to be a human carcinogen
OSHA	1910.1025
Reproductive Toxicity - Lead	
Suspected Human Reproductive Toxicant	
Rat – Inhalation	Effects on Newborn: Biochemical and metabolic
Rat – Oral	Effects on Newborn: Behavioral
Mouse – Oral	Effects on Fertility (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).
Teratogenicity - Lead	
Rat – Inhalation	Effects on Embryo or Fetus: Fetotoxicity (except death, e.g. stunted fetus). Specific Developmental Abnormalities: Blood and Lymphatic system (including spleen and marrow).
Rat – Oral	Specific Developmental Abnormalities: Blood and Lymphatic system (including spleen and marrow). Effects on newborn: Growth statistics (e.g., reduced weight gain).
Rat – Oral	Effects on Embryo or Fetus: Fetotoxicity (except death, e.g. stunted fetus) and Fetal death.
Mouse – Oral	Effects on Embryo or Fetus: Fetotoxicity (except death, e.g. stunted fetus) and Fetal death.

XII. Ecological Information

Lead in sheet or massive form is not a significant ecological hazard in its present form. All ecological tests were conducted with a dissolved form of lead or antimony.

Toxicity to Fish	Lead - Mortality LOEC – Oncorhynchus mykiss (rainbow trout) – 1.19 mg/l – 96 h
	Lead - LC50 – Micropterus dolomieu (smallmouth bass) – 2.2 mg/l – 96 h Antimony – LC50 – Cyprinodon variegatus (sheepshead minnow) – 6.2 – 8.3 mg/l – 96 h
	Lead - Mortality NOEC – Salvelinus fontinalis (brook trout) – 1.7 mg/l – 10 d. Antimony - Mortality NOEC – Cyprinodon variegatus (sheepshead minnow) – 6.2 mg/l – 96h
Toxicity to Daphnia	Lead - Mortality LOEC – 0.17 mg/l -24 h
	Lead - Mortality NOEC – 0.099 mg/l – 24 h
Toxicity to Algae	Lead - Mortality EC50 – Skeletonema costatum – 7.94 mg/l – 10 d
Persistence and degradability	N/A
Mobility in soil	N/A
PBT and vPvB assessment	N/A
Other adverse effects	Very toxic to aquatic life with long lasting effects.

XIII. Disposal Considerations

Dispose of toxic substances and hazardous wastes in accordance with local, state, and federal regulations.

XIV. Transport Information

Not regulated as hazardous for transport.

XV. Regulatory Information

OSHA Hazards	Carcinogen, Target Organ Effect, Harmful by Ingestion, Teratogen
SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	Subject to reporting levels established by SARA Title III, Section 313.
Massachusetts Right to Know Components	Lead CAS #7439-92-1, Revision Date 1994-04-01 Antimony CAS#7440-36-0, Revision Date 2007-07-01
Pennsylvania Right to Know Components	Lead CAS #7439-92-1, Revision Date 1994-04-01 Antimony CAS#7440-36-0, Revision Date 2007-07-01
New Jersey Right to Know Components	Lead CAS #7439-92-1, Revision Date 1994-04-01 Antimony CAS#7440-36-0, Revision Date 2007-07-01
California Proposition 65 Warning	**WARNING:** This product can expose you to Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

XVI. Other Information

Date of revision	February 8, 2022
Jamestown North America believes that this information is correct, however, we cannot guarantee that it is all inclusive. No warranty is made, express or implied, and Jamestown North America assumes no liability resulting from its use.	

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