



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 Avenue, Houston, TX 77028 |
| Telephone | 713-672-6655 |
| Emergency Phone | 713-702-8850 |
| Trade Names | Lead Sheet, Plate, Ingot, Pig, Brick, Pipe, Wire, Rod |
| Synonyms | Lead Products |
| Intended Use | Medical, Industrial, Commercial, and Domestic |

| II. Hazards Identification | |
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| 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) Carcinogenicity (Category 2) Reproductive toxicity (Category 2) Specific target organ toxicity – repeated exposure (Category 2) Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 1) | |
| GHS Label Elements, including precautionary statements | |
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| Signal Word: Warning | |
| Hazard Statements | |
| H302 | Harmful if swallowed. |
| H351 | Suspected of causing cancer. |

II. Hazards Identification (cont'd)

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| H361 | Suspected of damaging fertility or the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H410 | 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. |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| 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. |
| P314 | 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 | 99.9 |

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, weakness, vomiting, loss of appetite, uncoordinated body movements, convulsions, stupor, bloody stools, and possible coma may ensue. |

IV. First Aid Measures (cont'd)

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| 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

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| 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. The product, or its dust, can react vigorously with strong oxidizing agents |

VI. Accidental Release Measures

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| 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 |

VI. Accidental Release Measures (cont'd)

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| Waste Disposal Method | Dispose of toxic substances and hazardous wastes in accordance with local, state, and federal regulations |
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VII. Handling and Storage

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| <p>Precautions for Safe Handling</p> | <ul style="list-style-type: none"> • 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. |
| <p>Other Handling and Storage Requirements</p> | <ul style="list-style-type: none"> • 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. • <i>Before using this product, be familiar with the information contained in the Federal OSHA Standard for Occupational Exposure to Lead (29CFR1910.1025 and 29CFR1920.62).</i> |

VIII. Exposure Controls and Personal Protective Equipment

| Exposure Limits | |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.05 mg/m ³ | OSHA Permissible Exposure Limit (PEL), 8-hour TWA 29CFR1910.1025 and 29CFR1926.62 |
| 0.05 mg/m ³ | ACGIH Threshold Limit Value (TLV), 8-hour TWA Confirmed animal carcinogen with unknown relevance to humans |
| 0.05 mg/m ³ | NIOSH Recommended Exposure Limit (REL), 8-hour TWA Appendix C |
| Engineering Controls | |
| Ventilation Requirements | Ventilation, as described in the <i>Industrial Ventilation Manual</i> 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

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| Boiling Point @ 760 MM HG | ~ 3164° F |
| Melting Point | ~ 621° F |
| Specific Gravity (H ₂ O = 1) | ~ 11.3 |
| Vapor Pressure | N/A |
| Vapor Density (AIR = 1) | N/A |
| Solubility in H ₂ O (% 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

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| 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 |

XI. Toxicological Information

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| Lead 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 |
| Specific Target Organ Toxicity – Acute Exposure | Gastrointestinal (Digestive), Neurological (Nervous System), Ocular (Eyes), Renal (Urinary System or Kidneys) |
| 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) |
| Acute Toxicity to Animals | |
| LC50 | N/A |
| LD50 | N/A |
| Other Information on Acute Toxicity | N/A |
| Skin Corrosion/Irritation | N/A |
| Serious Eye Damage/eye irritation | N/A. Particulate may cause mechanical injury |
| Respiratory or skin sensitization | N/A |
| Germ Cell Mutagenicity | |
| Cytotoxicity analysis | Inhalation – rat |
| Carcinogenicity | |
| IARC | Group 2B – Possibly carcinogenic to humans |
| NTP | Reasonably anticipated to be a human carcinogen |
| OSHA | 1910.1025 |
| Reproductive Toxicity | |
| Suspected Human Reproductive Toxicant | |
| Rat – Inhalation | Effects on Newborn: Biochemical and metabolic |
| Rat – Oral | Effects on Newborn: Behavioral |

XI. Toxicological Information (cont'd)

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| 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 | |
| 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

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| 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. | |
| Toxicity to Fish | Mortality LOEC – Oncorhynchus mykiss (rainbow trout) – 1.19 mg/l – 96 h |
| | LC50 – Micropterus dolomieu (smallmouth bass) – 2.2 mg/l – 96 h |
| | Mortality NOEC – Salvelinus fontinalis (brook trout) – 1.7 mg/l – 10 d. |
| Toxicity to Daphnia | Mortality LOEC – 0.17 mg/l -24 h |
| | Mortality NOEC – 0.099 mg/l – 24 h |
| Toxicity to Algae | 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

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|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 |
| Pennsylvania Right to Know Components | Lead CAS #7439-92-1, Revision Date 1994-04-01 |
| New Jersey Right to Know Components | Lead CAS #7439-92-1, Revision Date 1994-04-01 |
| California Prop. 65 Warning | WARNING! This product contains a chemical known to the State of California to cause cancer. WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. |

XVI. Other Information

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| Date of revision | May 29, 2015 |
| 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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