



CHINATUNGSTEN

ONLINE MANU. & SALES CORP

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Plumbum Metal

Section 01 - Chemical And Product And Company Information

Product Identifier Plumbum Metal

Product Use Used as a construction material for tank linings, piping, and equipment used in the manufacture of sulfuric acid and the refining and processing of petroleum; use in x-ray and atomic radiation shielding; use in the manufacture of tetraethyl lead, paint pigments, organic and inorganic lead compounds, lead shot, lead wire for bullets, ballast, and lead solders; use as a bearing metal or alloy; use in the manufacture of storage batteries, ceramics, plastics, and electronic devices; use in the metallurgy of steel and other metals; and use in the form of lead oxide for batteries.

Section 02 - Composition / Information on Ingredients

Hazardous Ingredients	Lead	99+%
CAS Number	Lead	7439-92-1
Synonym (s)	Lead; Pb; Plumbum; Metallic Lead; Inorganic Lead; ASTM B29; TADANAC Lead, Low-Alpha Lead.	

Section 03 - Hazard Identification

- Inhalation**..... Inhalation of lead dust or fumes may result in headache, nausea, vomiting, abdominal spasms, fatigue, sleep disturbances, weight loss, anemia and leg, arm, and joint pain.
- Skin Contact / Absorption**..... Contact with dust or fume may cause local irritation but would not cause tissue damage.
- Eye Contact**..... Contact with dust or fume may cause local irritation but would not cause tissue damage.
- Ingestion**..... Symptoms due to ingestion of lead dust or fume would be similar to those from inhalation. Other health effects such as metallic taste in the mouth and constipation or bloody diarrhea might also be expected to occur.
- Exposure Limits**..... OSHA PEL: 0.05mg/m³
ACGIH TLV: 0.05mg/m³
NIOSH REL: <0.10mg/m³

Section 04 - First Aid Measures

- Inhalation**..... Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.
- Skin Contact / Absorption**..... Dust: Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
Molten Metal: Flush contact area to solidify and cool but do not attempt to remove encrusted material or clothing. Cover burns and seek medical attention immediately.
- Eye Contact**..... Flush immediately with warm, running water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention.
- Ingestion**..... If victim is conscious and can swallow, dilute stomach contents with 2-4 cupfuls of water or milk. Do not induce vomiting. Seek medical attention and bring a copy of this MSDS. Never give anything by mouth to an unconscious person.
- Additional Information**..... Not available

Section 05 - Fire Fighting

Conditions of Flammability	Massive metal is not flammable or combustible. Finely-divided lead dust or powder is a moderate fire hazard and moderate explosion hazard when dispersed in the air at high concentrations and exposed to heat, flame, or incandescents. Explosions may also occur upon contact with certain incompatible materials (see Stability and Reactivity, Section 10).
Means of Extinction	Use any means of extinction appropriate for surrounding fire conditions such as water spray, carbon dioxide, dry chemical, or foam.
Flash Point	Not Applicable
Auto-ignition Temperature	Not Applicable
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Hazardous Combustible Products.	Highly toxic lead oxide fumes may evolve in fires.
Special Fire Fighting Procedures	Wear NIOSH-approved self-contained breathing apparatus and protective clothing. Fire fighters must be fully trained and wear full protective clothing including an approved, self-contained breathing apparatus which supplies a positive air pressure within a full face-piece mask.
Explosion Hazards	Explosions may also occur upon contact with certain incompatible materials (see Stability and Reactivity, Section 10).

Section 06 - Accidental Release Measures

Leak / Spill	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Prevent material from entering sewers. Molten metal should be allowed to solidify before cleanup. If solid metal, wear gloves, pick up and return to process. If dust, wear recommended personal protective equipment (see Section 8) and use methods which will minimize dust generation (e.g., vacuum solids). Return uncontaminated spilled material to the process if possible. Place contaminated material in suitable labeled containers for recovery or disposal. Treat or dispose of waste material in accordance with all local, regional, and national requirements.
Deactivating Materials	Not available

Section 07 - Handling and Storage

- Handling Procedures**..... Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Persons responding to an accidental release should wear protective clothing, gloves and a respirator (see also Section 8). Close-fitting safety goggles may be necessary in some circumstances to prevent eye contact with dust and fume. Where molten metal is involved, wear heat-resistant gloves and suitable clothing for protection from hot-metal splash as well as a respirator to protect against inhalation of lead fume. Workers should wash and change clothing following cleanup of a lead spill to prevent personal contamination with lead dust.
- Storage Requirements**..... Store in a dry, covered area away from incompatible materials, strong acids and food or feedstuffs. Solid metal suspected of containing moisture should be THOROUGHLY DRIED before being added to a molten bath. Otherwise, entrained moisture could expand explosively and spatter molten metal out of the bath. Always practice good personal hygiene. Refrain from eating, drinking, or smoking in work areas. Thoroughly wash hands before eating, drinking, or smoking in appropriate, designated areas as well as at the end of the workday. No special packaging materials are required.

Section 08 - Personal Protection and Exposure Controls

Protective Equipment

- Eyes**..... Chemical goggles, full-face shield, or a full -face respirator is to be worn at all times, heat resistant if working with hot or molten metal, when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
- Respiratory**..... Where lead dust or fumes are generated and cannot be controlled to within acceptable levels by engineering means, use appropriate NIOSH-approved respiratory protection equipment (a 42CFR84 Class N, R or P-100 particulate filter cartridge). When exposure levels are unknown, a self-contained breathing apparatus which supplies a positive air pressure within a full face-piece mask should be worn.
- Gloves**..... Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Where hot or molten metal is handled, heat resistant gloves should be worn to protect from hot metal splashes. Wash contaminated clothing and dry thoroughly before reuse.
- Clothing**..... Body suits, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
- Footwear**..... Impervious boots of chemically resistant material should be worn.

Engineering Controls

Ventilation Requirements..... Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other..... Not available

Section 09 - Physical and Chemical Properties

Physical State..... Solid

Odor and Appearance..... None, Malleable(bluish-white or silvery-grey metal)

Odor Threshold..... Not applicable

Specific Gravity (Water=1)..... 11.34

Vapor Pressure (mm Hg, 20C)..... 1.3 mm Hg at 970°C(negligible @ 20°C)

Vapor Density (Air=1)..... Not applicable

Evaporation Rate..... Not applicable

Boiling Point..... 1,740°C

Freeze/Melting Point..... 328°C

pH..... Not applicable

Water/Oil Distribution Coefficient... Not applicable

Bulk Density..... Not available

% Volatiles by Volume..... Not available

Solubility in Water..... Insoluble in water

Molecular Formula..... Pb

Molecular Weight..... 207.2

Section 10 - Stability and Reactivity

Stability..... Massive metal is stable under normal temperatures and pressures. Fresh cut or cast lead surfaces tarnish rapidly due to the formation of an insoluble protective layer of basic lead carbonate.

Incompatibility..... Lead reacts vigorously with strong oxidizers, such as hydrogen peroxide and chlorine trifluoride, and active metals, such as sodium and potassium. Powdered lead metal in contact with disodium acetylide, chlorine trifluoride, sodium carbide or fused ammonium nitrate poses a risk of explosion. Solutions of sodium azide in contact with lead metal can form lead azide, which is a detonating compound. A lead-zirconium alloy (10-70% Zr) will ignite when struck with a hammer.

Hazardous Products of Decomposition High temperature operations such as oxy-acetylene cutting, electric arc welding or overheating a molten bath will generate highly toxic lead oxide fume. Lead oxide is highly soluble in body fluids and the particle size of the metal fumes is largely within the respirable size range, which increases the likelihood of inhalation and deposition of the fume within the body.

Polymerization..... Not available

Section 11 - Toxicological Information

Irritancy..... Gradual irritant

Sensitization..... Not available

Chronic/Acute Effects..... Acute:
Skin/Eye: Contact with dust or fume may cause local irritation but would not cause tissue damage.

Inhalation: Exposure to lead dust or fume may cause headache, nausea, vomiting, abdominal spasms, fatigue, sleep disturbances, weight loss, anemia, and pain in legs, arms, and joints. An acute, short-term dose of lead could cause acute encephalopathy with seizures, coma, and death. However, short-term exposure of this magnitude is rare. Kidney damage, as well as anemia, can occur from acute exposure.

Ingestion: Symptoms due to ingestion of lead dust or fume would be similar to those from inhalation. Other health effects such as metallic taste in the mouth and constipation or bloody diarrhea might also be expected to occur.

Chronic:
Prolonged exposure to lead dust and fume may produce many of the symptoms of short-term exposure and may also cause central nervous system damage, gastrointestinal disturbances, anemia, and, rarely, wrist drop. Reduced hemoglobin production has been associated with low lead exposures. Symptoms of central nervous system damage due to moderate lead exposure include fatigue, headaches, tremors and hypertension. Very high lead exposure can result in lead encephalopathy with symptoms of hallucinations, convulsions, and delirium. Kidney dysfunction and possible injury has also been associated with chronic lead poisoning.

Synergistic Materials..... Not available

Animal Toxicity Data..... Not available

Carcinogenicity..... Lead and lead compounds are listed as an A3 Carcinogen (Confirmed Animal Carcinogen with Unknown Relevance to Humans) by the ACGIH and as a Group 2B Carcinogen (possibly carcinogenic to humans) by IARC. The NTP, OSHA and the EU do not currently list lead as a human carcinogen.

Reproductive Toxicity..... Chronic over-exposure to lead has been implicated as a causative agency for the impairment of male and female reproductive capacity. Pregnant women should be protected from excessive exposure.

Teratogenicity..... Teratogenic effects from exposure to lead have been reported in some studies but not in others.

Mutagenicity..... Mutagenic effects from exposure to lead have been reported in some studies but not in others.

Section 12 - Ecological Information

Fish Toxicity..... Lead compounds are not particularly mobile in the aquatic environment but can be toxic to organisms, especially fish, at low concentrations. Water hardness, pH and dissolved organic carbon content are factors which regulate the degree of toxicity. Levels of toxicity are not available.

Biodegradability..... While lead metal is insoluble, its processing or extended exposure in the aquatic and terrestrial environments may lead to the release of lead in bioavailable forms.

Environmental Effects..... Lead metal has limited bioavailability but its compounds can pose a severe threat to the aquatic and terrestrial environments. Contamination of water and soil should be prevented.

Section 13 - Disposal Consideration

Waste Disposal..... Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 - Transportation Information

TDG Classification

Class..... Not applicable

Group..... Not applicable

Other Secure containers (full and/or empty) with suitable hold down devices during shipment.

Section 15 - Regulatory Information

WHMIS Classification.....D2

NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 - Other Information

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / MSDS coordinator

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