

SAFETY DATA SHEET

LEAD



Section 1: Identification

Product Name:	Lead shielding/Lead absorbers	Manufacturing Company Information:
Usage:	shielding and/or absorbing radiation	Nuclear Lead 1007 Alvin Weinberg Drive Oak Ridge, TN 37830
Synonyms:	Lead metal	Distributor Company Information:
Chemical Name:	Lead	Spectrum Techniques, LLC 106 Union Valley Road Oak Ridge, TN 37830
Chemical Formula:	Pb	Company Phone Number: 865-482-9937 Emergency Phone Number: 865-482-9937 Website: www.spectrumtechniques.com

Section 2: Hazard(s) Identification

Classification of the substance or mixture:

**Irritant**

Acute toxicity (oral, dermal, inhalation), category 4

**Health Hazard**Reproductive toxicity, category 1A
Specific target organ toxicity following repeated exposure, category 2**Environmentally Damaging**Acute hazard to aquatic environment, category 1
Chronic hazards to the aquatic environment, category 1

Hazard statements: Harmful if followed, harmful if inhaled, may damage fertility or the unborn child, may cause damage to organs through prolonged or repeated exposure, very toxic to aquatic life.

Section 3: Composition/Information on Ingredients

CAS #	EC Number	Chemical Name	Percent (by weight)
7439-92-1	231-100-4	Lead, Metal	100

Section 4: First-Aid Measures

Eyes:	Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Get medical assistance if irritation persists or if concerned.
Skin:	Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Get medical advice if discomfort or Irritation persists.
Ingestion:	Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Get medical assistance if irritation, discomfort, or vomiting persists.
Inhalation:	Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other Symptoms appear.
Notes to Physician:	Not applicable
Antidote:	Not applicable

Section 5: Fire-Fighting Measures

Fire:	Not applicable	Explosion:	Not considered to be an explosion hazard
Fire Extinguishing Mode:	Not applicable	Flash Point:	Not applicable
Autoignition Temperature:	Not applicable		
Explosion Limits, Lower:	Not available		
Explosion Limits, Upper:	Not available		

Section 6: Accidental Release Measures

General Information:	Not applicable
Spills/Leaks:	Not applicable

Section 7: Handling and Storage

Handling:	Painted – no special handling instructions.
Storage:	Store away from incompatible materials. Protect from freezing and physical damage. Avoid storage near Extreme heat, ignition sources or open flame.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:	Painted - Not applicable
Exposure Limits:	Painted - Not applicable
Personal Protective Equipment	
Eyes:	Painted - Not applicable
Skin:	Painted - Not applicable
Clothing:	Painted - Not applicable

Section 9: Physical and Chemical Properties

Physical State:	Solid	Viscosity:	Not determined
Appearance:	Painted	Boiling Point:	1744 °C
Molecular Weight:	207.19	Melting Point:	327.4 °C
pH:	Not applicable	Critical Temperature:	Not available
Vapor Pressure:	1.33 mm Hg @ 970 °C	Oxidizing Properties:	oxidizer
Vapor Density:	Not available	Solubility:	Insoluble in water
Evaporation Rate:	Not determined	Specific Gravity/Density:	Not determined

Section 10: Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Reactivity:	Nonreactive under normal conditions.
Incompatibilities with other materials:	Strong acids, strong oxidizing agents.
Hazardous Decomposition Products:	Lead oxides
Dangerous Polymerization:	No
Corrosivity:	No

Section 11: Toxicological Information

Routes of Entry:	Ingestion. Inhalation.
Carcinogenicity:	Lead: POSSIBLE (Group 2B, IARC) (EPA); CARCINOGEN (Animal, A3, ACGIH).
Mutagenicity:	Lead : Cytogenetic analysis: 23 µg/m ³ /16 week (Inhalation, Rat); DNA damage: 4.2 ng/l/6 year intermittent (Inhalation, Human). (RTECS).
Teratogenicity:	Lead: ORAL (LoTD): 0.2 ppb (Multigeneration) Specific developmental abnormalities: Urogenital system; 24 µg/kg (Multigeneration) Effects on newborn: Physical (Mouse). (RTECS).
Acute toxicity:	Lead : ORAL acute (LoLD) : 155 mg/kg (Human) ; 0.2 mg/kg (Rat). INHALATION acute (LoTC): 10 µg/m ³ (Human). INTRAPERITONEAL acute (LoLD): 1 g/kg (Rat). (RTECS).
Acute effects:	Conditions and work practices which generate dust or fumes should be avoided or controlled. Possibility of eyes and skin irritation Lead: Absorption is easier by inhalation and the symptoms develop more quickly than by ingestion. Symptoms: Loss of appetite, anemia, insomnia, headache, muscle and joint pain. Toxicity by ingestion, compared to those by inhalation, requires greater concentrations before symptom onset.
Chronic effects:	Possibility of toxic effects to: Liver, lungs, kidneys, blood; Nervous and reproductive systems. Non-controlled repeated or prolonged exposure: Possibility of target organs damages. Lead: Target organs for acute and chronic overexposure (NIOSH 90-117): Blood, gingival tissues; gastrointestinal, central nervous, renal systems. Symptoms of acute overexposure often develop abruptly and resemble those of chronic overexposure: Anaemia, lassitude, weakness, nausea, vomiting, abdominal cramps, constipation, confusion, convulsions, muscular weakness, muscular and joint pains. Target organs (Chronic overexposure): Blood, kidneys, digestive, nervous and reproductive systems.
Toxicity:	Persons with the following pre-existing conditions warrant particular attention: Lead: Anaemia, pregnant or breast feeding women and women of child bearing age. Preferred method for biological monitoring: Blood lead levels (Pb blood) measurement (BEI 30 µg/100 ml); Sampling time: Not critical. Eating, drinking and smoking must be prohibited in areas where this material is handled and processed. Wash hands and face before eating, drinking and smoking.

Section 12: Ecological Information

Ecotoxicity:	Harmful to aquatic life.
Mobility in soil:	Metals: Soluble compounds produced by acidic conditions, becomes mobile in water and in soil.
Persistence and Degradability:	Not applicable
Biodegradation Products:	Not applicable
Biodegradation Products:	Not applicable
Bioaccumulative Potential:	Not applicable

Section 13: Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused Product. It is the responsibility of the waste generator to properly characterize all waste materials according to Applicable regulatory entities. Chemical waste generators must determine whether a discarded chemical is classified as A hazardous waste. Chemical waste generators must also consult local, regional, and national waste regulations. Ensure Complete and accurate classification.

Section 14: Transport Information

UN number: Not regulated
UN proper shipping name: Not regulated
Transport hazard class: Not regulated
Packing group: Not regulated

Section 15: Regulatory Information

Labeling (GHS): Regulation (EC) No 1272/2008 CLP: Not listed.

Labeling (DSD): EU (Regulation 67/548/EEC): Not listed.
EU Consolidated Inventories: Listed
Lead EU Consolidated Inventories: EC Number 231-100-4
Not classified in the Annex I of Directive 67/548/EEC
Not listed in the Annex I of Council Regulation No (EC) 304/2003
Not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93)

Rick phrases (DSD): None

Safety phrases (DSD): None

CEPA DSL (Canada): CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): on the Domestic Substances List (DSL); acceptable for use under the provisions of CEPA.

Regulation (U.S.): CERCLA Section 103 Hazardous substances (40 CFR 302.4); SARA 110 ATSDR CERCLA Priority List: Listed; SARA Section 313, Toxic Chemicals (40 CFR 372.65): Listed.
Lead (RQ): *10 pounds (4.54 kg)
TSCA (EPA, Toxic Substance Control Act) Chemical Inventory (40 CFR710): Listed.
Lead
*No declaration required if the diameter of the piece of solid metal released is equal to or exceeds 100 micrometers (0.004 inches).

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