

MATERIAL SAFETY DATA SHEET**Product Name:** Lead monoxide**CAS No.:** 1317-36-8**Version:** 0**1. Identification**

Product Code : 90439
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2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
LEAD MONOOXIDE	1317-36-8	98-100 %

3. Hazards Identification

Emergency Overview : POISON! DANGER! MAY BE FATAL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. NEUROTOXIN. AFFECTS THE GUM TISSUE, CENTRAL NERVOUS SYSTEM, KIDNEYS, BLOOD AND REPRODUCTIVE SYSTEM.

Health Rating : 3 - Severe (Cancer Causing)
Flammability Rating : 0 - None
Reactivity Rating : 3 - Severe (Oxidizer)
Contact Rating : 2 - Moderate

Potential Health Effects

Inhalation : Inhalation can cause a flu-like illness (metal fume fever). This 24- to 48-hour illness is characterized by chills, fever, aching muscles, dryness in the mouth and throat and headache. May irritate the respiratory tract. May increase the incidence of upper respiratory infections (pneumonia). Absorption of inorganic manganese salts through the lungs is poor but may occur in chronic poisoning. Lead can be absorbed through the respiratory system.

Ingestion : May cause abdominal pain and nausea. Although they are poorly absorbed through the intestines, inorganic manganese salts may produce hypoglycemia and decreased calcium blood levels should absorption occur. The symptoms of lead poisoning include abdominal pain and spasms, nausea, vomiting, headache. Acute poisoning can lead to muscle weakness, "lead line" on the gums, metallic taste, definite loss of appetite, insomnia, dizziness, high lead levels in blood and urine with shock, coma and death in extreme cases.

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- Skin Contact** : Lead and lead compounds may be absorbed through the skin on prolonged exposure; the symptoms of lead poisoning described for ingestion exposure may occur. Contact over short periods may cause local irritation, redness and pain.
- Eye Contact** : Absorption can occur through eye tissues but the more common hazards are local irritation or abrasion.
- Chronic Exposure** : Lead is a cumulative poison and exposure even to small amounts can raise the body's content to toxic levels. The symptoms of chronic exposure are like those of ingestion poisoning; restlessness, irritability, visual disturbances, hypertension and gray facial color may also be noted.
- Aggravation of Pre-existing Conditions** : Persons with pre-existing kidney, nerve or circulatory disorders or with skin or eye problems may be more susceptible to the effects of this substance..

4. First Aid Measures

- General information** : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
- Inhalation** : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion** : Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
- Skin Contact** : Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire fighting measures

- Fire** : Not considered to be a fire hazard.
- Explosion** : Not considered to be an explosion hazard.
- Fire Extinguishing Media** : Use any means suitable for extinguishing surrounding fire. Do not allow water runoff to enter sewers or waterways.
- Special Information** : In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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6. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures** : Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Sweep up and place in a clearly labeled container for chemical waste.
Clean surface thoroughly to remove residual contamination.
- Notification Procedures** : Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

- Precautions for safe handling** : Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. Wear special protective equipment for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
- Conditions for safe storage, including any incompatibilities** : Keep containers tightly closed. Store in cool, dry place. Store in a well-ventilated place.

8. Exposure Controls Personal Protection**Control parameters****Occupational exposure limits**

For lead, metal and inorganic dusts and fumes, as Pb:

OSHA Permissible Exposure Limit (PEL): 0.05 mg/m³ (TWA)

For lead, elemental and inorganic compounds, as Pb:

ACGIH Threshold Limit Value (TLV): 0.05 mg/m³ (TWA), A3 animal carcinogen

ACGIH Biological Exposure Indices (BEI): 30 ug/100ml, notation B (see actual Indices for more information).

For lead, inorganic:

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- Ventilation System** : A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.
- Personal Respirators (NIOSH Approved):** : If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
- Skin Protection** : Wear protective gloves and clean body-covering clothing.
- Eye Protection:** : Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.
- Other** : Clothing contaminated with this material may be an increased fire hazard. Wash contaminated clothing as soon as possible.
- Respiratory protection** : In case of inadequate ventilation use suitable respirator.
- Hygiene measures** : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

9. Physical and Chemical Properties

- Appearance : Red or reddish yellow powder
- Odor : Odorless.
- pH : Strong base
- Melting point/freezing point : 888C (1630F)
- Initial boiling point and boiling range : Not applicable.
- Flash Point : No information found.
- Vapor pressure : 10
- Vapor density : No information found.
- Relative density : 9.53
- Solubility in water : Insoluble in water.

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Solubility (other) : No data available.
 Formula : PbO
 Molecular Weight : 223.21 g/mol

10. Stability and Reactivity

Stability : Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products : Toxic metal fumes may form when heated to decomposition.
Hazardous Polymerization : Will not occur.
Incompatibilities: : Hydrogen peroxide, lithium carbide, chlorine, ethylene, fluorine, sulfides, acetylides, aluminum, strong reducing agents, combustible materials, chemically active metals.
Conditions to Avoid: : Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

Toxicological Data:

Investigated as a tumorigen and mutagen.

Reproductive Toxicity:

Lead and other smelter emissions are human reproductive hazards. (Chemical Council on Environmental Quality; Chemical Hazards to Human Reproduction, 1981).

Carcinogenicity:

For lead and inorganic lead compounds:

EPA / IRIS classification: Group B2 - Probable human carcinogen, sufficient animal evidence.

Cancer Lists

Ingredient	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans	US. National Toxicology Program (NTP) Report on Carcinogens	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Lead Oxide (1317-36-8)	No	No	2B

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12. Ecological Information

Ecotoxicity

Acute hazards to the aquatic environment :

Fish Product : No data available.

Aquatic invertebrates Product : No data available.

Chronic hazards to the aquatic environment :

Fish Product : No data available.

Aquatic invertebrates Product : No data available.

Toxicity to Aquatic Plants Product: : No data available.

Persistence and degradability

Biodegradation Product : No data available.

BOD/COD ratio Product : No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product : No data available on bioaccumulation.

Product

Partition coefficient n-octanol / water (log Kow) Product : No data available.

Mobility in soil : No data available.

Other adverse effects : No data available.

13. Disposal consideration

Disposal instructions : Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated packaging : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT			Not regulated.		
IMDG			Not regulated.		
IATA			Not regulated.		

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This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. Other Information**Issue Date :**01/08/2014**Version : 0**

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