

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Lead monoxide
CAS number	1317-36-8
Synonyms	Lead oxide, lead protoxide

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC


SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Carcinogenicity	Category 2
Reproductive Toxicity	Category 1A
Effects on or via lactation	
Specific target organ toxicity - (repeated exposure)	Category 1
Target Organs - Blood, Central nervous system (CNS), Peripheral Nervous System (PNS), Kidney.	

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	Suspected of causing cancer. May damage the unborn child. Suspected of damaging fertility. May cause harm to breast-fed children. Causes damage to organs through prolonged or repeated exposure. Harmful if swallowed or if inhaled.
Precautionary statements	
Prevention	Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact during pregnancy/while nursing. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.
Response	IF exposed or concerned: Get medical attention/advice.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Ingestion	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
Storage	Store locked up.
Disposal	Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Very toxic to aquatic life with long lasting effects.
WARNING. Cancer - <https://www.p65warnings.ca.gov/>.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Lead monoxide	-	1317-36-8	<= 100%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If swallowed	Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media No information available

Unsuitable extinguishing media No information available

5.2 Specific hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. Do not allow run-off from fire-fighting to enter drains or water sources.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

5.4 Further information

Flash Point No information available

Autoignition Temperature No information available

Explosion limits

Upper	No data available
Lower	No data available

Sensitivity to Mechanical Impact

No information available

Sensitivity to Static Discharge

No information available

NFPA

Health	Flammability	Instability	Physical hazards
2	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

6.2 Environmental precautions

Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible materials.

Incompatibilities

Strong oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

No information available

US. ACGIH Threshold Limit Values

Component	Type	Value
Lead monoxide	TWA	0.05 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Lead monoxide	IDLH	100 mg/m ³
	TWA	0.050 mg/m ³

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tight sealing safety goggles. Face protection shield.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritating or other symptoms are experienced.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State
Appearance
Odor

Solid
Yellow
Odorless

Odor Threshold	No information available
pH	9.9 @ 20°C 100 g/L
Melting Point/Range	886 °C / 1626.8 °F
Boiling Point/Range	1470 °C / 2678 °F
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No information available
Lower	No information available
Vapor Pressure	10 mmHg @ 1085 °C
Vapor Density	No information available
Density	No information available
Solubility	Slightly soluble in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	O Pb
Molecular Weight	223.19
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products. Excess heat.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors, lead oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Lead monoxide	> 10000 mg/kg (rat)	>2000 mg/kg (rat)	> 5.05 mg/L (rat) 4h

Skin corrosion/irritation

No information available

Serious eye damage/eye irritation

No information available

Respiratory or skin sensitization

No information available

Germ cell mutagenicity

No information available

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Lead monoxide	1317-36-8	Group 2A	Reasonably Anticipated	A3	X	Not listed

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

Blood, Central nervous system (CNS), Peripheral nervous system (PNS), Kidney.

Reproductive toxicity

Possible risk of impaired fertility.

Chronic effects

No information available

11.2 Additional Information

No information available

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Lead monoxide	LC50	Pimephales promelas	0.3 mg/L 96h
	EC50	Water Flea	0.13 mg/L 48h

12.2 Persistence and degradability

May persist based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Is not likely mobile in the environment due to its low water solubility. Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

The toxicological properties have not been fully investigated.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

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 hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN-No	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S
Hazard Class	9
Packing Group	III

IMDG

UN-No	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S
Hazard Class	9
Packing Group	III

IATA

UN-No	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S
Hazard Class	9
Packing Group	III

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed

SARA 304 Emergency release notification
Not listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Listed, 30 µg/m³ Action Level. 50 µg/m³ TWA.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

SARA 313 (TRI reporting)
Listed, Weight: 100%, Threshold Values %: 0. RT = 100 lb.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not listed.

Safe Drinking Water Act
Not listed.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Not listed

US state regulations

US. Massachusetts RTK - Substance List
Listed

US. New Jersey Worker and Community Right-to-Know Act
Listed

US. Pennsylvania Worker and Community Right-to-Know Law
Listed

California Proposition 65

Listed, Carcinogen.

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.