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Material Safety Data Sheet

LEAD MONOXIDE

Section 1 - Product Identification

Product Name : Lead Monoxide
CAS No. : 1317-36-8
Synonym : Lead Oxide (Litharge); Lead (II) oxide; lead oxide yellow; litharge; massicot
Company Identification : Tradeasia International Pte. Limited
Address :
133 Cecil Street # 12-03 Keck Seng Tower, Singapore
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Section 2 – Composition/Information on Ingredients

Substances

Name of substance	Lead Monoxide
Identifiers	
CAS No	1317-36-8
Molecular formula	PbO
Molar Mass	223.2 g/mol

Section 3 – Hazardous Ingredients & Occupational Exposure Limits

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Carcinogenicity, Oral (Category 2), H351
Reproductive toxicity (Category 1A), H360Df
Effects on or via lactation, H362
Specific target organ toxicity - repeated exposure, Inhalation (Category 1), Central nervous system, Kidney, Blood, H372
Specific target organ toxicity - repeated exposure, Oral (Category 1), Central nervous system, Kidney, Blood, H372
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

Labelling according Regulation (EC) No 1272/2008

Pictogram 

Signal word - Danger

Hazard statement(s)

H302 + H332 Harmful if swallowed or if inhaled
H351 Suspected of causing cancer if swallowed.
H360Df May damage the unborn child. Suspected of damaging fertility.
H362 May cause harm to breast-fed children.
H372 Causes damage to organs (Central nervous system, Kidney, Blood) through prolonged or repeated exposure if swallowed. H372 Causes damage to organs (Central nervous system, Kidney, Blood) through prolonged or repeated exposure if inhaled.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P263 Avoid contact during pregnancy/ while nursing.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard Statements none

Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 4 – First-Aid Measures

General Advice. Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye Contact. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin Contact. Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation. Remove to fresh air. 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. If not breathing, give artificial respiration.

Ingestion. Do NOT induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and effects. No information available.

Notes to Physician. Treat symptomatically

Section 5 – Employee Protection

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. Can produce toxic lead fumes at elevated temperatures and also react with oxidizing materials

Section 6 – Accidental Release Measures

Personal Precautions

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

Environmental Precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

Methods for Containment and Clean Up

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

Section 7 – Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Areas in which exposure to lead metal or lead compounds may occur should be identified by signs or appropriate means, and access to the area should be limited to authorized persons. 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.

Section 8 – Exposure Controls/Personal Protection (later)

Exposure guidelines:
Component: Lead monoxide
ACGIH TLV: TWA: 0.05 mg/m3
OSHA PEL: Not available
NIOSH IDLH: DLH: 100 mg/m3 TWA: 0.050 mg/m3
Mexico OEL (TWA): TWA: 0.05 mg/m3

Engineering Measures: 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 irritation or other symptoms are experienced.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice

Section 9 – Physical and Chemical Properties

Physical State - Solid
Appearance - Yellow
Odor - Odorless
Odor Threshold - No information available
pH No information - available
Melting Point/Range - 886 °C / 1626.8 °F
Boiling Point/Range - 1470 °C / 2678 °F
Flash Point - No information available
Evaporation - Rate Not applicable
Flammability (solid,gas) - No information available
Flammability or explosive limits
Upper - No data available
Lower - No data available
Vapor Pressure - 10 mmHg @ 1085 °C
Vapor Density - Not applicable

Specific Gravity - No information available
Solubility - Slightly soluble in water
Partition coefficient; n-octanol/water - No data available
Autoignition Temperature - No information available
Decomposition Temperature - No information available
Viscosity - Not applicable

Other information
No data available.

Section 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.

Section 11 – Toxicological Information

Acute toxicity
LD50 Dermal - Rat - male and female - > 2,000 mg/kg(Lead monoxide)
(OECD Test Guideline 402)

Carcinogenicity - IARC: 2A - Group 2A: Probably carcinogenic to humans (Lead monoxide)
Reproductive toxicity - May damage the unborn child. Suspected of damaging fertility
Specific target organ toxicity - single exposure - No data available
Specific target organ toxicity - repeated exposure - May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard - No data available

Potential health effects
Inhalation: Lead can be absorbed through the respiratory system. Local irritation of bronchia and lungs can occur and, in cases of acute exposure, symptoms such as metallic taste, chest and abdominal pain, and increased lead blood levels may follow. See also Ingestion.
Ingestion: POISON! 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.
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.

Additional Information - RTECS: OG1750000

Section 12 – Ecological Information

Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 0.298 mg/l - 96 h(Lead monoxide)

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 0.132 mg/l - 48 h(Lead monoxide)

Persistence and degradability: No data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects: Very toxic to aquatic life with long lasting effects.

Section 13 – Disposal Considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

Contaminated packaging

Dispose of as unused product.

Section 14 – Transport Information

DOTS

UN-No: UN3077

Proper Shipping: Name Environmentally hazardous substances, solid, n.o.s.

Technical Name: Lead monoxide

Hazard Class: 9

Packing Group: III

IMDG

Proper Shipping: Name Environmentally hazardous substances, solid, n.o.s.

Technical Name: Lead monoxide

Hazard Class: 9

Packing Group: III

IATA

Proper Shipping: Name Environmentally hazardous substances, solid, n.o.s.

Technical Name: Lead monoxide

Hazard Class: 9

Packing Group: III

Further Information

No data available

Section 15 – Regulatory Information

1. US Federal regulations

Component: Lead monoxide
CAS. No: 1317-36-8
Weight%: >95
SARA 313 – Threhold Values %: 0.1
CWA – Toxic Pollutants: Listed
CAA – HAPS Data: Listed

2. International regulations

CANADA

No data available

EU-Regulations

No REACH Annex XVII restrictions
Lead monoxide (lead oxide) is on the REACH Candidate List
LEAD MONOXIDE AR is not on the REACH Annex XIV List

3. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 3, strongly hazardous to water (KBwS-Beschluss; WGK No 3649)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

4. US State regulations

No data avaialble

Section 16 - Additional Information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product