LEAD MONOXIDE CAS No 1317-36-8	MATERIAL SAFETY DATA SHEET SDS/MSDS

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

1.1 Product identifiers

Product name : Lead Monoxide

CAS-No. : 1317-36-8

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet

Company : Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi -110002
INDIA

Telephone : +91 11 49404040
Email : care@cdhfinechemical.com.

1.4 Emergency telephone number

Emergency Phone : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

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

2.3 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 3: Composition/information on ingredients

3.1 Substances

Formula	:	OPb
Molecular weight	:	223.20 g/mol
CAS-No.	:	1317-36-8
EC-No.	:	215-267-0
Index-No.	:	082-001-00-6

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
Lead monoxide Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No. EC-No. Index-No.	1317-36-8 215-267-0 082-001-00-6	Acute Tox. 4; Carc. 2; Repr. 1A; Lact. ; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H332, H351, H360Df, H362, H373, H373, H400, H410 Concentration limits: >= 2.5 %: Repr. 2, H361f; >= 0.5 %: STOT RE 2, H373; M-Factor - Aquatic Acute: 1	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Lead oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.Avoid exposure - obtain special instructions before use.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: powder Colour: light yellow
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	9.9 at 100 g/l at 20 °C
e)	Melting point/freezing point	Melting point/range: 886 °C - lit.
f)	Initial boiling point and boiling range	> 600 °C at ca.1013 hPa - OECD Test Guideline 103
g)	Flash point	Not applicable
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available

j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	9.530 g/cm3
n)	Water solubility	0.0702 g/l at 20 °C - OECD Test Guideline 105 - slightly soluble
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Hydrogen peroxide, Strong oxidizing agents, acids

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Lead oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
No data availableLead monoxide
LD50 Dermal - Rat - male and female - > 2,000 mg/kg(Lead monoxide)
(OECD Test Guideline 402)

Skin corrosion/irritation
Skin - Rabbit(Lead monoxide)
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit(Lead monoxide)
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitisation
Maximisation Test - Guinea pig(Lead monoxide)
Result: Did not cause sensitisation on laboratory animals.
(OECD Test Guideline 406)

Germ cell mutagenicity
No data available(Lead monoxide)

Carcinogenicity

IARC: 2A - Group 2A: Probably carcinogenic to humans (Lead monoxide)

Reproductive toxicity

No data available(Lead monoxide)

Specific target organ toxicity - single exposure
No data available(Lead monoxide)

Specific target organ toxicity - repeated exposure
Ingestion - Causes damage to organs through prolonged or repeated exposure. - Central nervous system, Kidney, Blood
inhalation (dust/mist/fume) - Causes damage to organs through prolonged or repeated exposure. - Kidney, Central nervous system, Blood

Aspiration hazard
No data available(Lead monoxide)

Additional Information
RTECS: OG1750000

Lead salts have been reported to cross the placenta and to induce embryo- and feto- mortality. They also have teratogenic effect in some animal species. No teratogenic effects have been reported with exposure to organometallic lead compounds. Adverse effects of lead on human reproduction, embryonic and fetal development, and postnatal (e.g., mental) development have been reported. Excessive exposure can affect blood, nervous, and digestive systems. The synthesis of hemoglobin is inhibited and results in anemia. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. Additional symptoms of overexposure include: joint and muscle pain, weakness of the extensor muscles (frequently the hand and wrist), headache, dizziness, abdominal pain, diarrhea, constipation, nausea, vomiting, blue line on the gums, insomnia, and metallic taste. High body levels produce increased cerebrospinal pressure, brain damage, and stupor leading to coma and often death., Anorexia., Vomiting, Convulsions, Nausea, Headache, Weakness, anemia, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Lead monoxide)

SECTION 12: Ecological information

12.1 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)

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available(Lead monoxide)

12.5 Results of 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.

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

14.1 UN number

ADR/RID: 2291	IMDG: 2291	IATA: 2291

14.2 UN proper shipping name

ADR/RID:	LEAD COMPOUND, SOLUBLE, N.O.S. (Lead monoxide)
IMDG:	LEAD COMPOUND, SOLUBLE, N.O.S. (Lead monoxide)
IATA:	Lead compound, soluble, n.o.s. (Lead monoxide)

14.3 Transport hazard class(es)

ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1

14.4 Packaging group

ADR/RID: III	IMDG: III	IATA: III

14.5 Environmental hazards

ADR/RID: no	IMDG Marine pollutant: yes	IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H302 + H332	Harmful if swallowed or if inhaled
H332	Harmful if inhaled.
H351	Suspected of causing cancer if swallowed.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H361f	Suspected of damaging fertility.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs (/$/*_ORG_REP_INHA/$/) through prolonged or repeated exposure if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.