

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/15/2024

Reviewed on 05/15/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Lead Oxide, Yellow (Litharge), Laboratory Grade Powder
- **Article number:** L3399
- **CAS Number:**  
1317-36-8
- **EC number:**  
215-267-0
- **Index number:**  
082-001-00-6
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Aqua Solutions, Inc.  
6913 Highway 225  
DEER PARK, TX 77536  
USA  
800-256-2586
- **Information department:**  
Technical Coordinator  
Sherman Nelson [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)  
Technical Coordinator  
Sherman Nelson [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carcinogenicity 2

Toxic to Reproduction 1A

Specific Target Organ Toxicity - Repeated Exposure 2

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Toxicity - Oral 4

Acute Toxicity - Inhalation 4

H302 Harmful if swallowed.

H332 Harmful if inhaled.

- **Label elements**

- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07



GHS08

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/15/2024

Reviewed on 05/15/2024

**Trade name: Lead Oxide, Yellow (Litharge), Laboratory Grade Powder**

(Contd. of page 1)

- **Signal word** *Danger*

- **Hazard statements**

*Harmful if swallowed or if inhaled.*

*Suspected of causing cancer.*

*May damage fertility or the unborn child.*

*May cause damage to organs through prolonged or repeated exposure.*

- **Precautionary statements**

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Do not breathe dust/fume/gas/mist/vapors/spray.*

*Wash thoroughly after handling.*

*Do not eat, drink or smoke when using this product.*

*Use only outdoors or in a well-ventilated area.*

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

*If swallowed: Call a poison center/doctor if you feel unwell.*

*Rinse mouth.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*IF exposed or concerned: Get medical advice/attention.*

*Get medical advice/attention if you feel unwell.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



*Health = 3*

*Fire = 0*

*Reactivity = 0*

- **HMIS-ratings (scale 0 - 4)**



*Health = \*2*

*Fire = 0*

*Reactivity = 0*

- **Other hazards**

- **Results of PBT and vPvB assessment**

· **PBT:** *Not applicable.*

· **vPvB:** *Not applicable.*

## 3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

*CAS: 1317-36-8 Lead Oxide, Yellow (Litharge)*

- **Identification number(s)**

· **EC number:** *215-267-0*

· **Index number:** *082-001-00-6*

US

(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS

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**Trade name: Lead Oxide, Yellow (Litharge), Laboratory Grade Powder**

(Contd. of page 2)

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 0.16 mg/m<sup>3</sup>
- **PAC-2:** 130 mg/m<sup>3</sup>
- **PAC-3:** 750 mg/m<sup>3</sup>

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/15/2024

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**Trade name: Lead Oxide, Yellow (Litharge), Laboratory Grade Powder**

(Contd. of page 3)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## \* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**CAS: 1317-36-8 Lead Oxide, Yellow (Litharge)**

PEL	Long-term value: 0.05 mg/m <sup>3</sup> as Pb; See 29 CFR 1910.1025
REL	Long-term value: 0.05* mg/m <sup>3</sup> as Pb; *8-hr TWA; See Pocket Guide App. C
TLV	Long-term value: 0.05 mg/m <sup>3</sup> as Pb; A3, BEI

· **Ingredients with biological limit values:**

**CAS: 1317-36-8 Lead Oxide, Yellow (Litharge)**

BEI	200 µg/100 ml LD50 Intraperitoneal: blood Time: not critical LD50: Lead
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· **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/15/2024

Reviewed on 05/15/2024

**Trade name: Lead Oxide, Yellow (Litharge), Laboratory Grade Powder**

(Contd. of page 4)

· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· <b>Form:</b>	Powder
· <b>Color:</b>	Yellow
· <b>Odor:</b>	Odorless
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not applicable.· **Change in condition**

· <b>Melting point/Melting range:</b>	886 °C (1,626.8 °F)
· <b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Product is not flammable.· **Decomposition temperature:** Not determined.· **Ignition temperature:** Not determined.· **Danger of explosion:** Product does not present an explosion hazard.· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapor pressure:** Not applicable.· **Density at 20 °C (68 °F):** 9.53 g/cm<sup>3</sup> (79.52785 lbs/gal)· **Bulk density:** 3,100 kg/m<sup>3</sup>· **Relative density:** Not determined.· **Vapor density:** Not applicable.· **Evaporation rate:** Not applicable.· **Solubility in / Miscibility with**· **Water:** Not determined.· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**· **Dynamic:** Not applicable.· **Kinematic:** Not applicable.· **Other information:** No further relevant information available.

US

(Contd. on page 6)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/15/2024

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**Trade name: Lead Oxide, Yellow (Litharge), Laboratory Grade Powder**

(Contd. of page 5)

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	500 mg/kg (ATE)
Inhalative	LC50/4h	1.5 mg/l (ATE)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** 2A
- **NTP (National Toxicology Program)** R
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- **Water hazard class 3 (Assessment by list):** extremely hazardous for water
- **Do not allow product to reach ground water, water course or sewage system, even in small quantities.**
- **Danger to drinking water if even extremely small quantities leak into the ground.**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

US

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/15/2024

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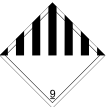

**Trade name: Lead Oxide, Yellow (Litharge), Laboratory Grade Powder**

(Contd. of page 6)

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>	UN2291
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	<p>Lead compounds, soluble, n.o.s. (Lead Oxide, Yellow (Litharge))  <b>LEAD COMPOUND, SOLUBLE, N.O.S. (Lead Oxide, Yellow (Litharge)), MARINE POLLUTANT</b>  <b>LEAD COMPOUND, SOLUBLE, N.O.S. (Lead Oxide, Yellow (Litharge))</b></p>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, IATA</b></li> </ul>	<div style="text-align: center;">  </div> <p>9 Miscellaneous dangerous substances and articles</p>
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	9
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul>	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	9
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>	III
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	<p>Environmentally hazardous substance, solid; Marine Pollutant            No            Symbol (fish and tree)</p>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Segregation groups</b></li> <li>· <b>Stowage Category</b></li> </ul>	<p>Warning: Miscellaneous dangerous substances and articles            60            F-A,S-A            (SGG7) Heavy metals and their salts (including their organometallic compounds), (SGG9) lead and its compounds            A</p>
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	Not applicable.

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

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(Contd. of page 7)

**· Transport/Additional information:**

**· DOT**

**· Quantity limitations**

On passenger aircraft/rail: 100 kg

On cargo aircraft only: 200 kg

**· IMDG**

**· Limited quantities (LQ)**

5 kg

**· Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

**· UN "Model Regulation":**

UN 2291 LEAD COMPOUND, SOLUBLE, N.O.S. (LEAD OXIDE, YELLOW (LITHARGE)), 9, III

## 15 Regulatory information

**· Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

**· Sara**

**· Section 355 (extremely hazardous substances):** Substance is not listed.

**· Section 313 (Specific toxic chemical listings):** Substance is listed.

**· TSCA (Toxic Substances Control Act):** ACTIVE

**· Hazardous Air Pollutants** Substance is listed.

**· Proposition 65**

**· Chemicals known to cause cancer:** Substance is listed.

**· Chemicals known to cause reproductive toxicity for females:** Substance is not listed.

**· Chemicals known to cause reproductive toxicity for males:** Substance is not listed.

**· Chemicals known to cause developmental toxicity:** Substance is not listed.

**· Carcinogenic categories**

**· EPA (Environmental Protection Agency) B2**

**· TLV (Threshold Limit Value) A3**

**· NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.

**· GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

**· Hazard pictograms**



GHS07    GHS08

**· Signal word** Danger

**· Hazard statements**

Harmful if swallowed or if inhaled.

Suspected of causing cancer.

May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure.

**· Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

(Contd. on page 9)



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(Contd. of page 8)

Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 If swallowed: Call a poison center/doctor if you feel unwell.  
 Rinse mouth.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 IF exposed or concerned: Get medical advice/attention.  
 Get medical advice/attention if you feel unwell.  
 Store locked up.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.  
 · **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.

· **Contact:**

Date of Preparation / Last Revision:

· **Date of preparation / last revision**

Revision 1.2, 05/15/2024: Reviewed SDS for accuracy. MH/STN  
 05/15/2024

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Carcinogenicity 2: Carcinogenicity – Category 2

Toxic to Reproduction 1A: Reproductive toxicity – Category 1A

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2

· **\* Data compared to the previous version altered.**

US