

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: August 04, 2020

1 Identification

- **Product identifier**
- **Trade name:** Lead Pb
- **Product code:** PB-5014-S
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
- Acute Tox. 4 H302 Harmful if swallowed.
- Carc. 1A H350 May cause cancer. Route of exposure: Inhalation.
- Repr. 1A H360-H362 May damage fertility or the unborn child. May cause harm to breast-fed children.
- STOT RE 1 H372 Causes damage to the central nervous system, the kidneys and the nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.

· Label elements

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms:



GHS07 GHS08

· Signal word: Danger

· Hazard statements:

H302 Harmful if swallowed.
H350 May cause cancer. Route of exposure: Inhalation.

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H360-H362 May damage fertility or the unborn child. May cause harm to breast-fed children.

H372 Causes damage to the central nervous system, the kidneys and the nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.

Precautionary statements:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P263 Avoid contact during pregnancy/while nursing.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P330 Rinse mouth.

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

P314 Get medical advice/attention if you feel unwell.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Components:

7439-92-1	lead (mass metal form) Carc. 2, H351; Repr. 1A, H360-H362; STOT RE 1, H372	80-100%
7440-36-0	antimony Carc. 2, H351; STOT RE 2, H373	1-10%
7440-38-2	arsenic Acute Tox. 3, H301; Acute Tox. 3, H331 Carc. 1A, H350	0.1-2.0%

Additional information:

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

For the wording of the listed Hazard Statements, refer to section 16.

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.

Seek immediate medical advice.

Provide oxygen treatment if affected person has difficulty breathing.

If experiencing respiratory symptoms: Call a poison center/doctor.

After skin contact:

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Wash with soap and water.

After contact with the molten product, cool rapidly with cold water.

In case of thermal burns, seek medical help.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for 15 minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Mechanical irritation to eyes and skin.

Gastric or intestinal disorders when ingested.

· **Danger:**

Harmful if swallowed.

May damage fertility or the unborn child. May cause harm to breast-fed children.

Causes damage to the central nervous system, the kidneys and the nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.

May cause cancer. Route of exposure: Inhalation.

· **Indication of any immediate medical attention and special treatment needed:**

Medical supervision for at least 48 hours.

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No relevant information available.

· **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

· **Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

· **Methods and material for containment and cleaning up**

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**

See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
Prevent formation of dust.
Use only in well ventilated areas.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizers, strong acids, strong bases.
- **Further information about storage conditions:** Keep containers tightly sealed.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· Control parameters

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

7439-92-1 lead (mass metal form)

PEL (USA)	Long-term value: 0.05* mg/m ³ *see 29 CFR 1910.1025
REL (USA)	Long-term value: 0.05* mg/m ³ *8-hr TWA ;See PocketGuide App.C
TLV (USA)	Long-term value: 0.05* mg/m ³ *and inorganic compounds, as Pb; BEI
EL (Canada)	Long-term value: 0.05 mg/m ³ R; IARC 2B
EV (Canada)	Long-term value: 0.05 mg/m ³ as Pb, Skin (organic compounds)
LMPE (Mexico)	Long-term value: 0.05 mg/m ³ A3, IBE

7440-36-0 antimony

PEL (USA)	Long-term value: 0.5 mg/m ³ as Sb
REL (USA)	Long-term value: 0.5 mg/m ³ as Sb
TLV (USA)	Long-term value: 0.5 mg/m ³ as Sb
EL (Canada)	Long-term value: 0.5 mg/m ³ as Sb

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EV (Canada)	Long-term value: 0.5 mg/m ³
LMPE (Mexico)	Long-term value: 0.5 mg/m ³ como Sb

7440-38-2 arsenic

PEL (USA)	Long-term value: 0.5* 0.01** mg/m ³ as As; *organic**inorg. compds.; 29 CFR 1910.1018
REL (USA)	Ceiling limit value: 0.002 mg/m ³ as As; 15min; See Pocket Guide App. A
TLV (USA)	Long-term value: 0.01 mg/m ³ as As; BEI
EL (Canada)	Long-term value: 0.01 mg/m ³ as As; ACGIH A1, IARC1
EV (Canada)	Short-term value: 0.05 mg/m ³ Long-term value: 0.01 mg/m ³ as As
LMPE (Mexico)	Long-term value: 0.01 mg/m ³ A1, IBE; como As

· Ingredients with biological limit values:

7439-92-1 lead (mass metal form)

BEI (USA)	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead
	10 µg/100 ml Medium: blood Time: not critical Parameter: Lead (women of child bearing potential)

7440-38-2 arsenic

BEI (USA)	35 µg As/L Medium: urine Time: end of workweek Parameter: Inorganic arsenic plus methylated metabolites (background)
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· Exposure controls

· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.

· Engineering controls: Provide adequate ventilation.

· Breathing equipment: Not required under normal conditions of use.

· Protection of hands:

Wear gloves for protection against thermal and mechanical hazards according to OSHA and NIOSH rules.

· Material of gloves

A recommendation for a suitable glove material is not available. Testing will be required to determine the suitability of any potential glove materials.

· Eye protection:

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Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**
No relevant information available.
- **Risk management measures** No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Solid material

Color: Light blue

· Odor: Odorless

· Odor threshold: Not determined.

· pH-value: Not applicable.

· Melting point/Melting range: 327.4 °C (621.3 °F)

· Boiling point/Boiling range: 1740 °C (3164 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not determined.

· Auto-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· Oxidizing properties: Non-oxidizing.

· Vapor pressure at 970 °C (1778 °F): 1.3 mm Hg

· Density at 20 °C (68 °F): 11.3 g/cm³ (94.3 lbs/gal)

· Relative density: Not determined.

· Vapor density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.
Insoluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity

Dynamic: Not applicable.

Kinematic: Not applicable.

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Other information

No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products** Leadoxide vapor

11 Toxicological information

Information on toxicological effects

- **Acute toxicity:** Harmful if swallowed.

LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	>1920-2216 mg/kg (rat)
Inhalative	LC50/4h	25-500 mg/l

7439-92-1 lead (mass metal form)

Oral	LD50	>2000 mg/kg (rat)
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7440-36-0 antimony

Oral	LD50	7000 mg/kg (rat)
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7440-38-2 arsenic

Oral	LD50	763 mg/kg (rat)
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Primary irritant effect:

- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.

IARC (International Agency for Research on Cancer):

7439-92-1	lead (mass metal form)	2B
7440-38-2	arsenic	1

NTP (National Toxicology Program):

7439-92-1	lead (mass metal form)	R
7440-38-2	arsenic	K

OSHA-Ca (Occupational Safety & Health Administration):

7440-38-2	arsenic
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Probable route(s) of exposure:

Ingestion.
Inhalation.

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Eye contact.

Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):** No relevant information available.

· **Repeated dose toxicity:** Danger of serious damage to health by prolonged exposure.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** May cause cancer. Route of exposure: Inhalation.

· **Reproductive toxicity:** May damage fertility or the unborn child. May cause harm to breast-fed children.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:**

Causes damage to the central nervous system, the kidneys and the nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity** No relevant information available.

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** May be accumulated in organism

· **Mobility in soil:** No relevant information available.

· **Additional ecological information**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary.

· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, ADR/RID/ADN, IMDG, IATA**

Not regulated.

· **UN proper shipping name**

· **DOT, ADR/RID/ADN, IMDG, IATA**

Not regulated.

· **Transport hazard class(es)**

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· DOT, ADR/RID/ADN, IMDG, IATA	
· Class	Not regulated.
· Packing group	
· DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· Environmental hazards	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

All ingredients are listed.

· TSCA (Toxic Substances Control Act)

All ingredients are listed or exempt.

· Proposition 65 (California)

· Chemicals known to cause cancer:

7439-92-1 | lead (mass metal form)

7440-38-2 | arsenic

· Chemicals known to cause developmental toxicity for females:

7439-92-1 | lead (mass metal form)

· Chemicals known to cause developmental toxicity for males:

7439-92-1 | lead (mass metal form)

· Chemicals known to cause developmental toxicity:

7439-92-1 | lead (mass metal form)

· EPA (Environmental Protection Agency):

7439-92-1 | lead (mass metal form)

B2

7440-38-2 | arsenic

A

· IARC (International Agency for Research on Cancer):

7439-92-1 | lead (mass metal form)

2B

7440-38-2 | arsenic

1

· Canadian Domestic Substances List (DSL):

All ingredients listed on DSL or NDSL.

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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.

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
OSHA: Occupational Safety & Health Administration
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Carc. 1A: Carcinogenicity – Category 1A
Carc. 2: Carcinogenicity – Category 2
Repr. 1A: Reproductive toxicity – Category 1A
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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