

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/05/2024

Reviewed on 05/15/2024

1 Identification

- **Product identifier**
- **Trade name:** Lead Nitrate, Laboratory Grade Crystal
- **Article number:** L3318
- **CAS Number:**
10099-74-8
- **EC number:**
233-245-9
- **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
- **Emergency telephone number:**
Chemtec: 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

- **Signal word** *Danger*

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- **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)**



The substance possesses oxidizing properties.

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



- **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: 10099-74-8 Lead Nitrate
- **Identification number(s)**
- **EC number:** 233-245-9
- **Index number:** 082-001-00-6

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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:** 0.24 mg/m³
- **PAC-2:** 180 mg/m³
- **PAC-3:** 1,100 mg/m³

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.

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- **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: 10099-74-8 Lead Nitrate

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

· **Ingredients with biological limit values:**

CAS: 10099-74-8 Lead Nitrate

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.

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· 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:

Form: Crystalline

Color: White

· Odor: Odorless

· Odor threshold: Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range: 470 °C (878 °F)

Boiling point/Boiling range: 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:

Lower: Not determined.

Upper: Not determined.

· Vapor pressure: Not applicable.

· Density at 20 °C (68 °F): 4.535 g/cm³ (37.84458 lbs/gal)· Bulk density: 1,850 kg/m³

· Relative density: Not determined.

· Vapor density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with

Water at 20 °C (68 °F): 525 g/l

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

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· Other information: No further relevant information available.

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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.

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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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA 	<p style="text-align: center;">UN1469</p>
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG · IATA 	<p style="text-align: center;">Lead nitrate LEAD NITRATE, MARINE POLLUTANT LEAD NITRATE</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="display: flex; align-items: center; justify-content: center; gap: 10px;">   </div> <p style="text-align: center;">5.1 Oxidizing substances</p>
<ul style="list-style-type: none"> · Class · Label 	<p style="text-align: center;">5.1, 6.1</p>
<ul style="list-style-type: none"> · IMDG 	<div style="display: flex; align-items: center; justify-content: center; gap: 10px;">    </div> <p style="text-align: center;">5.1 Oxidizing substances</p>
<ul style="list-style-type: none"> · Class · Label 	<p style="text-align: center;">5.1/6.1</p>
<ul style="list-style-type: none"> · IATA 	<div style="display: flex; align-items: center; justify-content: center; gap: 10px;">   </div> <p style="text-align: center;">5.1 Oxidizing substances</p>
<ul style="list-style-type: none"> · Class · Label 	<p style="text-align: center;">5.1 (6.1)</p>
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	<p style="text-align: center;">II</p>
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	<p style="text-align: center;">Environmentally hazardous substance, solid; Marine Pollutant No Symbol (fish and tree)</p>
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): 56 	<p style="text-align: center;">Warning: Oxidizing substances</p>

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· EMS Number:	F-A,S-Q
· Segregation groups	(SGG7) Heavy metals and their salts (including their organometallic compounds), (SGG9) lead and its compounds
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 kg On cargo aircraft only: 25 kg
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1469 LEAD NITRATE, 5.1 (6.1), II

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.

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· **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.
- **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, 06/05/2024: Reviewed SDS for accuracy. MH/STN
06/05/2024
- **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