

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/16/2021

Reviewed on 03/21/2014

## 1 Identification

- **Product identifier**
- **Trade name:** Lead Nitrate Solution
- **Article number:** R310406
- **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)
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 2      H351 Suspected of causing cancer.  
 Repr. 1A    H360 May damage fertility or the unborn child.  
 STOT RE 2   H373 May cause damage to organs through prolonged or repeated exposure.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
Lead Nitrate
- **Hazard statements**  
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.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF exposed or concerned: Get medical advice/attention.  
Get medical advice/attention if you feel unwell.

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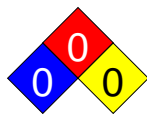
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Solution*

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Store locked up.

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

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = \*0

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:** *Mixtures*· **Description:** *Mixture of the substances listed below with nonhazardous additions.*· **Dangerous components:**

CAS: 10099-74-8	Lead Nitrate	1.5%
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· **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	98.5%
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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; consult doctor in case of complaints.· **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:** If symptoms persist consult 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**

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

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- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- **Environmental precautions:**
  - Dilute with plenty of water.
  - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 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:**

CAS: 10099-74-8	Lead Nitrate	0.24 mg/m <sup>3</sup>
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- **PAC-2:**

CAS: 10099-74-8	Lead Nitrate	180 mg/m <sup>3</sup>
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- **PAC-3:**

CAS: 10099-74-8	Lead Nitrate	1,100 mg/m <sup>3</sup>
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## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Open and handle receptacle with care.
  - Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - Requirements to be met by storerooms and receptacles:** No special requirements.
  - 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 item 7.

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· **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 <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; BEI

· **Ingredients with biological limit values:**

**CAS: 10099-74-8 Lead Nitrate**

BEI	30 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **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.

· **Eye protection:**



Tightly sealed goggles

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· **Body protection:** *Protective work clothing*

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### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** *Liquid*

**Color:** *Colorless*

· **Odor:** *Odorless*

· **Odor threshold:** *Not determined.*

· **pH-value:** *Not determined.*

· **Change in condition**

**Melting point/Melting range:** *0 °C (32 °F)*

**Boiling point/Boiling range:** *100 °C (212 °F)*

· **Flash point:** *Not applicable.*

· **Flammability (solid, gaseous):** *Not applicable.*

· **Decomposition temperature:** *Not determined.*

· **Auto igniting:** *Product is not selfigniting.*

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

· **Explosion limits:**

**Lower:** *Not determined.*

**Upper:** *Not determined.*

· **Vapor pressure at 20 °C (68 °F):** *23 hPa (17.3 mm Hg)*

· **Density at 20 °C (68 °F):** *1.05303 g/cm<sup>3</sup> (8.78754 lbs/gal)*

· **Relative density** *Not determined.*

· **Vapor density** *Not determined.*

· **Evaporation rate** *Not determined.*

· **Solubility in / Miscibility with**

**Water:** *Fully miscible.*

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

· **Viscosity:**

**Dynamic:** *Not determined.*

**Kinematic:** *Not determined.*

· **Solvent content:**

**Water:** *98.5 %*

**VOC content:** *0.00 %  
0.0 g/l / 0.00 lb/gal*

**Solids content:** *1.5 %*

· **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:**

**ATE (Acute Toxicity Estimate)**

Oral	LD50	33,333 mg/kg
Inhalative	LC50/4h	100 mg/l

**CAS: 10099-74-8 Lead Nitrate**

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:**  
The product shows the following dangers according to internally approved calculation methods for preparations:

- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

CAS: 10099-74-8	Lead Nitrate	2A
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· **NTP (National Toxicology Program)**

CAS: 10099-74-8	Lead Nitrate	R
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is 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 2 (Self-assessment): hazardous for water

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

*Danger to drinking water if even 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.

### 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

· **UN-Number**

· **DOT, IMDG, IATA**

UN3287

· **UN proper shipping name**

· **DOT**

Toxic liquid, inorganic, n.o.s. (Lead nitrate)

· **IMDG, IATA**

TOXIC LIQUID, INORGANIC, N.O.S. (LEAD NITRATE)

· **Transport hazard class(es)**

· **DOT**



· **Class**

6.1 Toxic substances

· **Label**

6.1

· **IMDG, IATA**



· **Class**

6.1 Toxic substances

· **Label**

6.1

· **Packing group**

· **DOT, IMDG, IATA**

III

· **Environmental hazards:**

· **Marine pollutant:**

No

· **Special precautions for user**

Warning: Toxic substances

· **EMS Number:**

F-A,S-A

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· <b>Segregation groups</b>	Heavy metals and their salts (including their organometallic compounds)
· <b>Stowage Category</b>	A
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 3287 TOXIC LIQUID, INORGANIC, N.O.S. (LEAD NITRATE), 6.1, 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):

None of the ingredients is listed.

### · Section 313 (Specific toxic chemical listings):

CAS: 10099-74-8 | Lead Nitrate

### · TSCA (Toxic Substances Control Act):

Water

ACTIVE

Lead Nitrate

ACTIVE

### · Hazardous Air Pollutants

CAS: 10099-74-8 | Lead Nitrate

### · Proposition 65

#### · Chemicals known to cause cancer:

CAS: 10099-74-8 | Lead Nitrate

#### · Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

#### · Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

#### · Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

CAS: 10099-74-8 | *Lead Nitrate*

B2

· **TLV (Threshold Limit Value)**

CAS: 10099-74-8 | *Lead Nitrate*

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

*Lead Nitrate*

· **Hazard statements**

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

*Creation Date for SDS 12-03-2014 STN**06/16/2021 / -*

· **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**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)*

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VOC: Volatile Organic Compounds (USA, EU)  
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  
Carc. 2: Carcinogenicity – Category 2  
Repr. 1A: Reproductive toxicity – Category 1A  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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