

# Safety Data Sheet

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

Revision: July 20, 2020

## 1 Identification

- **Product identifier**
- **Trade name:** Lead Nitrate Solution, 0.1M
- **Product code:** S25858
- **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:**  
Fisher Science Education  
6771 Silver Crest Road,  
Nazareth, PA 18064  
(800) 955-1177
- **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**
- Eye Dam. 1 H318 Causes serious eye damage.
- Skin Sens. 1 H317 May cause an allergic skin reaction.
- Carc. 1B H350 May cause cancer.
- Repr. 1A H360 May damage fertility or the unborn child.
- STOT RE 1 H372 Causes 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:



GHS05 GHS07 GHS08

- **Signal word:** Danger
- **Hazard statements:**  
H318 Causes serious eye damage.  
H317 May cause an allergic skin reaction.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.

(Cont'd. on page 2)

# Safety Data Sheet

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

Revision: July 20, 2020

**Trade name: Lead Nitrate Solution, 0.1M**

(Cont'd. of page 1)

H372 Causes damage to organs through prolonged or repeated exposure.

· **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 mist/vapors/spray.  
 P264 Wash thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P302+P352 If on skin: Wash with plenty of soap and water.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a poison center/doctor.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P363 Wash contaminated clothing before reuse.  
 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:**

10099-74-8	lead dinitrate  Ox. Sol. 2, H272  Carc. 1B, H350; Repr. 1A, H360; STOT RE 1, H372  Eye Dam. 1, H318  Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1B, H317	<4%
7732-18-5	Water	>96%

· **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:**

(Cont'd. on page 3)

# Safety Data Sheet

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

Revision: July 20, 2020

**Trade name: Lead Nitrate Solution, 0.1M**

(Cont'd. of page 2)

Immediately wash with water and soap and rinse thoroughly.

If skin irritation or rash occurs: Get medical advice/attention.

· **After eye contact:**

Protect unharmed eye.

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:**

Coughing

Allergic reactions

Strong irritant with the danger of severe eye injury.

Methaemoglobinaemia

· **Danger:**

May cause sensitization by skin contact.

Causes serious eye damage.

Causes damage to organs through prolonged or repeated exposure.

May cause cancer.

May damage fertility or the unborn child.

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

Medical supervision for at least 48 hours.

Treat skin and mucous membrane with antihistamine and corticoid preparations.

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.

Substance/product is oxidizing when dry.

· **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.

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

Ensure adequate ventilation.

· **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**

(Cont'd. on page 4)

# Safety Data Sheet

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

Revision: July 20, 2020

**Trade name: Lead Nitrate Solution, 0.1M**

(Cont'd. of page 3)

Substance/product is oxidizing when dry.  
Wipe up small spills with paper towel and discard.  
For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard.  
Send for recovery or disposal in suitable receptacles.

· **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.

## 7 Handling and storage

· **Handling**

· **Precautions for safe handling:**

Prevent formation of aerosols.  
Avoid splashes or spray in enclosed areas.  
Use only in well ventilated areas.

· **Information about protection against explosions and fires:**

Keep respiratory protective device available.  
Substance/product is oxidizing when dry.

· **Conditions for safe storage, including any incompatibilities**

· **Requirements to be met by storerooms and receptacles:**

Avoid storage near extreme heat.  
Store only in the original receptacle.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.  
Do not store together with alkalis (caustic solutions).

· **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:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

**10099-74-8 lead dinitrate**

PEL (USA)	Long-term value: 0.05 mg/m <sup>3</sup> as Pb; See 29 CFR 1910.1025
REL (USA)	Long-term value: 0.05* mg/m <sup>3</sup> as Pb;*8-hr TWA; See Pocket Guide App. C
TLV (USA)	Long-term value: 0.05 mg/m <sup>3</sup> as Pb; BEI
EL (Canada)	Long-term value: 0.05 mg/m <sup>3</sup> as Pb; IARC 2A, R
EV (Canada)	Long-term value: 0.05 mg/m <sup>3</sup> as Pb, Skin (organic compounds)

(Cont'd. on page 5)

# Safety Data Sheet

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

Revision: July 20, 2020

**Trade name: Lead Nitrate Solution, 0.1M**

(Cont'd. of page 4)

LMPE (Mexico)	Long-term value: 0.05 mg/m <sup>3</sup> A3, IBE; como Pb
---------------	---

· **Ingredients with biological limit values:**

**10099-74-8 lead dinitrate**

BEI (USA)	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead
-----------	--

· **Exposure controls**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Engineering controls:** Provide adequate ventilation.

· **Breathing equipment:** Use suitable respiratory protective device when high concentrations are present.

· **Protection of hands:**



Protective gloves

· **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:**



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:** Liquid

· **Color:** According to product specification

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

(Cont'd. on page 6)

# Safety Data Sheet

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

Revision: July 20, 2020

**Trade name: Lead Nitrate Solution, 0.1M**

(Cont'd. of page 5)

· <b>pH-value:</b>	Not determined.
· <b>Melting point/Melting range:</b>	Not determined.
· <b>Boiling point/Boiling range:</b>	100 °C (212 °F)
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Auto-ignition temperature:</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Oxidizing properties:</b>	Non-oxidizing.
· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17.3 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	>1.14 g/cm <sup>3</sup> (>9.51 lbs/gal)
· <b>Relative density:</b>	Not determined.
· <b>Vapor density:</b>	Not determined.
· <b>Evaporation rate:</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity</b>	
Dynamic:	Not determined.
Kinematic:	Not determined.
· <b>Other information</b>	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**  
Reacts with alkali (lyes).  
Reacts with certain metals.  
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials**  
Alkalis  
Metals.
- **Hazardous decomposition products**  
Leadoxide vapor  
Nitrogen oxides

(Cont'd. on page 7)

# Safety Data Sheet

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

Revision: July 20, 2020

Trade name: Lead Nitrate Solution, 0.1M

(Cont'd. of page 6)

## 11 Toxicological information

### Information on toxicological effects

- **Acute toxicity:** Based on available data, the classification criteria are not met.

### LD/LC50 values that are relevant for classification:

#### ATE (Acute Toxicity Estimate)

Oral	LD50	>12500 mg/kg
Inhalative	LC50/4h	>37.5 mg/l

### Primary irritant effect:

- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.

### IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

### NTP (National Toxicology Program):

10099-74-8 | lead dinitrate

R

### OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

### Probable route(s) of exposure:

Ingestion.  
Inhalation.  
Eye contact.  
Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):** Causes serious eye damage.
- **Repeated dose toxicity:**  
Repeated exposure may result in skin sensitivity.  
Danger of very serious irreversible effects.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** May cause cancer.
- **Reproductive toxicity:** May damage fertility or the unborn child.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Causes damage to organs through prolonged or repeated exposure.
- **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.

### Ecotoxicological effects:

· **Remark:** Toxic for fish

### Additional ecological information

· **General notes:**

(Cont'd. on page 8)

# Safety Data Sheet

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

Revision: July 20, 2020

**Trade name: Lead Nitrate Solution, 0.1M**

(Cont'd. of page 7)

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

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**

UN3082

Classification as a MARINE POLLUTANT is based on MARPOL and DOT rules. Labeling as a MARINE POLLUTANT is not required for non-bulk single package shipments by motor vehicle, rail car or aircraft. Bulk packaging consists of a maximum capacity of greater than 450L (119 gallons) for a liquid and a maximum net mass greater than 400kg (882 pounds) for a solid.

- **ADR/RID/ADN, IMDG, IATA**

UN3082

- **UN proper shipping name**

- **DOT**

Environmentally hazardous substance, liquid, n.o.s. (Lead nitrate)

- **ADR/RID/ADN, IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LEAD NITRATE)

- **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LEAD NITRATE), MARINE POLLUTANT

- **Transport hazard class(es)**

- **DOT, IMDG, IATA**



- **Class**

9

- **Label**

9

(Cont'd. on page 9)



# Safety Data Sheet

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

Revision: July 20, 2020

Trade name: Lead Nitrate Solution, 0.1M

(Cont'd. of page 8)

· **ADR/RID/ADN**



· **Class** 9 (M6)  
 · **Label** 9

· **Packing group**  
 · **DOT, ADR/RID/ADN, IMDG, IATA** III

· **Environmental hazards** Product contains environmentally hazardous substances: lead dinitrate  
 · **Marine pollutant:** Yes (DOT)  
 Symbol (fish and tree)

· **Special precautions for user** Warning: Miscellaneous dangerous substances and articles  
 · **Hazard identification number (Kemler code):** 90  
 · **EMS Number:** F-A,S-F  
 · **Segregation groups** Heavy metals and their salts (including their organometallic compounds), lead and its compounds

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:** Not regulated when carried in single or combination packaging containing a net quantity of 5 L or less for liquids or 5 kg or less for solids per the following:  
 ADR: SP 375  
 IMDG: 2.10.2.7  
 IATA: special provision A197

## 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):**

10099-74-8 | lead dinitrate

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

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

(Cont'd. on page 10)

# Safety Data Sheet

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

Revision: July 20, 2020

**Trade name: Lead Nitrate Solution, 0.1M**

(Cont'd. of page 9)

10099-74-8	lead dinitrate
------------	----------------

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

10099-74-8	lead dinitrate	B2
------------	----------------	----

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

10099-74-8	lead dinitrate	2A
------------	----------------	----

· **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

## 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

Ox. Sol. 2: Oxidizing solids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Carc. 1B: Carcinogenicity – Category 1B

Repr. 1A: Reproductive toxicity – Category 1A

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

· **Sources**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))

Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sor\\_internet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do))

Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://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., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

ChemTel

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

(Cont'd. on page 11)

# Safety Data Sheet

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

Revision: July 20, 2020

**Trade name: Lead Nitrate Solution, 0.1M**

(Cont'd. of page 10)

Website: [www.chemtel.com](http://www.chemtel.com)