

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Lead (II) nitrate solution

Supplier : Sentury Reagents, Inc.
2515 Commerce Dr.
Rock Hill, SC 29730

Telephone : 803-327-6880

Fax : 803-327-3872

Emergency Phone # : PERS: 800-633-8253
International: 011-801-629-0667
Account #10613

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Oxidizer, Carcinogen, Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Teratogen

GHS Classification

Oxidizing liquids (Category 2)
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 4)
Reproductive toxicity (Category 1A)
Specific target organ toxicity - repeated exposure (Category 2)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H272 : May intensify fire; oxidizer.
H302 + H332 : Harmful if swallowed or if inhaled.
H360 : May damage fertility or the unborn child.
H373 : May cause damage to organs through prolonged or repeated exposure.
H410 : Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201 : Obtain special instructions before use.
P220 : Keep/Store away from clothing/ combustible materials.
P273 : Avoid release to the environment.
P308 + P313 : IF exposed or concerned: Get medical advice/ attention.
P501 : Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 2
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 2
Personal protection: F

NFPA Rating

Health hazard: 2
Fire: 0
Reactivity Hazard: 2
Special hazard: OX

Potential Health Effects

Inhalation	Toxic if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : N_2O_6Pb
Molecular Weight : 331.21 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Lead nitrate			
10099-74-8	233-245-9	082-001-00-6	36.8
Water			
7732-18-5	231-791-2		63.2

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx), Lead oxides

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Remarks	See 1910.1025			
Lead nitrate	10099-74-8	TWA	0.075 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	0.05 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Confirmed animal carcinogen with unknown relevance to humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.			
		TWA	0.05 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Central Nervous System impairment Hematologic effects Peripheral Nervous System impairment Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure. varies			
		TWA	0.05 mg/m ³	USA. NIOSH Recommended Exposure Limits
	See Appendix C			

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	clear

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: 470 °C (878 °F) - dec.
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Auto ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Specific gravity	1.44
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Solubility in other solvents	Ethanol 0.4 g/l Methanol 13.3 g/l
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Materials to avoid

Strong reducing agents, Organic materials, Powdered metals

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx), Lead oxides

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

Inhalation LC50

Dermal LD50

no data available

Other information on acute toxicity

LD50 Intravenous - rat - 93 mg/kg

LD50 Intraperitoneal - mouse - 74 mg/kg

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: 2B - Group 2B: Possibly carcinogenic to humans Re-evaluation of inorganic lead compounds, IARC Monograph (Vol. 87) (February 2004) (Lead nitrate)

2A - Group 2A: Probably carcinogenic to humans (Lead nitrate)

IARC: 2B - Group 2B: Possibly carcinogenic to humans Re-evaluation of inorganic lead compounds, IARC Monograph (Vol. 87) (February 2004) (Lead nitrate)

2A - Group 2A: Probably carcinogenic to humans (Lead nitrate)

NTP: Reasonably anticipated to be a human carcinogen (Lead nitrate)

Reasonably anticipated to be a human carcinogen The reference note has been added by TD based on the background information of the NTP. (Lead nitrate)

OSHA: 1910.1025 (Lead nitrate)

Reproductive toxicity

no data available

Teratogenicity

no data available

Developmental Toxicity - rat

Specific Developmental Abnormalities: Central nervous system.

Known human reproductive toxicant

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

no data available

Potential health effects

Inhalation

Toxic if inhaled. May cause respiratory tract irritation.

Ingestion

Toxic if swallowed.

Skin

May be harmful if absorbed through skin. May cause skin irritation.

Eyes

May cause eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Lead salts have been reported to cross the placenta and to induce embryo- and feto- mortality.

Synergistic effects

no data available

Additional Information

RTECS: OG2100000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 1.5 mg/l - 96.0 h

LC50 - Cyprinus carpio (Carp) - 0.4 - 1.3 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - 0.5 - 2.0 mg/l - 48 h

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1469 Class: 5.1 (6.1) Packing group: II

Proper shipping name: Lead nitrate solution

Reportable Quantity (RQ): 10 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 1469 Class: 5.1 (6.1) Packing group: II EMS-No: F-A, S-Q

Proper shipping name: LEAD NITRATE SOLUTION

Marine pollutant: No

IATA

UN number: 1469 Class: 5.1 (6.1) Packing group: II

Proper shipping name: Lead nitrate solution

15. REGULATORY INFORMATION**OSHA Hazards**

Oxidizer, Carcinogen, Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Teratogen

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Lead nitrate	10099-74-8	1993-04-24

SARA 311/312 Hazards

Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Lead nitrate	10099-74-8	1993-04-24
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Pennsylvania Right To Know Components

Lead nitrate	10099-74-8	1993-04-24
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New Jersey Right To Know Components

Lead nitrate	10099-74-8	1993-04-24
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California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

Lead nitrate	10099-74-8	1992-10-01
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16. OTHER INFORMATION

Further information

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sentury Reagents, Inc shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoicing or packing slip for additional terms and conditions of sale.

