

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Lead(II) nitrate

Product Number : 228621

Brand : Sigma-Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +18003255832

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2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Oxidizer, Carcinogen, Target Organ Effect, Toxic by inhalation.

GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H272 : May intensify fire; oxidiser.
H302 + H332 : Harmful if swallowed or if inhaled.
H361 : Suspected of damaging fertility or the unborn child.
H400 : Very toxic to aquatic life.

Precautionary statement(s)

P220 : Keep/Store away from clothing/ combustible materials.
P273 : Avoid release to the environment.
P281 : Use personal protective equipment as required.

HMIS Classification

Health hazard: 3
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 2

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 : May be harmful 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	-

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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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 fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

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

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

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 combustible material.

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	Update	Basis
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Lead nitrate	10099-74-8	TWA	0.075 mg/m3	1989-03-01	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Remarks	Sec. 1910.1025 Lead.				
		TWA	0.05 mg/m3	1995-05-23	USA. ACGIH Threshold Limit Values (TLV)
	<p>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.</p> <p>See Notice of Intended Changes (NIC)</p> <p>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)</p> <p>Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL.</p> <p>Substance identified by other sources as a suspected or confirmed human carcinogen.</p> <p>1995-1996 Adoption.</p>				
		TWA	0.05 mg/m3	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
	<p>Central Nervous System impairment Hematologic effects Peripheral Nervous System impairment</p> <p>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</p>				
	<p>See 1910.1025</p> <p>Correction: CAS number [7439-92-1] has been deleted</p>				

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.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form solid
 Colour white

Safety data

pH no data available
 Melting point 470 °C (878 °F) - dec.
 Boiling point no data available

Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	4.53 g/cm ³
Water solubility	500 g/l
Solubility	0.4 g/l Ethanol 13.3 g/l Methanol

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions. Stable under recommended storage conditions.

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 (NO_x), Lead oxides

11. TOXICOLOGICAL INFORMATION

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

Suspected human reproductive toxicant

Developmental Toxicity - rat

Specific Developmental Abnormalities: Central nervous system.

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	Toxic if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful 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.

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 organisms, may cause long-term adverse effects in the aquatic environment.
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13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. 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
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
Marine pollutant: Marine pollutant

IATA

UN-Number: 1469 Class: 5.1 (6.1) Packing group: II
Proper shipping name: Lead nitrate

15. REGULATORY INFORMATION

OSHA Hazards

Oxidizer, Carcinogen, Target Organ Effect, Toxic by inhalation.

DSL Status

All components of this product are on the Canadian DSL list.

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

	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

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

Pennsylvania Right To Know Components

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

New Jersey Right To Know Components

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

California Prop. 65 Components

	CAS-No.	Revision Date
WARNING! This product contains a chemical known to the State of California to cause cancer. Lead nitrate	10099-74-8	1992-10-01

16. OTHER INFORMATION

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. 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. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.