

**LEAD(II) NITRATE**

Safety Data Sheet PBL6360

Date of issue: 04/01/2016

Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form	: Substance
Physical state	: Solid
Substance name	: LEAD(II) NITRATE
Product code	: PBL6360
Formula	: N2O6Pb
Synonyms	: PLUMBOUS NITRATE
Chemical family	: METAL COMPOUND

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/mixture	: Chemical intermediate For research and industrial use only
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**1.3. Details of the supplier of the safety data sheet****GELEST, INC.**11 East Steel Road  
Morrisville, PA 19067**USA**

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)**1.4. Emergency telephone number**

Emergency number	: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)
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**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS-US classification**

Ox. Sol. 2	H272
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:dust,mist)	H332
Carc. 1B	H350
Repr. 1B	H360
STOT SE 3	H335
STOT RE 2	H373
Aquatic Acute 2	H401

Full text of H statements : see section 16

**2.2. Label elements****GHS-US labeling**

Hazard pictograms (GHS-US)



GHS03

GHS07

GHS08

Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H272 - May intensify fire; oxidizer  
 H302+H332 - Harmful if swallowed or if inhaled  
 H335 - May cause respiratory irritation  
 H350 - May cause cancer  
 H360 - May damage fertility or the unborn child  
 H373 - May cause damage to organs through prolonged or repeated exposure  
 H401 - Toxic to aquatic life

Precautionary statements (GHS-US)

: P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P308+P313 - If exposed or concerned: Get medical advice/attention  
 P210 - Keep away from heat, open flames, sparks. - No smoking  
 P220 - Keep/Store away from combustible materials  
 P221 - Take any precaution to avoid mixing with combustibles  
 P260 - Do not breathe dust  
 P264 - Wash hands thoroughly after handling

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P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P330 - Rinse mouth  
P301+P312 - If swallowed: Call a doctor if you feel unwell  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P314 - Get medical advice/attention if you feel unwell  
P370+P378 - In case of fire: Use appropriate media to extinguish  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/container to licensed waste disposal facility

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

No data available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substance

Substance type : Mono-constituent  
Name : LEAD(II) NITRATE  
CAS No : 10099-74-8  
EC no : 233-245-9

Name	Product identifier	%	GHS-US classification
Lead nitrate	(CAS No) 10099-74-8	95 - 100	Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Carc. 1B, H350 Repr. 1B, H360 STOT SE 3, H335 STOT RE 2, H373 Aquatic Acute 2, H401

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact : Wash with plenty of soap and water. Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : May cause cancer. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Symptoms/injuries after inhalation : Harmful if inhaled. May cause respiratory irritation.

Symptoms/injuries after skin contact : May cause skin irritation.

Symptoms/injuries after eye contact : May cause eye irritation.

Symptoms/injuries after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

Chronic symptoms : Exposure to dust or fumes of lead compounds is known to cause toxic effects. Lead is a cumulative poison.

### 4.3. Indication of any immediate medical attention and special treatment needed

Physician note: Diagnostic mobilization of lead with calcium EDTA may be useful in questionable cases.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Product not flammable. Use fire-fighting measures that suit the surrounding fire.

Unsuitable extinguishing media : None known.

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### 5.2. Special hazards arising from the substance or mixture

Fire hazard : May intensify fire; oxidizer. This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. If this product is involved in a fire, the following can be released: nitrogen oxides (NOx) and lead oxide fumes.

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.  
Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters. Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.  
Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust. Avoid dust formation. Use only outdoors or in a well-ventilated area.  
Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store locked up.  
Incompatible materials : Oxidizable materials.  
Storage area : Store in a well-ventilated place. Store away from heat.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Lead nitrate (10099-74-8)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> as lead
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> as lead

### 8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.  
Personal protective equipment : Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.  
Hand protection : Neoprene or nitrile rubber gloves.  
Eye protection : Chemical goggles. Contact lenses should not be worn.  
Skin and body protection : Wear suitable protective clothing.  
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Molecular mass	: 331.2 g/mol
Color	: White.
Odor	: No data available
Odor threshold	: No data available
Refractive index	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 470 °C decomposes
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: May intensify fire; oxidizer
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 4.53
VOC content	: < 1 %
Solubility	: Water: 540 g/l @ 20°C Organic solvent:13.7 g/l methanol @ 22°C
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Stable.

#### 10.3. Possibility of hazardous reactions

At high temperatures >300°C can liberate lead fumes. Can reduce the ignition temperature of flammable liquids.

#### 10.4. Conditions to avoid

elevated temperature.

#### 10.5. Incompatible materials

Oxidizable materials.

#### 10.6. Hazardous decomposition products

Lead nitrate. Metallic lead fumes.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Inhalation:dust,mist: Harmful if inhaled.

LEAD(II) NITRATE (10099-74-8)	
ATE US (oral)	500.000 mg/kg body weight
ATE US (dust, mist)	1.500 mg/l/4h
Toxicity information	RTECS Number: OG2100000

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Lead nitrate (10099-74-8)	
LD50 intravenous mouse	74 mg/kg
LD50 intravenous rat	93 mg/kg
LDLo oral guinea pig	500 mg/kg
ATE US (oral)	500.000 mg/kg body weight
ATE US (gases)	4500.000 ppmV/4h
ATE US (vapors)	11.000 mg/l/4h
ATE US (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer.

Lead nitrate (10099-74-8)	
IARC group	2A - Probably carcinogenic to humans
Reproductive toxicity	: May damage fertility or the unborn child. Teratogenicity: Developmental Toxicity - rat Specific Developmental Abnormalities: Central nervous system. Known human reproductive toxicant
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Harmful if inhaled. May cause respiratory irritation.
Symptoms/injuries after skin contact	: May cause skin irritation.
Symptoms/injuries after eye contact	: May cause eye irritation.
Symptoms/injuries after ingestion	: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: Exposure to dust or fumes of lead compounds is known to cause toxic effects. Lead is a cumulative poison.
Reason for classification	: Expert judgment

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life.

Lead nitrate (10099-74-8)	
LC50 fish 1	0.4 - 1.3 mg/l (Cyprinus carpio)
EC50 Daphnia 1	0.5 - 2 mg/l Daphnia magna (Water flea)
LC50 fish 2	1.5 mg/l (Oncorhynchus mykiss)

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other adverse effects	: This substance may be hazardous to the environment.
Effect on ozone layer	: No additional information available
Effect on the global warming	: No known ecological damage caused by this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials	: Avoid release to the environment.

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### SECTION 14: Transport information

#### 14.1. UN number

UN-No.(DOT) : 1469  
DOT NA no. UN1469

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Lead nitrate  
Class (DOT) : 5.1 - Class 5.1 - Oxidizer 49 CFR 173.128  
Hazard labels (DOT) : 5.1 - Oxidizer  
6.1 - Poison



Packing group (DOT) : II - Medium Danger  
DOT Packaging Exceptions (49 CFR 173.xxx) : 152  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 212  
DOT Packaging Bulk (49 CFR 173.xxx) : 242

#### 14.3. Additional information

Emergency Response Guide (ERG) Number : 141  
Other information : No supplementary information available.

#### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 kg  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 25 kg

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Lead nitrate (10099-74-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

##### Lead nitrate (10099-74-8)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on the Canadian DSL (Domestic Substances List)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Poisonous and Deleterious Substances Control Law  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on the Canadian IDL (Ingredient Disclosure List)  
Listed on INSQ (Mexican national Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)

#### 15.3. US State regulations

##### LEAD(II) NITRATE(10099-74-8)

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

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Lead nitrate (10099-74-8)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Lead nitrate (10099-74-8)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

Abbreviations and acronyms : Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development.

Full text of H-phrases:

H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H332	Harmful if inhaled
H335	May cause respiratory irritation
H350	May cause cancer
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H401	Toxic to aquatic life

#### HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given  
Flammability : 0 Minimal Hazard  
Physical : 1 Slight Hazard

Prepared by safety and environmental affairs.

Date of issue: 04/01/2016 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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