



## 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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

#### GELEST, INC.

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 Morrisville, PA 19067

#### USA

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[info@gelestde.com](mailto:info@gelestde.com) - [www.gelestde.com](http://www.gelestde.com)

### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Oxidising Solids, Category 2	H272
Acute toxicity (oral), Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 4	H332
Carcinogenicity, Category 1B	H350
Reproductive toxicity, Category 1B	H360
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335
Specific target organ toxicity — Repeated exposure, Category 2	H373
Full text of H statements : see section 16	

#### Adverse physicochemical, human health and environmental effects

No additional information available

# LEAD(II) NITRATE

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### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H272 - May intensify fire; oxidiser.  
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.

Precautionary statements (CLP) :

P202 - Do not handle until all safety precautions have been read and understood.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P220 - Keep/Store away from combustible materials.  
P264 - Wash hands thoroughly after handling.  
P308+P313 - IF exposed or concerned: Get medical advice/attention.

### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lead nitrate substance listed as REACH Candidate (Lead dinitrate)	(CAS-No.) 10099-74-8 (EC-No.) 233-245-9	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

Full text of H-statements: see section 16

### 3.2. Mixtures

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 person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

First-aid measures after skin contact : Wash with plenty of 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/doctor.

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

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

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Symptoms/effects after inhalation	: Harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects 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.

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

Fire hazard	: May intensify fire; oxidiser. 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.
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### 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".
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### 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)

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

## 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
Colour	: White.
Odour	: No data available
Odour threshold	: No data available
Refractive index	: No additional information available
pH	: No data available
Relative evaporation rate (butylacetate=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; oxidiser.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 4.53
% Volatiles	: < 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
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

# LEAD(II) NITRATE

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### 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 : Harmful if swallowed. Harmful if inhaled.

LEAD(II) NITRATE (10099-74-8)	
ATE CLP (oral)	500 mg/kg bodyweight
ATE CLP (dust,mist)	1.5 mg/l/4h
Toxicity information	RTECS Number: OG2100000

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 CLP (oral)	500 mg/kg bodyweight
ATE CLP (gases)	4500 ppmv/4h
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	1.5 mg/l/4h

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitisation : 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

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

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

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

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

Symptoms/effects 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.  
Acute aquatic toxicity : Not classified  
Chronic aquatic toxicity : Not classified

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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. Results of PBT and vPvB assessment

LEAD(II) NITRATE (10099-74-8)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
Component	
Lead nitrate (10099-74-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

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

## SECTION 14: Transport information

### 14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : 1469  
UN-No. (IMDG) : 1469  
UN-No. (IATA) : 1469  
UN-No. (ADN) : 1469  
UN-No. (RID) : 1469

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : LEAD NITRATE  
Proper Shipping Name (IMDG) : LEAD NITRATE  
Proper Shipping Name (IATA) : Lead nitrate  
Proper Shipping Name (ADN) : LEAD NITRATE  
Proper Shipping Name (RID) : LEAD NITRATE  
Transport document description (ADR) : UN 1469 LEAD NITRATE, 5.1 (6.1), II, (E)  
Transport document description (IMDG) : UN 1469 LEAD NITRATE, 5.1 (6.1), II, MARINE POLLUTANT  
Transport document description (IATA) : UN 1469 Lead nitrate, 5.1, II  
Transport document description (ADN) : UN 1469 LEAD NITRATE, 5.1 (6.1), II  
Transport document description (RID) : UN 1469 LEAD NITRATE, 5.1 (6.1), II

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 5.1 (6.1)  
Danger labels (ADR) : 5.1, 6.1



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### IMDG

Transport hazard class(es) (IMDG) : 5.1 (6.1)

Danger labels (IMDG) : 5.1, 6.1



### IATA

Transport hazard class(es) (IATA) : 5.1 (6.1)

Hazard labels (IATA) : 5.1, 6.1



### ADN

Transport hazard class(es) (ADN) : 5.1 (6.1)

Danger labels (ADN) : 5.1, 6.1



### RID

Transport hazard class(es) (RID) : 5.1 (6.1)

Danger labels (RID) : 5.1, 6.1



### 14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : Yes (IMDG only)

Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : OT2

Limited quantities (ADR) : 1kg

Excepted quantities (ADR) : E2

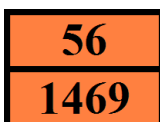
Packing instructions (ADR) : P002, IBC08

Mixed packing provisions (ADR) : MP2

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Portable tank and bulk container instructions (ADR) : T3  
Portable tank and bulk container special provisions (ADR) : TP33  
Tank code (ADR) : SGAN  
Tank special provisions (ADR) : TU3  
Vehicle for tank carriage : AT  
Transport category (ADR) : 2  
Special provisions for carriage - Packages (ADR) : V11  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV24, CV28  
Hazard identification number (Kemler No.) : 56  
Orange plates :



Tunnel restriction code (ADR) : E  
EAC code : 1Y

### - Transport by sea

Limited quantities (IMDG) : 1 kg  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P002  
IBC packing instructions (IMDG) : IBC08  
IBC special provisions (IMDG) : B2, B4  
Tank instructions (IMDG) : T3, BK2  
Tank special provisions (IMDG) : TP33  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-Q  
Stowage category (IMDG) : A  
Properties and observations (IMDG) : White crystals. Soluble in water. Mixtures with combustible material are readily ignited and may burn fiercely. Toxic if swallowed, by skin contact or by dust inhalation.

### - Air transport

PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y543  
PCA limited quantity max net quantity (IATA) : 1kg  
PCA packing instructions (IATA) : 558  
PCA max net quantity (IATA) : 5kg  
CAO packing instructions (IATA) : 562  
CAO max net quantity (IATA) : 25kg  
ERG code (IATA) : 5P

### - Inland waterway transport

Classification code (ADN) : OT2  
Special provisions (ADN) : 802  
Limited quantities (ADN) : 1 kg  
Excepted quantities (ADN) : E2  
Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 2

### - Rail transport

Classification code (RID) : OT2  
Limited quantities (RID) : 1kg  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P002, IBC08  
Special packing provisions (RID) : B4  
Mixed packing provisions (RID) : MP2  
Portable tank and bulk container instructions (RID) : T3



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Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN
Special provisions for RID tanks (RID)	: TU3
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage - Loading, unloading and handling (RID)	: CW24, CW28
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 56

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Lead dinitrate is on the REACH Candidate List

Contains a substance on the REACH candidate list in concentration  $\geq 0.1\%$  or with a lower specific limit: Lead dinitrate (EC 233-245-9, CAS 10099-74-8)

LEAD(II) NITRATE is not on the REACH Annex XIV List

LEAD(II) NITRATE is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

LEAD(II) NITRATE is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

% Volatiles : < 1 %

#### 15.1.2. National regulations

##### Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

##### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product  
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Abbreviations and acronyms:

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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; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 1B	Carcinogenicity, Category 1B
Ox. Sol. 2	Oxidising Solids, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H272	May intensify fire; oxidiser.
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.

SDS EU (REACH Annex II) - Custom

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