

# Lead (II) nitrate

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Date of issue: 12/6/2019 Version: 1.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Substance
Substance name	: Lead (II) nitrate
IUPAC name	: Lead nitrate
EC-No.	: 233-245-9
CAS-No.	: 10099-74-8
Product code	: 12923563
Formula	: N2O6Pb
Product group	: Raw material

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

##### 1.2.1. Relevant identified uses

Main use category	: Laboratory use, Industrial use, Professional use
Industrial/Professional use spec	: For professional use only
Use of the substance/mixture	: For analytical purposes Scientific research and development Not for human consumption or veterinary purposes.

##### 1.2.2. Uses advised against

No additional information available

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

##### Supplier

Scafell Organics  
Molekula Ltd  
Lingfield Way  
Darlington - England  
T +44 (0) 1949 823777 / +44 (0) 7590 545705  
[info@molekula.com](mailto:info@molekula.com) / [kbowen@molekula.com](mailto:kbowen@molekula.com) - [www.molekula.com](http://www.molekula.com)

#### 1.4. Emergency telephone number

Emergency number : +44 (0) 7590 545705

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Oxidising Solids, Category 3	H272
Acute toxicity (oral), Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 4	H332
Serious eye damage/eye irritation, Category 1	H318
Reproductive toxicity, Category 1B	H360Df
Specific target organ toxicity — Repeated exposure, Category 2	H373
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410
Full text of H statements : see section 16	

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

No additional information available

#### 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.  
H318 - Causes serious eye damage.  
H360Df - May damage the unborn child. Suspected of damaging fertility.  
H373 - May cause damage to organs through prolonged or repeated exposure.  
H410 - Very toxic to aquatic life with long lasting effects.

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Precautionary statements (CLP) : P201 - Obtain special instructions before use.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P263 - Avoid contact during pregnancy and while nursing.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.  
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

Name	Product identifier	%
Lead (II) nitrate substance listed as REACH Candidate (Lead dinitrate)	(CAS-No.) 10099-74-8 (EC-No.) 233-245-9	100

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 : If possible show this sheet, if not available show packaging or label. Never give anything by mouth to an unconscious person. Do not leave affected person unattended.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. If breathing difficulties persist : Get medical advice/attention.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Do not remove clothing if it sticks to the skin. If irritation persists, consult a doctor.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Get medical advice/attention.

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

Symptoms/effects after inhalation : Harmful if inhaled. May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.

Symptoms/effects after skin contact : May cause moderate irritation, including burning sensation, tearing, redness or swelling.

Symptoms/effects after eye contact : Causes serious eye damage. redness, itching, tears.

Symptoms/effects after ingestion : Harmful if swallowed. Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting.

Chronic symptoms : May damage the unborn child. Suspected of damaging fertility. May cause damage to organs through prolonged or repeated exposure.

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

Get immediate medical advice/attention.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Dry powder. Sand. Carbon dioxide. Foam. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

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

Fire hazard : Flammable solid. May intensify fire; oxidiser.

Explosion hazard : May form flammable/explosive vapour-air mixture.

Hazardous decomposition products in case of fire : Lead oxide. Nitrogen oxides.

### 5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: seal off low-lying areas. Keep container tightly closed and away from heat, sparks and flame. Keep away from combustible materials.

Firefighting instructions : Evacuate area. Eliminate all ignition sources if safe to do so. Use water spray or fog for cooling exposed containers. Fight fire from safe distance and protected location. Keep upwind.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Use self-contained breathing apparatus and chemically protective clothing.

Other information : Warn all persons of toxic hazard.

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### SECTION 6: Accidental release measures

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

General measures : Do not handle until all safety precautions have been read and understood. Ventilate the area thoroughly, especially low lying areas (basements, workpits etc). Proper grounding procedures to avoid static electricity should be followed.

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.  
Emergency procedures : Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Do not touch or walk on the spilled product. Avoid contact with skin, eyes and clothing.  
Measures in case of dust release : Keep upwind. Avoid creating or spreading dust. Ventilate the area thoroughly, especially low lying areas (basements, workpits etc). Special attention should be given to low areas/pits where flammable vapours can accumulate.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use self-contained breathing apparatus and chemically protective clothing.  
Emergency procedures : All equipment used when handling the product must be grounded. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Stop leak if safe to do so.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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

Methods for cleaning up : On land, sweep or shovel into suitable containers. Shovel or sweep up and put in a closed 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

Additional hazards when processed : Is or contains SVHC.  
Precautions for safe handling : Avoid formation of dust. Avoid contact with skin, eyes and clothing. Do not handle until all safety precautions have been read and understood. Ensure that there is a suitable ventilation system. Do not handle in a confined space.  
Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

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

Technical measures : Ensure adequate ventilation, especially in confined areas. Proper grounding procedures to avoid static electricity should be followed.  
Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, Direct sunlight. Keep container closed when not in use.  
Incompatible products : Strong oxidizing agents. reducing agents. Organic materials. Powdered metals.  
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. open flames. sparks.  
Heat and ignition sources : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Storage area : Keep away from combustible materials. Store below 20 °C. Store in a dry place. Store in a closed container.

#### 7.3. Specific end use(s)

For analytical purposes. Scientific research and development. Not for human consumption or veterinary purposes.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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

United Kingdom	WEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup> Europe. Chemical Agents Directive - Annex I: Binding occupational exposure limit values
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#### 8.2. Exposure controls

##### Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety procedures.

##### Personal protective equipment:

Avoid all unnecessary exposure.

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<b>Materials for protective clothing:</b>					
Wear suitable protective clothing, gloves and eye/face protection					
<b>Hand protection:</b>					
The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374					
<b>Type</b>	<b>Material</b>	<b>Permeation</b>	<b>Thickness (mm)</b>	<b>Penetration</b>	<b>Standard</b>
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.11		EN 374
<b>Eye protection:</b>					
Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Use eye protection according to EN 166, designed to protect against powders and dusts.					
<b>Type</b>	<b>Use</b>	<b>Characteristics</b>	<b>Standard</b>		
Safety goggles, Face shield	Fine dust, Dust	tightly fitting safety goggles, With side shields	EN 166		
<b>Skin and body protection:</b>					
Emergency safety showers should be available in the immediate vicinity of any potential exposure. Keep suitable chemically resistant protective clothing readily available for emergency use					
<b>Type</b>				<b>Standard</b>	
Total impervious protective suits, gloves, and boots must be worn to prevent any contact with the product, Flame retardant antistatic protective clothing				EN ISO 13982	
<b>Respiratory protection:</b>					
Keep self contained breathing apparatus readily available for emergency use. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended					
<b>Device</b>	<b>Filter type</b>	<b>Condition</b>	<b>Standard</b>		
Respiratory protective device with a particle filter	Type P3	Dust protection	EN 14387		

### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Crystals. lumps.
Molecular mass	: 331.21 g/mol
Colour	: White to off-white.
Odour	: No data available.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 470 °C
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)	: Flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 4.53 g/cm <sup>3</sup>
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available

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Oxidising properties : No data available

Explosive limits : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable solid.

### 10.2. Chemical stability

Flammable solid. In use may form flammable/explosive vapour-air mixture. May intensify fire; oxidiser.

### 10.3. Possibility of hazardous reactions

Stable under normal conditions of use.

### 10.4. Conditions to avoid

Protect from sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5. Incompatible materials

Strong oxidizers. Powdered metals. Organic materials. reducing agents.

### 10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. Thermal decomposition generates : Nitrogen oxides. Lead oxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Oral: Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Inhalation:dust,mist: Harmful if inhaled.

Skin corrosion/irritation : Not classified

Additional information : Based on available data, the classification criteria are not met

Serious eye damage/irritation : Causes serious eye damage.

Additional information : Based on available data, the classification criteria are not met

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : May damage the unborn child. Suspected of damaging fertility.

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

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

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.

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

EC50 Daphnia 1	1.8 mg/l Daphnia magna (Water flea) 48hr
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### 12.2. Persistence and degradability

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

Persistence and degradability	No data available.
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### 12.3. Bioaccumulative potential

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

Bioaccumulative potential: No data 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

### 12.6. Other adverse effects

Additional information: Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods






Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.

Additional information: Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials: Avoid release to the environment.

## SECTION 14: Transport information

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

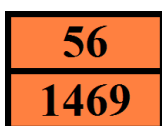
ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1469	1469	1469	1469	1469
<b>14.2. UN proper shipping name</b>				
LEAD NITRATE	LEAD NITRATE	Lead nitrate	LEAD NITRATE	LEAD NITRATE
<b>Transport document description</b>				
UN 1469 LEAD NITRATE (Lead (II) nitrate), 5.1 (6.1), II, (E), ENVIRONMENTALLY HAZARDOUS	UN 1469 LEAD NITRATE (Lead (II) nitrate), 5.1 (6.1), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1469 Lead nitrate (Lead (II) nitrate), 5.1, II, ENVIRONMENTALLY HAZARDOUS	UN 1469 LEAD NITRATE (Lead (II) nitrate), 5.1 (6.1), II, ENVIRONMENTALLY HAZARDOUS	UN 1469 LEAD NITRATE (Lead (II) nitrate), 5.1 (6.1), II, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>				
5.1 (6.1)	5.1 (6.1)	5.1 (6.1)	5.1 (6.1)	5.1 (6.1)
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				
<b>14.6. Special precautions for user</b>				
<b>Overland transport</b>				
Classification code (ADR)	: OT2			
Limited quantities (ADR)	: 1kg			
Excepted quantities (ADR)	: E2			
Packing instructions (ADR)	: P002, IBC08			

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Special packing provisions (ADR)	: B4
Mixed packing provisions (ADR)	: MP2
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)	: B21, 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
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
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN

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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

Directive 2012/18/EU (SEVESO III)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

## SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Ox. Sol. 3	Oxidising Solids, Category 3
Repr. 1B	Reproductive toxicity, Category 1B
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*