

## SAFETY DATA SHEET

Version 3.11  
Revision Date 04/24/2015  
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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Lead(II) nitrate	
Product Number	:	L6258	
Brand	:	Sigma-Aldrich	
Product Use	:	For laboratory research purposes.	
Supplier	:	Sigma-Aldrich Canada Co. 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA	Manufacturer : Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA
Telephone	:	+1 9058299500	
Fax	:	+1 9058299292	
Emergency Phone # (For both supplier and manufacturer)	:	+1-703-527-3887 (CHEMTREC)	
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956	

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

#### WHMIS Classification

C	Oxidizing Material	Oxidizer
D1B	Toxic Material Causing Immediate and Serious Toxic Effects	Toxic by inhalation.
D2A	Very Toxic Material Causing Other Toxic Effects	Chronic toxicity
D2B	Toxic Material Causing Other Toxic Effects	Teratogen
		Carcinogen
		Severe eye irritant

#### GHS Classification

Oxidizing solids (Category 2)  
Acute toxicity, Oral (Category 4)  
Acute toxicity, Inhalation (Category 4)  
Serious eye damage (Category 1)  
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; oxidiser.
H302 + H332	Harmful if swallowed or if inhaled
H318	Causes serious eye damage.
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.  
P280 Wear protective gloves/ eye protection/ face protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
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

**Potential Health Effects**

**Inhalation** Toxic if inhaled. Causes respiratory tract irritation.  
**Skin** Harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** Harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : N<sub>2</sub>O<sub>6</sub>Pb  
Molecular weight : 331.21 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Lead nitrate</b>			
10099-74-8	233-245-9	082-001-00-6	<=100%

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**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.

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**5. FIREFIGHTING MEASURES**

**Conditions of flammability**

Not flammable or combustible.

**Suitable extinguishing media**

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

**Special protective equipment for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO<sub>x</sub>), Lead oxides

**Explosion data - sensitivity to mechanical impact**

No data available

**Explosion data - sensitivity to static discharge**

No data available

**Further information**

Use water spray to cool unopened containers.

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, 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.

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**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.

**Conditions for safe storage**

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

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Lead nitrate	10099-74-8	TWA	0.050000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks				
		TWAEV	0.050000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	As of January 4, 2008, lead [7439-92-1] and its inorganic compounds (As Pb) as foreseen in Part 1 of Annex I, in the regulation concerning the lead foundries of the second fusion. For the application of this article, 'lead foundry of second fusion' is understood to mean any institution intended to treat a substance containing lead, other than lead concentrate from a mine by a chemical or metallurgical process for the production of refined lead, the oxide of lead or lead alloy. Carcinogenic effect detected in animals. Results of studies relating to the carcinogenicity of these substances in animals are not necessarily applicable to humans.			
		TWA	0.050000 mg/m3	Canada. British Columbia OEL
	IARC '2A' applies to substances deemed probably carcinogenic to humans on the basis of limited evidence of carcinogenicity in humans. Adverse reproductive effect			
		TWA	0.050000 mg/m3	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
	Skin			

	Skinnotation only applies to organic compounds Denotes a chemical agent listed in Table 1 of Ontario Regulation 490/09 (Designated Substances) made under the Act. See clause 2 (2) (a) of this Regulation.			
		TWA	0.05 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWAEV	0.05 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	As of January 4, 2008, lead [7439-92-1] and its inorganic compounds (As Pb) as foreseen in Part 1 of Annex I, in the regulation concerning the lead foundries of the second fusion. For the application of this article, 'lead foundry of second fusion' is understood to mean any institution intended to treat a substance containing lead, other than lead concentrate from a mine by a chemical or metallurgical process for the production of refined lead, the oxide of lead or lead alloy. Carcinogenic effect detected in animals. Results of studies relating to the carcinogenicity of these substances in animals are not necessarily applicable to humans.			
		TWA	0.05 mg/m3	Canada. British Columbia OEL
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## 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.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Eye protection**

Face shield and safety glasses 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.

#### **Specific engineering controls**

Use mechanical exhaust or laboratory fumehood to avoid exposure.

### **9. PHYSICAL AND CHEMICAL PROPERTIES**

#### **Appearance**

Form crystalline  
Colour white

#### **Safety data**

pH	No data available
Melting point/freezing point	205 °C (401 °F) - Decomposes before melting.
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
Density	4.53 g/cm <sup>3</sup>
Water solubility	500 g/l
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

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### **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 (NO<sub>x</sub>), Lead oxides  
Other decomposition products - No data available

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**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Oral LD50**

No data available

**Inhalation LC50**

No data available

**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 sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

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

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

**Reproductive toxicity**

No data available

**Teratogenicity**

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**

<b>Inhalation</b>	Toxic if inhaled. Causes respiratory tract irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes 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

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**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.

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**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.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

UN number: 1469 Class: 5.1 (6.1)

Packing group: II

Proper shipping name: Lead nitrate

Sigma-Aldrich - L6258

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

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**15. REGULATORY INFORMATION**

**WHMIS Classification**

C	Oxidizing Material	Oxidizer
D1B	Toxic Material Causing Immediate and Serious Toxic Effects	Toxic by inhalation.
D2A	Very Toxic Material Causing Other Toxic Effects	Chronic toxicity
D2B	Toxic Material Causing Other Toxic Effects	Teratogen Carcinogen Severe eye irritant

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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**16. OTHER INFORMATION**

**Text of H-code(s) and R-phrase(s) mentioned in Section 3**

H410	Very toxic to aquatic life with long lasting effects.
Ox. Sol.	Oxidizing solids
Repr.	Reproductive toxicity
STOT RE	Specific target organ toxicity - repeated exposure

**Further information**

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