

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: LEAD NITRATE

Other name(s): Lead Dinitrate; Nitric acid, Lead (2+) Salt; Lead (II) Nitrate (1:2).

Recommended Use of the Chemical and Restrictions on Use Mordant; oxidant.

Supplier: Ixom Operations Pty Ltd
ABN: 51 600 546 512
Street Address: Level 8, 1 Nicholson Street
East Melbourne Victoria 3002
Australia

Telephone Number: +61 3 9906 3000
Emergency Telephone: 1 800 033 111 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Oxidising solids - Category 2
Acute Oral Toxicity - Category 4
Acute Inhalation Toxicity - Category 4
Toxic to Reproduction - Category 1A
Mutagenicity - Category 2
Carcinogenicity - Category 2
Specific target organ toxicity (repeated exposure) - Category 2
Acute Aquatic Toxicity - Category 1
Chronic Aquatic Toxicity - Category 1

SIGNAL WORD: DANGER



Hazard Statement(s):

H272 May intensify fire; oxidizer.
H302+H332 Harmful if swallowed or if inhaled.
H318 Causes serious eye damage.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
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.

Safety Data Sheet



Precautionary Statement(s):

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P220 Keep and store away from clothing, incompatible materials, combustible materials.
P221 Take any precaution to avoid mixing with combustibles / incompatible materials.
P260 Do not breathe mist, vapours, spray.
P264 Wash hands thoroughly after handling.
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.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P281 Use personal protective equipment as required.

Response:

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P370+P378 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Poisons Schedule (SUSMP): S6 Poison.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Lead nitrate	10099-74-8	99-100%	H272 H302 H332 H317 H318 H341 H351 H360 H373 H400 H410

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Product Name: LEAD NITRATE
Substance No: 000031063201

Issued: 17/08/2018
Version: 6

Safety Data Sheet



Skin Contact:

If skin or hair contact occurs, remove contaminated clothing and wash skin and hair with soap and water. If irritation occurs seek medical advice.

Eye Contact:

Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

Ingestion:

Immediately rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Never give anything by the mouth to an unconscious patient. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:

Treat as for exposure to inorganic lead compounds. Physical examination should include haemoglobin determination, tests for blood lead levels and evaluation of renal function. Can cause corneal burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Coarse water spray, fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 1Y

Specific hazards arising from the chemical:

Non combustible, but will support combustion of other materials. Environmentally hazardous.

Special protective equipment and precautions for fire-fighters:

Decomposes on heating emitting toxic fumes, including those of lead. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. Do not allow container or product to get into drains, sewers, streams or ponds. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Wear protective equipment to prevent skin and eye contact. Avoid breathing in dust. Work up wind or increase ventilation. Vacuum solid spills instead of sweeping. DO NOT use compressed air, compressed gas or dry sweeping to collect spilt material. Collect and seal in properly labelled containers or drums for disposal.

7. HANDLING AND STORAGE

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

Precautions for safe handling:

Avoid skin and eye contact and breathing in dust. Keep out of reach of children. When using do not eat, drink or smoke. Wash hands before breaks and at the end of the work day.

Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

Product Name: LEAD NITRATE
Substance No: 000031063201

Issued: 17/08/2018
Version: 6

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Lead, inorganic dusts & fumes (as Pb): 8hr TWA = 0.05 mg/m³

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Refer to State Regulations for the control of lead processes.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Colour:	Colourless or White
Odour:	Odourless
Molecular Formula:	Pb(NO ₃) ₂
Solubility:	Soluble in water.

Product Name: LEAD NITRATE
Substance No: 000031063201

Issued: 17/08/2018
Version: 6

Safety Data Sheet



Specific Gravity:	4.53 @20°C
Relative Vapour Density (air=1):	11.0
Vapour Pressure (20 °C):	Not available
Flash Point (°C):	Not applicable
Flammability Limits (%):	Not applicable
Autoignition Temperature (°C):	Not applicable
Melting Point/Range (°C):	470
pH:	3.0-4.0 (20% aq. solution)

10. STABILITY AND REACTIVITY

Reactivity:	No information available.
Chemical stability:	Stable.
Possibility of hazardous reactions:	Hazardous polymerisation will not occur.
Conditions to avoid:	Avoid dust generation. Avoid exposure to heat, sources of ignition, and open flame.
Incompatible materials:	Incompatible with ammonium thiocyanate , powdered carbon , hydrogen peroxide , lead hypophosphite , combustible materials , organic materials , strong reducing agents , powdered metals .
Hazardous decomposition products:	Lead fume. Oxides of nitrogen. Oxides of lead.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting, diarrhoea, and abdominal pain. Swallowing large amounts may result in lethargy, motor weakness, muscle tenderness and inco-ordination. Death may occur if large amounts are ingested.
Eye contact:	A severe eye irritant. Contamination of eyes can result in permanent injury.
Skin contact:	Contact with skin may result in irritation.
Inhalation:	Breathing in dust may result in respiratory irritation.

Acute toxicity: No oral LD50 data available for the product.

Chronic effects:

Absorption of lead over a prolonged period of time (by any route) can produce adverse effects on the blood, central and peripheral nervous systems and reproductive systems, and renal injury. Long term exposure to low concentrations of lead (by any route) may result in blood effects, anaemia, central and peripheral nervous system damage, gastrointestinal disturbances, renal injury, foetotoxicity, developmental deficiencies in neonates and children, and testicular damage including decreased sperm count.

Lead compounds, inorganic: Have been classified by the International Agency for Research on Cancer (IARC) as a Group 2A carcinogen. Group 2A - The agent is probably carcinogenic to humans.

Safety Data Sheet



Mutagenicity:	Suspected of causing genetic defects.
Carcinogenicity:	Suspected of causing cancer.
Reproductive toxicity:	May damage fertility or the unborn child.
Specific Target Organ Toxicity (STOT) - single exposure:	No information available.
Specific Target Organ Toxicity (STOT) - repeated exposure:	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard:	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Avoid contaminating waterways.
Persistence/degradability:	No information available.
Bioaccumulative potential:	No information available.
Mobility in soil:	No information available.
Aquatic toxicity:	Very toxic to aquatic organisms. May cause long lasting harmful effects to aquatic life.
48hr EC50 (Daphnia magna):	0.5-2.0 mg/L
96hr LC50 (fish):	0.4-1.3 mg/L (Carp)

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.



UN No:	1469
Transport Hazard Class:	5.1 Oxidizing Agent
Subrisk 1:	6.1 Toxic
Packing Group:	II
Proper Shipping Name or Technical Name:	LEAD NITRATE
Hazchem or Emergency Action Code:	1Y

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

Safety Data Sheet



UN No: 1469
Transport Hazard Class: 5.1 Oxidizing Agent
Subrisk 1: 6.1 Toxic
Packing Group: II
Proper Shipping Name or Technical Name: LEAD NITRATE

IMDG EMS Fire: F-A
IMDG EMS Spill: S-Q

Marine Pollutant Yes

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 1469
Transport Hazard Class: 5.1 Oxidizing Agent
Subrisk 1: 6.1 Toxic
Packing Group: II
Proper Shipping Name or Technical Name: LEAD NITRATE

15. REGULATORY INFORMATION

Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Oxidising solids - Category 2
Acute Oral Toxicity - Category 4
Acute Inhalation Toxicity - Category 4
Toxic to Reproduction - Category 1A
Mutagenicity - Category 2
Carcinogenicity - Category 2
Specific target organ toxicity (repeated exposure) - Category 2
Acute Aquatic Toxicity - Category 1
Chronic Aquatic Toxicity - Category 1

Hazard Statement(s):

H272 May intensify fire; oxidizer.
H302+H332 Harmful if swallowed or if inhaled.
H318 Causes serious eye damage.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
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.

Poisons Schedule (SUSMP): S6 Poison.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Product Name: LEAD NITRATE
Substance No: 000031063201

Issued: 17/08/2018
Version: 6

Safety Data Sheet



Supplier Safety Data Sheet; 09/ 2017.

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

Reason(s) for Issue:

Revised Primary SDS

Change in Hazardous Chemical Classification

Change in Personal Protection Requirements

Update in Toxicological Information

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.