

SAFETY DATA SHEET

Lead Nitrate Solution

SECTION 01 - IDENTIFICATION

Product identifier	Lead Nitrate Solution
Other means of identification	Lead II Nitrate/Lead Dinitrate/Plumbous Nitrate
Recommended use of chemical	Mineral Processing Aid
Supplier name	Ixom Operations Pty Limited trading as LogiChem
Supplier address	Lot 33 Bulong Road Parkeston-Kalgoorlie, Australia PO Box 878 Kalgoorlie WA 6433 Australia
Supplier phone	1800 033 111 / Int. +61 (0) 3 9663 2130
24 Hour emergency phone	1800 033 111

SECTION 02 – HAZARD(S) IDENTIFICATION

Classification	Toxic To Reproduction - Category 1A Specific Target Organ Toxicity (Repeated Exposure) - Category 2 Long-term Hazard To The Aquatic Environment - Category 2
Signal word	Danger
Hazard statements	H302 - Harmful if swallowed. H332 - Harmful if inhaled. H360D - May damage the unborn child. H361f - Suspected of damaging fertility. H373 - May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard). H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements	Prevention P201 - Obtain special instructions before use. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P273 - Avoid release to the environment. P281 - Use personal protective equipment as required. Response P308 + P313 - IF exposed or concerned: Get medical advice/ attention. P314 Get medical advice/attention if you feel unwell. P391 Collect spillage. Storage P405 - Store locked up. Disposal P501 - Dispose of contents/container in accordance with local / regional / national / international regulations.



SECTION 03 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Components	Cas No:	Proportion % w/w
Water	7732-18-5	69.90%
Lead Nitrate	10099-74-8	30.10%

SECTION 04 – FIRST AID MEASURES

Description of necessary first aid measures	Eye - Treat as corrosive liquid. Flush thoroughly with water for 15 minutes lifting lower and upper eyelids. Seek medical attention.
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SAFETY DATA SHEET

Lead Nitrate Solution

	<p>Ingestion - Rinse mouth with water. Give plenty of water to drink provided victim is conscious. DO NOT induce vomiting. Seek prompt medical attention.</p> <p>Inhalation - Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest.</p> <p>Skin - Quickly remove contaminated clothing. Wipe off excess from skin. Wash skin with soapy water for 15 minutes. Launder all contaminated clothes promptly.</p>
Medical attention / special treatment	Treat symptomatically and supportively. Get medical attention immediately.
Symptoms caused by exposure	Not available.

SECTION 05 - FIRE FIGHTING MEASURES

Suitable extinguishing media	Use any means suitable for extinguishing surrounding fire. Suitable media may include use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).
Specific hazards arising from the chemical	Solution is not combustible. If subjected to heating in a fire the Lead Nitrate may start to crystallise from the solution as the water evaporates. This crystalline material could act as an oxidising agent and assist combustion of other materials.
Special protective equipment & precautions for fire fighters	<p>Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas.</p> <p>Do not allow water run-off to enter sewers or waterways. Material crystallised out of the solution by heat could assist combustion in a fire, especially in contact with incompatible materials such as strong reducing agents and finely powdered metals. Dry Lead Nitrate emits toxic fumes under fire conditions.</p>

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Eliminate all sources of ignition. Increase ventilation. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment. Do NOT contaminate. Keep combustibles away from spilled material. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing as listed in section 08.
Environmental precautions	Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.
Methods and materials for containment and cleaning up.	Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal.

SECTION 07 - HANDLING AND STORAGE

Precautions for safe handling	Use proper equipment for lifting and transporting containers and when dispensing the solution. Avoid all situations that could lead to harmful exposure.
Conditions for Safe Storage (Including Any Incompatibles)	Store in closed DG-rated containers in correctly banded areas. Protect against physical damage. Keep well away from organic substances or other readily oxidisable materials.

SECTION 08 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters - exposure standards, biological monitoring	No exposure standard has been established for this product by the Safe Work Australia. However, the exposure standard for dust not otherwise specified is 10mg/m ³ (for inspirable dust) and 3mg/m ³ (for respirable dust). NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. These 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 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.
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SAFETY DATA SHEET

Lead Nitrate Solution

Appropriate engineering controls	Lead Nitrate Solution has a very low vapour pressure at ambient temperatures so should not present an inhalation hazard. Avoid the generation of any mists when pumping and dispensing the material.
Personal protective equipment (PPE)	<p>Clothing – Chemical-resistant coveralls, splash apron (AS3765/2210).</p> <p>Eyes – Safety glasses with side shields (AS1336/1337).</p> <p>Footwear – Safety footwear (AS3765/2210).</p> <p>Gloves – Nitrile rubber gloves (AS2161).</p> <p>Other - RESPIRATOR: If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements (AS1715/1716). Emergency shower and eyewash facilities should be in close proximity to work area.</p>

SECTION 09 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Transparent, yellow solution
Odour	Odourless
Odour threshold	Not available
pH	3 – 3.5
Melting point/freezing point	Not available
Specific gravity (water = 1)	1.33
Boiling point and boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability	Not available
Upper/lower flammability or explosive limits	Not available
Vapour pressure (hPa @ 20°C)	low (hPa @ 20°C)
Vapour density	Not available
Relative density	Not available
Solubility(ies) (water)	Soluble
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Specific heat value	Not available
Particle size	Not available
Volatile organic compounds content	Not available
% volatile	Not available
Saturated vapour concentration	Not available
Release of invisible flammable vapours and gases	Not available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity	Hazardous Polymerisation has not been reported.
Chemical stability	Stable under ordinary conditions of use and storage.
Conditions to avoid	Direct sunlight. Extremely high or low temperatures.
Incompatible materials	Incompatible with combustibles, organic materials and strong reducing agents.
Hazardous decomposition products	Not combustible, however following evaporation of aqueous component residual material can burn if ignited. On burning, may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion. Oxides of carbon and nitrogen, lead fumes, smoke and other toxic fumes.

SAFETY DATA SHEET

Lead Nitrate Solution

SECTION 11- TOXICOLOGICAL INFORMATION

Information on routes of exposure	<p>Eyes - The solution is mildly acidic and direct eye exposure to the solution must be prevented. Absorption of lead can occur through eye tissue but the more common hazard is irritation. Lead and lead compounds may be absorbed through the skin on prolonged exposure; the symptoms of lead poisoning described for ingestion exposure may occur. Contact with the skin over short periods may cause local irritation, redness and mild pain.</p> <p>Ingestion - Poisonous. Swallowing can result in abdominal pain and spasms, nausea, vomiting and headache.</p> <p>Inhalation - As this product is a non-volatile solution absorption by inhalation is much less likely than when using the dry powder. Inhaled lead can be absorbed through the respiratory system.</p> <p>Skin - Lead and lead compounds may be absorbed through the skin on prolonged exposure; the symptoms of lead poisoning described for ingestion exposure may occur. Contact with the skin over short periods may cause local irritation, redness and mild pain.</p>
Symptoms related to exposure	Lead is a cumulative poison and repeated exposure even to small amounts can raise the body's content to toxic levels.
Numerical measures of toxicity	Unr-Rat LD50 - 3613 mg/kg Oral LD50 Guinea Pig - 1330 mg/kg
Immediate, delayed and chronic health effects from exposure	Chronic overexposure to lead may affect the following target organs or body systems: blood, digestive, kidneys, nervous and reproductive. The following are signs and symptoms of chronic lead exposure: nausea, vomiting, abdominal cramps, diarrhoea, constipation, confusion, convulsion, anaemia, weakness, fatigue, muscle and joint pain, muscle weakness. Lead is listed as a teratogen and reproductive toxin. In pregnant women, it could have a negative effect on the development of the foetus. It is also suspected that lead may impair male fertility. Lead is listed as a possible human carcinogen by the IARC (International Agency for Research on Cancer.)
Exposure levels	Not available
Interactive effects	Not available
Data limitations	Not available

SECTION 12- ECOLOGICAL INFORMATION

Ecotoxicity	Toxic to aquatic life with long lasting effects.
Persistence and degradability	May cause long-term adverse effects in the environment.
Bioaccumulative potential	Not available
Mobility in soil	Not available
Other adverse effects	Not available

SECTION 13 - DISPOSAL CONSIDERATIONS

Safe handling and disposal methods	Dispose of in accordance with all local, state and federal regulations.
Disposal of any contaminated packaging	All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Environmental regulations	Dispose of in accordance with all local, state and federal regulations.

SECTION 14 - TRANSPORT INFORMATION

UN number	3122
Proper shipping name	Lead Nitrate
Transport hazard class(es)	6.1 - Toxic and Infectious Substances - Toxic Substances
Subsidiary risk	5.1 - Oxidising Substances
Packaging group	II

SAFETY DATA SHEET

Lead Nitrate Solution

Environmental hazards	2W
Special precautions during transport	Not available
Hazchem code	2W

SECTION 15 - REGULATORY INFORMATION

AICS name	Nitric acid, lead(2+) salt
Poisons Schedule number	6

SECTION 16 - OTHER INFORMATION

SDS creations date	11 October 2002
Most recent revision date	01 February 2018
Revision number	019 THIS ISSUE NUMBER REPLACES ALL ISSUES
Reason for revision	Annual Update
Contact person	Ixom 1800 033 111

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

END OF SDS