Infosafe No™	1CH3R	Issue Date : August 2020	RE-ISSUED by CHEMSUPP

Product Name : **LEAD NITRATE**

Classified as hazardous

1. Identification

GHS Product Identifier LEAD NITRATE

Company Name CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

Address 38 - 50 Bedford Street GILLMAN
SA 5013 Australia

Telephone/Fax Number Tel: (08) 8440-2000

Emergency phone number CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

Recommended use of the chemical and restrictions on use Lead salts, mordant in dyeing and printing calico, matches, mordant for staining mother of pearl, oxidizer in the dye industry, sensitizer in photography, explosives, tanning, process engraving, lithography and laboratory reagent.

Other Names

Name	Product Code
LEAD NITRATE LR	LL019
LEAD NITRATE AR	LA019
Lead (II) nitrate	
LEAD NITRATE LR confroms to Def Std 68-71/1	LS019

Other Information

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture
Oxidizing Solids: Category 2
Acute Toxicity - Oral: Category 4
Acute Toxicity - Inhalation: Category 4
Eye Damage/Irritation: Category 1
Germ Cell Mutagenicity: Category 2
Carcinogenicity: Category 2
Toxic to Reproduction: Category 1A
Specific target organ toxicity - Repeated Exposure Category 2
Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1

Signal Word (s) DANGER

Hazard Statement (s)
H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H332 Harmful 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 (blood, CNS, Immune system, kidneys) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Pictogram (s) Flame over circle, Health hazard, Corrosion, Environment, Exclamation mark

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Precautionary statement – 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/Store away from clothing/combustible materials. P221 Take any precaution to avoid mixing with combustibles. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash skin 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.
Precautionary statement – Response	P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. 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. P370+P378 In case of fire: Use flooding quantities of water for extinction.
Precautionary statement – Storage	P405 Store locked up.
Precautionary statement – Disposal	P501 Dispose of contents/container according to relevant local, state and federal government regulations.
Other Information	Lead produces a brittleness of the red blood cells so that they haemolyse with but little trauma. This increased fragility results in the red cells being destroyed more rapidly than normal, leading to an anaemia which is rarely severe. The loss of circulating red cells stimulates the production of new young cells which are then acted upon by the circulating lead resulting in basophilic stippling. There is no uniform opinion on the effects of lead upon the white blood cells. Autopsies of deaths attributed to lead poisoning and experimental findings on animals have shown pathological lesions of the kidneys, liver, male gonads, nervous system, blood vessels and other tissues. None of these changes, however, have been found consistently.

3. Composition/information on ingredients

Chemical Characterization Solid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase
Lead Nitrate	10099-74-8	100 %		

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Obtain medical attention immediately.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Consult Poisons Information Centre. Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor at once.

5. Fire-fighting measures

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Hazards from Combustion Products	May liberate toxic fumes in fire including oxides of nitrogen.
Specific Methods	Small fire: USE FLOODING QUANTITIES OF WATER. Large fire: Flood fire area with water from a protected position. Cool containers with flooding quantities of water until well after fire is out - If impossible, withdraw from area and let fire burn. Avoid getting water inside containers: a violent reaction may occur. Dam fire control water for later disposal.
Specific hazards arising from the chemical	Will accelerate burning when involved in a fire. May ignite combustibles (wood, paper, clothing, etc). Fire may produce irritating, poisonous, and/or corrosive gases. Containers may explode when heated.
Hazchem Code	2Y
Decomposition Temp.	470 °C
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection.

6. Accidental release measures

Spills & Disposal	Do not contaminate. Keep combustibles (wood, paper, clothing, oil, etc.) away from spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use water spray to knock down vapours or divert vapour clouds. Prevent entry into waterways, drains or confined areas. Prevent exposure to heat. Dry Spill: Use clean non-sparking tools to transfer material to a clean, dry plastic container and cover loosely. Move container from spill area. Small Liquid Spill: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place in a loosely-covered container for later disposal. Large Liquid Spill: SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
Personal Precautions	Use personal protective equipment listed in Section 8. Avoid dust formation and avoid breathing dust. Evacuate the area of all non-essential personnel. Ventilate contaminated area thoroughly.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Absorb with dry earth, sand or other non-combustible material. Neutralise with lime or soda ash. Use clean nonsparking tools to collect and seal in properly labelled drums for disposal in an area approved by local authority bylaws. Wash area down with excess water to remove residual material. Do not use rags, sawdust or other combustible absorbents to wipe up spilled material.
Environmental Precautions	Prevent contamination of soil and water.

7. Handling and storage

Precautions for Safe Handling	Avoid substance contact and generation and inhalation of dust. Use in well ventilated areas away from all ignition sources. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid prolonged or repeated contact with skin and eyes . Wash hands and face thoroughly after working with material. Keep away from incompatibles.
Conditions for safe storage, including any incompatabilities	Store away from foodstuffs. Store away from combustible materials. Keep container tightly closed and dry, away from direct sunlight and other sources of heat or ignition. Store in a cool place.
Storage Regulations	Refer Australian Standard AS 4326 - 1995 'The storage and handling of oxidizing agents'.

8. Exposure controls/personal protection

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Lead Nitrate			0.15		Lead, inorganic dusts & fumes (as Pb)

Other Exposure Information	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. A time weighted average (TWA) has been established for Lead, inorganic dusts and fumes (as Pb) (Worksafe Aust) of 0.15 mg/m³. 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.
Appropriate engineering controls	Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. Recommendation: Class M particulate respirator (disposable,cartridge or canister).
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	White or colourless powder.
Odour	Almost odourless.
Decomposition Temperature	470 °C
Melting Point	470°C - dec.
Solubility in Water	486 g/l at 20°C
Solubility in Organic Solvents	0.4 g/l Ethanol 13.3 g/l Methanol
Specific Gravity	4.53 @ 20 °C
pH	3-4 (50 g/l, H2O, 20 °C)
Flammability	May act as an oxidising agent and can assist combustion.
Molecular Weight	331.20

10. Stability and reactivity

Reactivity	Oxidising agent.
Chemical Stability	Stable under normal temperatures and pressures.
Conditions to Avoid	Heat, flames, ignition sources and incompatibles.
Incompatible Materials	Reducing agents, organic combustible materials, finely powdered metals, alcohols, esters, ammonium compounds.

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Hazardous Decomposition Products	May liberate toxic fumes in fire including oxides of nitrogen.
Possibility of hazardous reactions	Reacts violently with reducing agents, ammonium thiocyanate, carbon and lead hypophosphite.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Harmful if swallowed. Ingestion of lead nitrate may cause abdominal pain or cramps, spasms, nausea, vomiting, headaches, convulsions (due to intracranial pressure which could result in permanent brain damage), muscle weakness, 'lead line' on the gums, metallic taste, anorexia (definite loss of appetite), insomnia, dizziness, high lead levels in blood and urine with shock, coma and death in extreme cases. Ingestion of large amounts may result in death.
Inhalation	Harmful by inhalation. Inhalation of lead nitrate dust will cause irritation to the respiratory tract including nose, throat, bronchi, and lungs. The dust may be absorbed through the mucous membranes of the respiratory system. Symptoms after absorption of the powder and a latency period include metallic taste, salivation, vomiting, headaches, and a drop in blood pressure. This may lead to cyanosis (bluish discoloration of skin due to deficient oxygen of blood), convulsions, tachycardia, chest pain due to dyspnea (laboured breathing), behaviour/central nervous system, and death. Dust inhalation may cause similar symptoms to that of ingestion.
Skin	Lead and lead compounds may be absorbed through the skin on prolonged exposure; the symptoms of lead poisoning described as for ingestion and inhalation exposure may occur. Contact over short periods may cause local irritation, redness and pain.
Eye	Causes eye burns.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Germ Cell Mutagenicity: Category 2 H341 Suspected of causing genetic defects.
Carcinogenicity	Carcinogenicity: Category 2 H351 Suspected of causing cancer.
Reproductive Toxicity	Toxic to Reproduction: Category 1A H360 May damage fertility or the unborn child.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Specific target organ toxicity - Repeated Exposure Category 2 H373 May cause damage to organs,through prolonged or repeated exposure.
Health Hazard	The following applies to lead compounds in general: Due to the poor absorbability via the gastrointestinal tract, only very high doses lead to acute cases of intoxication. After a latency period of several hours, fatigue, headache, sleep disturbances, constipation, aching bones and muscles, gastrointestinal tract disturbances, metallic taste, nausea, vomiting, abdominal pain, spasms, reduced appetite and colics occur, in many instances followed by shock. Chronic uptake causes peripheral muscular weakness ('drop-wrist'), anaemia, lead line on the gums, central-nervous disorders, metallic taste, dizziness, lead colic and high lead levels in blood and urine may occur and symptoms may be often be precipitated by alcohol or exercise. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. High body levels produce increased cerebrospinal pressure, causing severe headaches, convulsions, brain damage, and stupor leading to coma and often death.
Chronic Effects	Early effects of lead poisoning are non-specific and difficult to tell from viral infection. Symptoms are decreased physical fitness,fatigue,constipationsleep disturbance,aching bones and muscles,abdominal pains,loss of appetite. Later findings include anaemia,pallor,'lead line' on gums and wrist weaknessProlonged exposure may cause CNS effects and kidney damage. Effects of exposure are cumulative.

12. Ecological information

Ecological Information	H410 Very toxic to aquatic life with long lasting effects.
Ecotoxicity	Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Persistence and degradability	Methods for determination of biodegradability cannot be applied to inorganic substances.
Other Precautions	Hazard for drinking water. The following applies to nitrates in general: may contribute to the eutrophication of water supplies. Do not allow to enter waters, waste water, or soil!
Environmental Protection	Do not allow product to enter drains, waterways or sewers.

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information	Dangerous goods of Class 5.1 (Oxidizing Agent) are incompatible in a placard load with any of the following: Class 1, Class 2.1, Class 2.3, Class 3, Class 4, Class 5.2, Class 7, Class 8, Fire risk substances and Combustible liquids.
U.N. Number	1469
UN proper shipping name	LEAD NITRATE
Transport hazard class(es)	5.1
Sub.Risk	6.1
Hazchem Code	2Y
Packaging Method	3.8.5.1
Packing Group	II
EPG Number	5B2
IERG Number	31

15. Regulatory information

Regulatory Information	All of the significant ingredients in this formulation are compliant with Australian Industrial Chemicals Introduction Scheme (AICIS) regulations. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	S6

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'. Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals'. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand. Safe Work Australia, 'Hazardous Chemical Information System'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.
Contact Person/Point	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.
Empirical Formula & Structural Formula	Pb(NO3)2

...End Of MSDS...

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