



SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name LEAD NITRATE
Synonyms GEKKO LEAD NITRATE

1.2 Uses and uses advised against

Uses FLOTATION AGENT • LEATHER MANUFACTURING • MORDANT • ORE PROCESSING

1.3 Details of the supplier of the product

Supplier name GEKKO SYSTEMS PTY LTD
Address 321-323 Learmonth Road, Wendouree , VIC, 3355, AUSTRALIA
Telephone (03) 5304 4555

1.4 Emergency telephone numbers

Emergency 13 11 26 (Poisons Information Centre)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS UNDER OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200

Physical Hazards

Oxidizing Solids: Category 2

Health Hazards

Acute Toxicity: Oral: Category 4
Serious Eye Damage / Eye Irritation: Category 1
Acute Toxicity: Inhalation: Category 4
Germ Cell Mutagenicity: Category 2
Carcinogenicity: Category 2
Toxic to Reproduction: Category 1A
Specific Target Organ Toxicity (Repeated Exposure): Category 2

Environmental Hazards

Aquatic Toxicity (Chronic): Category 1

2.2 GHS Label elements

Signal word DANGER

Pictograms



Hazard statements

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

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash 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/hearing protection.

Response statements

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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P310	Immediately call a POISON CENTRE or doctor/physician.
P330	Rinse mouth.
P370 + P378	In case of fire: Use appropriate media to extinguish.
P391	Collect spillage.

Storage statements

P405	Store locked up.
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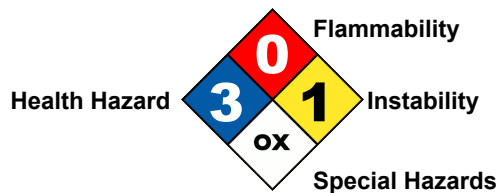
Disposal statements

P501	Dispose of contents/container in accordance with relevant regulations.
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2.3 Other hazards

No information provided.

NFPA



3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
LEAD (II) NITRATE	10099-74-8	233-245-9	>99%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact the Poison Control Centre at 1-800-222-1222 or a doctor (at once). If swallowed, do not induce vomiting.
First aid facilities	Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Non flammable - oxidising agent. May evolve toxic gases (lead/ nitrogen oxides) when heated to decomposition. May ignite in contact with incompatible materials.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

1Y
 1 Coarse Water Spray.
 Y Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Contain spill and run-off.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then collect and place in suitable containers for reuse, treatment and/or disposal. Avoid generating dust.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use.

7.3 Specific end uses

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Lead and inorganic compounds, as Pb	ACGIH TLV [USA]	--	0.05	--	--

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended.

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PPE

Eye / Face	Wear dust-proof goggles. When using large quantities or where heavy contamination is likely, wear a faceshield.
Hands	Wear PVC or rubber gloves.
Body	Wear coveralls.
Respiratory	Where an inhalation risk exists, wear a Full-face Class P3 (Particulate) respirator. At high dust levels, wear an Air-line respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	WHITE CRYSTAL OR POWDER
Odour	SLIGHT ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT RELEVANT
Melting point	470°C
Evaporation rate	NOT AVAILABLE
pH	3 to 4 (20 % solution)
Vapour density	NOT AVAILABLE
Relative density	NOT AVAILABLE
Solubility (water)	SOLUBLE
Vapour pressure	NOT RELEVANT
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT EXPLOSIVE
Oxidising properties	OXIDISING SOLID
Odour threshold	NOT AVAILABLE

9.2 Other information

Density	4.53 g/cm ³
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10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Unstable. Reacts violently with water.

10.3 Possibility of hazardous reactions

Hazardous polymerisation is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Oxidising agent. Incompatible with combustible materials, reducing agents (e.g. sulphites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), metals, heat and ignition sources.

10.6 Hazardous decomposition products

May evolve toxic gases (lead/ nitrogen oxides) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	Lead compounds are expected to be harmful if swallowed and/or if inhaled. This product has been classified as toxic for transport purposes (DG6.1).
Skin	Contact may result in irritation, redness, pain and rash.
Eye	Causes serious eye damage. Contact may result in irritation, lacrimation, pain, redness and possible burns with prolonged contact.
Sensitisation	Not classified as causing skin or respiratory sensitisation.
Mutagenicity	Suspected of causing genetic defects. The evidence for genotoxic effects of lead is contradictory, with numerous studies reporting both positive and negative effects. Responses appear to be induced by indirect mechanisms, mostly at very high concentrations that lack physiological relevance.
Carcinogenicity	Suspected of causing cancer. Lead compounds (inorganic) are classified as probably carcinogenic to humans (IARC Group 2A).
Reproductive	May damage the unborn child. Suspected of damaging fertility. Exposure to high levels of lead and its compounds may cause adverse effects on male and female fertility, including adverse effects on sperm quality. Prenatal exposure to lead and its compounds is also associated with adverse effects on neurobehavioral development in children.
STOT - single exposure	Over exposure to lead may result in severe headache, breathing difficulties, abdominal muscle pain, irritability, nausea and constipation.
STOT - repeated exposure	Lead is a cumulative poison and may be absorbed into the body through ingestion or inhalation. Lead has been documented in observational human studies to produce toxicity in multiple organ systems and body function including the haematopoietic (blood) system, kidney function, reproductive function and the central nervous system.
Aspiration	Not classified as causing aspiration.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Inorganic lead does not degrade.

12.3 Bioaccumulative potential

Lead bioconcentrates and bioaccumulates in both aquatic and terrestrial organisms.

12.4 Mobility in soil

Lead is sparingly soluble and is expected to be adsorbed onto soils and sediments. Mobility is expected to be low.

12.5 Results of PBT and vPvB assessment

No information provided.

12.6 Other adverse effects

Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Environmental pollutant. Recover by dissolving the nitrates in a minimum of water and saturating with hydrogen sulphide. Filter and wash precipitate. Dispose of to an approved landfill or waste processing site. Contact the manufacturer/supplier for additional information if disposing of large quantities (if required).

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF DOT, IMDG AND/OR IATA

PRODUCT NAME LEAD NITRATE

	LAND TRANSPORT (DOT)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1469	1469	1469
14.2 Proper Shipping Name	LEAD NITRATE	LEAD NITRATE	LEAD NITRATE
14.3 Transport hazard classes	5.1 (6.1)	5.1 (6.1)	5.1 (6.1)
14.4 Packing Group	II	II	II

14.5 Environmental hazards

Marine Pollutant.

14.6 Special precautions for user**EmS** F-A, S-Q**Other information**

The environmentally hazardous substance mark is not required when transported in packages of less than 5 kg/L (UN Model Regulations: Special Provision 375; IATA: Special Provision A197; IMDG: Special Provision 969) or less than 500 kg/L by Australian Road and Rail.

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****US EPCRA and CAA Regulatory Information**

The following components are subject to the Emergency Planning and Community Right-to-Know Act (EPCRA) and Section 112(r) of the Clean Air Act (CAA):

Ingredient	CAS Number	Sara 302 (TPQ)	Sara 304 (RQ)	CERCLA (RQ)	Sara 313	RCRA Code	CAA (TQ)
LEAD (II) NITRATE	10099-74-8			10	313c		

* Refer to Section 16 - Summary of Codes

Carcinogenicity

The following carcinogenic status applies:

PRODUCT NAME LEAD NITRATE**Carcinogenicity**

Ingredient	CAS Number	NTP	IARC	OSHA
LEAD (II) NITRATE	10099-74-8	diantisipasi	Group 2A	
LEAD (II) NITRATE	10099-74-8	dijangka	Group 2A	
LEAD (II) NITRATE	10099-74-8	كان متوقعا	Group 2A	
LEAD (II) NITRATE	10099-74-8	Erwartete	Group 2A	
LEAD (II) NITRATE	10099-74-8	Anticipato	Group 2A	
LEAD (II) NITRATE	10099-74-8	Inaasahan	Group 2A	
LEAD (II) NITRATE	10099-74-8	Dự kiến	Group 2A	
LEAD (II) NITRATE	10099-74-8	anticipado	Group 2A	
LEAD (II) NITRATE	10099-74-8		Group 2A	
LEAD (II) NITRATE	10099-74-8	antecipado	Group 2A	
LEAD (II) NITRATE	10099-74-8		Group 2A	
LEAD (II) NITRATE	10099-74-8	várható	Group 2A	
LEAD (II) NITRATE	10099-74-8	beklenen	Group 2A	
LEAD (II) NITRATE	10099-74-8	Forventet	Group 2A	
LEAD (II) NITRATE	10099-74-8	Anticipé	Group 2A	
LEAD (II) NITRATE	10099-74-8	forventet	Group 2A	
LEAD (II) NITRATE	10099-74-8	予期された	Group 2A	
LEAD (II) NITRATE	10099-74-8	Verwacht	Group 2A	
LEAD (II) NITRATE	10099-74-8	хүлээгдэж буй	Group 2A	
LEAD (II) NITRATE	10099-74-8		Group 2A	
LEAD (II) NITRATE	10099-74-8	预期	Group 2A	
LEAD (II) NITRATE	10099-74-8		Group 2A	
LEAD (II) NITRATE	10099-74-8	verwagte	Group 2A	
LEAD (II) NITRATE	10099-74-8	Anticipated	Group 2A	
LEAD (II) NITRATE	10099-74-8		Group 2A	

Inventory listings

AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)

All components are listed on AIIC, or are exempt.

EUROPE:EINECS (European Inventory of Existing Chemical Substances)

All components are listed on EINECS, or are exempt.

UNITED STATES: TSCA (US Toxic Substances Control Act)

All components are listed on the TSCA inventory, or are exempt.

16. OTHER INFORMATION**16.1 Additional information**

LEAD: Lead compounds are concentrated in the food chain. Biological half-life for inorganic lead in human bones: 10 yrs. Lake sediment microorganisms are able to directly methylate certain inorganic compounds. Under specific conditions, dissolution due to anaerobic microbial action may be significant in subsurface environments. Aquatic plants and animals have been shown to bioconcentrate lead at levels greater than in water, and sometimes similar to those in sediments. Lead levels decrease with increasing trophic (nourishment) levels within aquatic systems.

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

IARC GROUP 2A - PROBABLE HUMAN CARCINOGEN. This product contains an ingredient which has been classified by the International Agency for Research into Cancer (IARC) as a probable human carcinogen and whose use should be strictly monitored and controlled.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

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HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

16.2 Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
EPCRA	Emergency Planning and Community Right-to-Know Act
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
NTP	U.S. National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity measured in pounds (304, CERCLA)
SARA	Superfund Amendments and Reauthorization Act
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
TLV	Threshold Limit Value
TPQ	Threshold Planning Quantity measured in pounds (302)
TQ	Threshold Quantity measured in pounds (CAA)
TWA	Time Weighted Average

16.3 Summary Of Codes

RQ	Reportable Quantity measured in pounds (304, CERCLA)
TQ	Threshold Quantity measured in pounds (CAA)
TPQ	Threshold Planning Quantity measured in pounds (302)
^	Reporting threshold has changed since November 1998.
+	Member of PAC category.
#	Member of diisocyanate category.
X	Indicates that this is a second name for a chemical already included on this consolidated list. May also indicate that the same chemical with the same CAS number appears on another list with a different chemical name.
*	RCRA carbamate waste: statutory one-pound RQ applies until RQs are adjusted.
**	This chemical was identified from a Premanufacture Review Notice (PMN) submitted to EPA. The submitter has claimed certain information on the submission to be confidential, including specific chemical identity.
***	Indicates that no RQ is assigned to this generic or broad class, although the class is a CERCLA hazardous substance. See 50 Federal Register 13456 (April 4, 1985). Values in Section 313 column represent Category Codes for reporting under Section 313.
c	Although not listed by name and CAS number, this chemical is reportable under one or more of the EPCRA section 313 chemical categories.
s	Indicates that this chemical is currently under an administrative stay of the EPCRA section 313 reporting requirements, therefore, no Toxics Release Inventory reports are required until the stay is removed.
!	Member of the dioxin and dioxin-like compounds category.

16.4 Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

16.5 Prepared by

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Prepared in accordance to OSHA Hazard Communication standard, 29 CFR 1920.1200.

[End of SDS]