

MATERIAL SAFETY DATA SHEET

Product Name: Lead(II) nitrate

CAS No.: 10099-74-8

Version: 0

1. Identification

Product Code : 90178, 90440
Company Name : Advent Chembio Private Limited
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2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
LEAD(II) NITRATE	10099-74-8	100%

3. Hazards Identification**Hazard classification****Physical hazards**

Oxidizing solids : Category 2

Health hazards

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation - dust and mist) : Category 4

Serious eye damage/eye irritation : Category 1

Carcinogenicity : Category 1

Toxic to reproduction : Category 1

Specific target organ toxicity - repeated exposure : Category 2

Environmental hazards

Acute hazards to the aquatic environment : Category 1

Chronic hazards to the aquatic environment : Category 1

Labels elements**Hazard symbol****Signal word** : Danger**Hazard statement** : May intensify fire; oxidizer.
Harmful if swallowed.

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Harmful if inhaled.
Causes serious eye damage.
May damage fertility or the unborn child.
May cause cancer.
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects

Precautionary statement**Prevention**

: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep/Store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid release to the environment.

Response

: **IF SWALLOWED:** Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Collect spillage.

**Storage
Disposal**

: Store locked up.
: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result
in GHS classification**

: None.

4. First Aid Measures**General information**

: Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.

Ingestion

: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation

: Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact

: Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

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- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately.
- Most important symptoms/effects, acute and delayed** : Harmful if swallowed. Causes serious eye damage.
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

5. Fire fighting measures

- General fire hazards** : Strong oxidizer - contact with other material may cause fire. In case of fire and/or explosion do not breathe fumes.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : Use fire-extinguishing media appropriate for surrounding materials.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : May intensify fire; oxidizer. During fire, gases hazardous to health may be formed.
- Special protective equipment and precautions for firefighters**
- Special fire fighting procedures** : Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.
- Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

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6. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures** : Keep unauthorized personnel away. Use personal protective equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spills for later disposal.
- Notification Procedures** : Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.
- Environmental precautions** : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	:	Keep away from heat. Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Avoid inhalation of dust. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities	:	Keep container tightly closed. Store in a cool and well-ventilated place. Store in a dry place. Store away from incompatible materials.

8. Exposure Controls Personal Protection

Control parameters

Occupational exposure limits

Chemical Identity	Type	Exposure Limit Values	Source
LEAD NITRATE - as Pb	TWA	0.05 mg/m ³	US. ACGIH Threshold Limit Values (2011)
LEAD NITRATE	TWA	0.05 mg/m ³	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)
	OSHA_ACT	0.03 mg/m ³	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02

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			2006)
LEAD NITRATE - as Pb	TWA	0.05 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Biological Limit Values			
Chemical Identity	Exposure Limit Values		Source
LEAD NITRATE (Lead: Sampling time: Not critical.)	300 µg/l (Blood)		ACGIH BEL (2011)

Appropriate engineering controls : No data available.

Individual protection measures, such as personal protective equipment

General information : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/face protection : Use tight fitting goggles if dust is generated.

Hand protection : Chemical resistant gloves.

Other : Wear suitable protective clothing and gloves.

Respiratory protection : In case of inadequate ventilation use suitable respirator.

Hygiene measures : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

9. Physical and Chemical Properties

Appearance : White or colorless Solid Crystals.

Odor : Odorless

pH : 3.0 - 4.0 (25 °C) 20% aqueous solution

Melting point/freezing point : 470 °C

Initial boiling point and boiling range : No data available.

Flash Point : Not applicable

Vapor pressure : No data available.

Vapor density : 11.0 AIR=1

Relative density : 4.53 (20 °C)

: 376.5 g/l (0 °C)

: 565 g/l (20 °C)

Solubility in water : 1,270 g/l (100 °C)

Solubility (other) : ammonia: Soluble

Formula : Pb(NO₃)₂

Molecular Weight : 331.21 g/mol

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Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Material is stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	Contact with incompatible materials. Heat, sparks, flames.
Incompatible materials	:	Strong oxidizing agents. Flammable/combustible material. Organic compounds. Hydrogen peroxide (H ₂ O ₂)
Hazardous decomposition products	:	Toxic metal fumes may form when heated to decomposition.

11. Toxicological Information**Information on likely routes of exposure**

Ingestion	:	Harmful if swallowed. Lead is absorbed into the body by ingestion.
Inhalation	:	Harmful if inhaled.
Skin contact	:	May cause irritation.
Eye contact	:	Causes serious eye damage.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product	:	No data available.
Dermal Product	:	No data available.
Inhalation Product	:	No data available.
Repeated dose toxicity Product	:	No data available.
Skin corrosion/irritation Product	:	May cause skin irritation.
Serious eye damage/eye irritation Product	:	Causes serious eye damage.
Respiratory or skin sensitization Product	:	Causes serious eye damage.
Carcinogenicity Product	:	Suspected of causing cancer.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE	:	Overall evaluation: 2A. Probably carcinogenic to humans.
US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE	:	Reasonably Anticipated to be a Human Carcinogen.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050	:	No carcinogenic components identified
Germ cell mutagenicity	:	
In vitro Product	:	No mutagenic components identified
In vivo Product	:	No mutagenic components identified
Reproductive toxicity Product	:	May damage fertility or the unborn child.
Specific target organ toxicity -	:	No data available.

MATERIAL SAFETY DATA SHEET**Product Name:** Lead(II) nitrate**CAS No.:** 10099-74-8**Version:** 0**single exposure Product****Specific target organ toxicity - repeated exposure Product** : May cause damage to organs through prolonged or repeated exposure .**Aspiration hazard Product** : Not classified.**Other effects** : None known.**12. Ecological Information****Ecotoxicity****Acute hazards to the aquatic environment :****Fish Product** : No data available.**Specified substance(s): LEAD NITRATE** : LC 50 (Carp (Cyprinus carpio), 96 h): 0.17 mg/l Mortality
LC 50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss), 96 h): 1 mg/l Mortality**Aquatic invertebrates Product** : No data available.**Specified substance(s): LEAD NITRATE** : EC 50 (Water flea (Daphnia magna), 48 h): 1.753 - 2.003 mg/l Intoxication
LC 50 (Ostracod (Cypris), 48 h): 4.3 mg/l Mortality
LC 50 (Water flea (Daphnia magna), 48 h): 2.3 mg/l Mortality**Chronic hazards to the aquatic environment :****Fish Product** : No data available.**Aquatic invertebrates Product** : No data available.**Toxicity to Aquatic Plants Product:** : No data available.**Persistence and degradability****Biodegradation Product** : The product is not expected to be biodegradable.**BOD/COD ratio Product** : No data available.**Bioaccumulative potential****Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.**Product****Partition coefficient n-octanol / water (log Kow) Product** : No data available.**Mobility in soil** : No data available.**Other adverse effects** : Very toxic to aquatic organisms.

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13. Disposal consideration

Disposal instructions : Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated packaging : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 1469	Lead nitrate	5.1, 6.1	II	Yes
IMDG	UN 1469	Lead nitrate	5.1, 6.1	II	Yes
IATA	UN 1469	Lead nitrate	5.1, 6.1	II	No

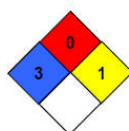
15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. Other Information

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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