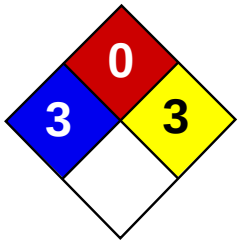

Health	3
Fire	0
Reactivity	3
Personal Protection	H

Material Safety Data Sheet
Lead nitrate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Lead nitrate

Catalog Codes: SLL1492

CAS#: 10099-74-8

RTECS: OG2100000

TSCA: TSCA 8(b) inventory: Lead nitrate

CI#: Not available.

Synonym: Lead (2+) Nitrate; Lead dinitrate; Lead (II) Nitrate; Nitric acid, lead (2+); Plumbous nitrate

Chemical Name: Lead Nitrate

Chemical Formula: Pb(NO3)2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Lead nitrate	10099-74-8	100

Toxicological Data on Ingredients: Lead nitrate LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED]. The substance may be toxic to blood, kidneys, the reproductive system, peripheral nervous system, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: combustible materials, organic materials

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat, of combustible materials, of organic materials.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:
Will accelerate burning when involved in a fire. May ignite combustibles (wood, paper, oil, clothing, etc.). Lead nitrate reacts with brilliant sparks when projected on red-hot carbon. Dangerous fire risk in contact with organic materials. When heated to decomposition it emits very toxic fumes of lead and nitrogen oxides.

Special Remarks on Explosion Hazards:
May react explosively with hydrocarbons (fuels). Many metal oxo-compounds (nitrates, oxides, and particularly sulfates) and sulfides are reduced violently or explosively in heating with aluminum powder to a suitably high temperature. May explode when in presence of organic or easily oxidizable compounds. May form explosive compound with ammonium thiocyanate, potassium acetate, or lead hypophosphite.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as combustible materials, organic materials.

Storage:
Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.05 (mg(Pb)/m) from OSHA (PEL) [United States] TWA: 0.05 (mg(Pb)/m) from ACGIH (TLV) [United States] TWA: 0.1 (mg(Pb)/m) from NIOSHConsult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Translucent crystals.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: 331.2 g/mole

Color: White. Colorless.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: 470°C (878°F) - decomposes

Critical Temperature: Not available.

Specific Gravity: 4.53 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol.

Solubility:
Easily soluble in cold water, hot water. Soluble in methanol. Solubility in water: 1 g/2 ml cold water; 1 g/0.75 ml boiling water; 37.65 g/100 ml water @ 0 deg. C; 56.5 g/100 ml water @ 20 deg. C; 127 g/100 ml water at 100 deg. C. Solubility in absolute alcohol: 1 g/2500 ml Solubility in Methanol: 1 g/75 ml Insoluble in concentrate nitric acid.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Highly reactive with combustible materials, organic materials.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with Ammonium thiocyanate, powdered carbon, lead hypophosphite, potassium acetate, aluminum, alkyl esters, hydroxylamine, phosphorus, phosphinates, sulfur, tin chloride.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED]. May cause damage to the following organs: blood, kidneys, the reproductive system, peripheral nervous system, central nervous system (CNS).

Other Toxic Effects on Humans:
Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
Human: passes through the placenta. May cause adverse reproductive effects and birth defects (teratogenic). May affect genetic material (mutagenic). It may cause cancer, but their is no conclusive evidence in humans. The American Conference of Governmental Industrial Hygienists (ACGIH) classified it as a confirmed animal carcinogen with unknown relevance to humans (A3).

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. It may be absorbed through the skin. Eyes: Causes eye irritation. Inhalation: Breathing lead nitrate can irritate the nose and throat. Irritation of the bronchi and lungs may also occur. It may be absorbed through the respiratory system. It may cause methemoglobimnemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of blood), convulsions, tachycardia, chest pain due to dyspnea (labored breathing), and death. It may also affect behavior/central nervous system and cause central nervous system effects including headache, convulsions, and possible death. It may cause kidney damage and anemia. It may also cause other symptoms similar to that of ingestion. Ingestion: Acute lead poisoning or plumbism is rare. Acute lead poisoning by ingestion may result in lead colic, abdominal discomfort or cramps, lead line on the gums, anorexia (loss of appetite)/weight loss, constipation, metallic taste. It may also affect behavior/centeral nervous system and cause headache, lassitude, insomnia, muscle weakness, depression, irritability, lassitude, dizziness, reduced memory, disturbed sleep, poor

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 240 ppm 48 hours [Fish (Mosquito fish)]. 6.7 ppm 96 hours [Daphnia (daphnia)].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification:
CLASS 5.1: Oxidizing material. CLASS 6.1: Poisonous material.

Identification: : Lead nitrate UNNA: 1469 PG: II

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Lead nitrate (Listed as Lead and Lead compounds) California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Lead nitrate (Listed as Lead and Lead compounds) California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (male) which would require a warning under the statute: Lead nitrate (Listed as Lead and Lead compounds) California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Lead nitrate (Listed as Lead and Lead compounds) California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Lead nitrate (Listed as Lead and Lead compounds)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS C: Oxidizing material. CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R8- Contact with combustible material may cause fire. R20/22- Harmful by inhalation and if swallowed. R33- Danger of cumulative effects. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R61- May cause harm to the unborn child. R62- Possible risk of impaired fertility. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S53- Avoid exposure - obtain special instructions before use. S60- This material and its container must be disposed of as hazardous waste. S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 3

Personal Protection: H

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 3

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Synthetic apron. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles. Protective apron.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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