# Material Safety Data Sheet
## Lead(II) nitrate

ACC# 12660

## Section 1 - Chemical Product and Company Identification

**MSDS Name:** Lead(II) nitrate
**Catalog Numbers:** AC193320100, AC211560010, AC211560050, AC211565000, AC423850050, AC423855000, S71959, S73056, S75326, S75329, S93274, L61-3, L62-100, L62-500
**Synonyms:** Lead dinitrate; Nitric acid, lead(2+) salt; Plumbous nitrate.
**Company Identification:**

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100
**Emergency Number:** 201-796-7100
**For CHEMTREC assistance, call:** 800-424-9300
**For International CHEMTREC assistance, call:** 703-527-3887

## Section 2 - Composition, Information on Ingredients

| CAS# | Chemical Name | Percent | EINECS/ELINCS |
|---|---|---|---|
| 10099-74-8 | Lead nitrate | >99 | 233-245-9 |

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

Appearance: white solid.
**Danger!** Strong oxidizer. Contact with other material may cause a fire. May cause harm to the unborn child. Harmful if inhaled or swallowed. Impairs the oxygen carrying capacity of the blood. May cause central nervous system effects. May cause cancer based on animal studies. May cause kidney damage. Danger of cumulative effects. Possible risk of impaired fertility. Marine pollutant.
**Target Organs:** Blood, kidneys, central nervous system, reproductive system.

**Potential Health Effects**
**Eye:** Causes eye irritation.
**Skin:** Causes skin irritation.
**Ingestion:** Harmful if swallowed. Ingestion of nitrate containing compounds can lead to methemoglobinemia. Ingestion of lead compounds can cause toxic effects in the blood-forming organs, kidneys and central nervous system. Ingestion of lead compounds can produce symptoms of lead poisoning. Symptoms of lead poisoning or plumbism include weakness, weight loss, lassitude, insomnia, and hypotension. It also includes constipation, anorexia, abdominal discomfort and colic.
**Inhalation:** Harmful if inhaled. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown blood. May cause methemoglobinemia.
**Chronic:** May cause methemoglobinemia, which is characterized by chocolate-brown colored

blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death. Chronic exposure to lead may result in plumbism which is characterized by lead line in gum, headache, muscle weakness, mental changes. Lead salts have been reported to cross the placenta and induce embryo- and feto- mortality. Chronic expsoure to lead may cause adverse effects on human reproduction, embryonic and fetal development and postnatal (e.g., mental) development.

## Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.
**Skin:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.
**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
**Extinguishing Media:** Use water only!
**Flash Point:** Not applicable.
**Autoignition Temperature:** Not applicable.
**Explosion Limits, Lower:**Not available.
**Upper:** Not available.
**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability:; Special Hazard: OX

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.
**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Keep combustibles (wood, paper, oil, etc.,) away from spilled material.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep from contact with clothing and other combustible materials. Do not breathe dust. Inform laundry personnel of contaminant's hazards.

**Storage:** Do not store near combustible materials. Keep away from reducing agents.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Exposure Limits**

| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs |
|---|---|---|---|
| Lead nitrate | 0.05 mg/m3 TWA (as Pb) (listed under Lead, inorganic compounds). | 0.050 mg/m3 TWA (as Pb) (listed under Lead compounds). | 50 æg/m3 TWA (as Pb); 30 æg/m3 Action Level (as Pb. Poison - see 29 CFR 1910.10 25) (listed under Lead, inorganic compounds). |

**OSHA Vacated PELs:** Lead nitrate: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary. Refer to 29 CFR1910.1025 for regulations on respiratory protection required during exposure to lead and lead compounds.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid
**Appearance:** white
**Odor:** odorless
**pH:** 3-4 (20% aq soln)
**Vapor Pressure:** Negligible.
**Vapor Density:** Not available.
**Evaporation Rate:**Negligible.
**Viscosity:** Not available.
**Boiling Point:** Not available.
**Freezing/Melting Point:**470 deg C (dec)
**Decomposition Temperature:**470 deg C
**Solubility:** Soluble.
**Specific Gravity/Density:**4.53
**Molecular Formula:**N2O6Pb
**Molecular Weight:**331.20

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Dust generation, excess heat.
**Incompatibilities with Other Materials:** Strong reducing agents, combustible organics.
**Hazardous Decomposition Products:** Nitrogen oxides, lead/lead oxides, lead fumes.
**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**
**CAS#** 10099-74-8: OG2100000
**LD50/LC50:**
Not available.
Oral LDLo guinea pig: 500 mg/kg.
**Carcinogenicity:**
CAS# 10099-74-8:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans (as Pb) (listed as 'Lead, inorganic compounds').
- **California:** carcinogen, initial date 10/1/92 (listed as Lead compounds).
- **NTP:** Not listed.
- **IARC:** Group 2A carcinogen (listed as Lead, inorganic compounds).

**Epidemiology:** Repeated exposure to lead has caused many toxic effects including: neurological changes, kidney damage, and blood abnormalities.
**Teratogenicity:** No data available.
**Reproductive Effects:** No data available.
**Mutagenicity:** No data available.
**Neurotoxicity:** Repeated exposure to lead has caused neurological changes.
**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.
**Environmental:** No information available.
**Physical:** No information available.
**Other:** Marine pollutant.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
**RCRA P-Series:** None listed.
**RCRA U-Series:** None listed.

## Section 14 - Transport Information

| | US DOT | Canada TDG |
|---|---|---|
| **Shipping Name:** | LEAD NITRATE | LEAD NITRATE |
| **Hazard Class:** | 5.1 | 5.1(6.1) |
| **UN Number:** | UN1469 | UN1469 |
| **Packing Group:** | II | II |

## Section 15 - Regulatory Information

### US FEDERAL

**TSCA**

CAS# 10099-74-8 is listed on the TSCA inventory.

**Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**

None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

**CERCLA Hazardous Substances and corresponding RQs**

CAS# 10099-74-8: 10 lb final RQ; 4.54 kg final RQ

**SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

**SARA Codes**

CAS # 10099-74-8: acute, chronic, flammable, reactive.

**Section 313**

This material contains Lead nitrate (listed as Lead compounds), >99%, (CAS# 10099-74-8) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

**Clean Air Act:**

CAS# 10099-74-8 (listed as Lead compounds) is listed as a hazardous air pollutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**

CAS# 10099-74-8 is listed as a Hazardous Substance under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 10099-74-8 is listed as a Toxic Pollutant under the Clean Water Act.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 10099-74-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, (listed as Lead, inorganic compounds), Massachusetts.

**California Prop 65**

**The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:**

WARNING: This product contains Lead nitrate, listed as `Lead compounds', a chemical known to the state of California to cause cancer. WARNING: This product contains Lead nitrate, listed as `Lead, inorganic compounds', a chemical known to the state of California to cause male

reproductive toxicity.
California No Significant Risk Level: None of the chemicals in this product are listed.

## European/International Regulations

### European Labeling in Accordance with EC Directives

**Hazard Symbols:**

T O N

**Risk Phrases:**

R 20/22 Harmful by inhalation and if swallowed.
R 33 Danger of cumulative effects.
R 8 Contact with combustible material may cause fire.
R 61 May cause harm to the unborn child.
R 62 Possible risk of impaired fertility.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety Phrases:**

S 17 Keep away from combustible material.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 53 Avoid exposure - obtain special instructions before use.
S 60 This material and its container must be disposed of as hazardous waste.
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

**WGK (Water Danger/Protection)**

CAS# 10099-74-8: 2

**Canada - DSL/NDSL**

CAS# 10099-74-8 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of C, D2A.

**Canadian Ingredient Disclosure List**

CAS# 10099-74-8 is listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 12/12/1997
**Revision #7 Date:** 2/08/2005

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*