



## SAFETY DATA SHEET

Creation Date 07-Jul-2009

Revision Date 16-May-2014

Revision Number 1

### 1. Identification

**Product Name** Lead(II) nitrate

**Cat No. :** AC423850000, AC423850025, AC423850050, AC423855000;

**Synonyms** Nitric acid, lead(2+) salt; Plumbous nitrate.; Lead dinitrate

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

| Company   | Entity / Business Name                                    | Emergency Telephone Number  |
|---|---|---|
| Fisher Scientific<br>One Reagent Lane<br>Fair Lawn, NJ 07410<br>Tel: (201) 796-7100 | Acros Organics<br>One Reagent Lane<br>Fair Lawn, NJ 07410 | For information <b>US</b> call: 001-800-ACROS-01<br>/ <b>Europe</b> call: +32 14 57 52 11<br>Emergency Number <b>US</b> :001-201-796-7100 /<br><b>Europe</b> : +32 14 57 52 99<br><b>CHEMTREC</b> Tel. No. <b>US</b> :001-800-424-9300 /<br><b>Europe</b> :001-703-527-3887 |

### 2. Hazard(s) identification

#### **Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|  |             |
|--|-------------|
| Oxidizing solids                                     | Category 3  |
| Acute oral toxicity                                  | Category 4  |
| Acute Inhalation Toxicity - Dusts and Mists          | Category 4  |
| Serious Eye Damage/Eye Irritation                    | Category 1  |
| Carcinogenicity                                      | Category 1B |
| Reproductive Toxicity                                | Category 1A |
| Specific target organ toxicity (single exposure)     | Category 3  |
| Target Organs - Central nervous system (CNS).        |             |
| Specific target organ toxicity - (repeated exposure) | Category 2  |
| Target Organs - Kidney, Liver, Blood.                |             |

#### **Label Elements**

##### **Signal Word**

Danger

##### **Hazard Statements**

May intensify fire; oxidizer  
Harmful if swallowed  
Causes serious eye damage  
Harmful if inhaled  
May cause drowsiness or dizziness  
May cause cancer

May damage the unborn child. Suspected of damaging fertility  
May cause damage to organs through prolonged or repeated exposure



### Precautionary Statements

#### Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Do not breathe dust/fume/gas/mist/vapors/spray  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep/Store away from clothing/ other combustible materials  
Take any precaution to avoid mixing with combustibles

#### Response

IF exposed or concerned: Get medical attention/advice

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

#### Eyes

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

#### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

#### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

#### Storage

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

## 3. Composition / information on ingredients

| Component        | CAS-No     | Weight % |
|------------------|------------|----------|
| Lead(II) nitrate | 10099-74-8 | >95      |

## 4. First-aid measures

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Obtain medical attention.

#### Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

#### Inhalation

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

**Ingestion** Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Most important symptoms/effects** Causes eye burns.  
**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

**Unsuitable Extinguishing Media** No information available

**Flash Point** Not applicable  
**Method -** No information available

**Autoignition Temperature**

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Oxidizing Properties** Oxidizer

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

### Specific Hazards Arising from the Chemical

Oxidizer: Contact with combustible/organic material may cause fire. Thermal decomposition can lead to release of irritating gases and vapors. May ignite combustibles (wood paper, oil, clothing, etc.). Do not allow run-off from fire fighting to enter drains or water courses.

### Hazardous Combustion Products

Nitrogen oxides (NOx) lead oxides

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

**Health**  
2

**Flammability**  
0

**Instability**  
2

**Physical hazards**  
OX

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid dust formation.

**Environmental Precautions** Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

**Methods for Containment and Clean Up** Provide adequate ventilation. Keep combustibles (wood, paper, oil, etc) away from spilled material. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

**Handling** Use only under a chemical fume hood. Wear personal protective equipment. Keep away from clothing and other combustible materials. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near

combustible materials.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Component        | ACGIH TLV                   | OSHA PEL | NIOSH IDLH  |
|------------------|-----------------------------|----------|---|
| Lead(II) nitrate | TWA: 0.05 mg/m <sup>3</sup> |          | IDLH: 100 mg/m <sup>3</sup><br>TWA: 0.050 mg/m <sup>3</sup> |

| Component        | Quebec                      | Mexico OEL (TWA)            | Ontario TWAEV               |
|------------------|-----------------------------|-----------------------------|-----------------------------|
| Lead(II) nitrate | TWA: 0.05 mg/m <sup>3</sup> | TWA: 0.15 mg/m <sup>3</sup> | TWA: 0.05 mg/m <sup>3</sup> |

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures** Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

**Eye/face Protection** 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 and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|   |                          |
|---|--------------------------|
| <b>Physical State</b>                         | Solid                    |
| <b>Appearance</b>                             | White                    |
| <b>Odor</b>                                   | Odorless                 |
| <b>Odor Threshold</b>                         | No information available |
| <b>pH</b>                                     | 3 - 4 20% aq. sol        |
| <b>Melting Point/Range</b>                    | 470 °C / 878 °F          |
| <b>Boiling Point/Range</b>                    | No information available |
| <b>Flash Point</b>                            | Not applicable           |
| <b>Evaporation Rate</b>                       | Not applicable           |
| <b>Flammability (solid,gas)</b>               | No information available |
| <b>Flammability or explosive limits</b>       |                          |
| <b>Upper</b>                                  | No data available        |
| <b>Lower</b>                                  | No data available        |
| <b>Vapor Pressure</b>                         | negligible               |
| <b>Vapor Density</b>                          | Not applicable           |
| <b>Relative Density</b>                       | 4.530                    |
| <b>Solubility</b>                             | Soluble in water         |
| <b>Partition coefficient; n-octanol/water</b> | No data available        |
| <b>Autoignition Temperature</b>               |                          |
| <b>Decomposition Temperature</b>              | No information available |
| <b>Viscosity</b>                              | Not applicable           |
| <b>Molecular Formula</b>                      | N2 O6 Pb                 |
| <b>Molecular Weight</b>                       | 331.2                    |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactive Hazard</b>                  | Yes  |
| <b>Stability</b>                        | Oxidizer: Contact with combustible/organic material may cause fire.              |
| <b>Conditions to Avoid</b>              | Avoid dust formation. Incompatible products. Excess heat. Combustible material.  |
| <b>Incompatible Materials</b>           | Strong reducing agents, Organic materials, Powdered metals, Combustible material |
| <b>Hazardous Decomposition Products</b> | Nitrogen oxides (NOx), lead oxides   |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.   |
| <b>Hazardous Reactions</b>              | None under normal processing.  |

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

| Component        | LD50 Oral        | LD50 Dermal | LC50 Inhalation |
|------------------|------------------|-------------|-----------------|
| Lead(II) nitrate | 93 mg/kg ( Rat ) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                        |  |
|------------------------|--|
| <b>Irritation</b>      | Risk of serious damage to eyes   |
| <b>Sensitization</b>   | No information available   |
| <b>Carcinogenicity</b> | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component        | CAS-No     | IARC     | NTP        | ACGIH | OSHA | Mexico     |
|------------------|------------|----------|------------|-------|------|------------|
| Lead(II) nitrate | 10099-74-8 | Group 2A | Not listed | A3    | X    | Not listed |

*IARC: (International Agency for Research on Cancer)*

*IARC: (International Agency for Research on Cancer)*

*Group 1 - Carcinogenic to Humans*

*Group 2A - Probably Carcinogenic to Humans*

*Group 2B - Possibly Carcinogenic to Humans*

|  |  |
|--|--|
| <b>Mutagenic Effects</b>                         | Mutagenic effects have occurred in humans.   |
| <b>Reproductive Effects</b>                      | Experiments have shown reproductive toxicity effects on laboratory animals.  |
| <b>Developmental Effects</b>                     | Developmental effects have occurred in experimental animals.   |
| <b>Teratogenicity</b>                            | Teratogenic effects have occurred in experimental animals.   |
| <b>STOT - single exposure</b>                    | Central nervous system (CNS)   |
| <b>STOT - repeated exposure</b>                  | Kidney Liver Blood   |
| <b>Aspiration hazard</b>                         | No information available   |
| <b>Symptoms / effects,both acute and delayed</b> | No information available   |
| <b>Endocrine Disruptor Information</b>           | No information available   |
| <b>Other Adverse Effects</b>                     | The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information. |

## 12. Ecological information

This product contains a chemical which is listed as a marine pollutant according to DOT

### Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

| Component        | Freshwater Algae | Freshwater Fish  | Microtox   | Water Flea                                 |
|------------------|------------------|--|------------|--|
| Lead(II) nitrate | Not listed       | LC50: 1.5 mg/l/96 h<br>(Oncorhynchus mykiss)<br>LC50: 0.4 - 1.3 mg/l/96 H<br>(Cyprinus carpio) | Not listed | EC50: 0.5 - 2 mg/l/48 H<br>(Daphnia magna) |

**Persistence and Degradability** based on information available. May persist

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

UN-No UN1469  
 Proper Shipping Name LEAD NITRATE  
 Hazard Class 5.1  
 Subsidiary Hazard Class 6.1  
 Packing Group II

### TDG

UN-No UN1469  
 Proper Shipping Name LEAD NITRATE  
 Hazard Class 5.1  
 Subsidiary Hazard Class 6.1  
 Packing Group II

### IATA

UN-No 1469  
 Proper Shipping Name LEAD NITRATE  
 Hazard Class 5.1  
 Subsidiary Hazard Class 6.1  
 Packing Group II

### IMDG/IMO

UN-No 1469  
 Proper Shipping Name LEAD NITRATE  
 Hazard Class 5.1  
 Subsidiary Hazard Class 6.1  
 Packing Group II

## 15. Regulatory information

### International Inventories

| Component        | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|------------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Lead(II) nitrate | X    | X   | -    | 233-245-9 | -      |     | X     | X    | X    | X     | X    |

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

TSCA 12(b) Not applicable

### SARA 313

| Component        | CAS-No     | Weight % | SARA 313 - Threshold Values % |
|------------------|------------|----------|-------------------------------|
| Lead(II) nitrate | 10099-74-8 | >95      | 0.1 1.0                       |

### SARA 311/312 Hazardous Categorization

|                                   |     |
|-----------------------------------|-----|
| Acute Health Hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire Hazard                       | No  |
| Sudden Release of Pressure Hazard | No  |
| Reactive Hazard                   | Yes |

### Clean Water Act

| Component        | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Lead(II) nitrate | X                          | 10 lb                       | X                      | -                         |

### Clean Air Act

| Component        | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|------------------|-----------|-------------------------|-------------------------|
| Lead(II) nitrate | X         |                         | -                       |

### OSHA Occupational Safety and Health Administration

| Component        | Specifically Regulated Chemicals                              | Highly Hazardous Chemicals |
|------------------|---|----------------------------|
| Lead(II) nitrate | 30 µg/m <sup>3</sup> Action Level<br>50 µg/m <sup>3</sup> TWA | -                          |

### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component        | Hazardous Substances RQs | CERCLA EHS RQs |
|------------------|--------------------------|----------------|
| Lead(II) nitrate | 10 lb                    | -              |

**California Proposition 65** This product contains the following Proposition 65 chemicals:

| Component        | CAS-No     | California Prop. 65  | Prop 65 NSRL | Category                 |
|------------------|------------|----------------------|--------------|--------------------------|
| Lead(II) nitrate | 10099-74-8 | Cancer/Developmental | -            | Developmental Carcinogen |

### State Right-to-Know

| Component        | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|------------------|---------------|------------|--------------|----------|--------------|
| Lead(II) nitrate | X             | X          | X            | X        | X            |

### U.S. Department of Transportation

Reportable Quantity (RQ): Y

DOT Marine Pollutant Y  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class** C Oxidizing materials  
D1B Toxic materials  
D2A Very toxic materials  
E Corrosive material

**16. Other information**

**Prepared By** Regulatory Affairs  
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**Creation Date** 07-Jul-2009  
**Revision Date** 16-May-2014  
**Print Date** 16-May-2014  
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**