

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** LEAD NITRATE

**Other means of identification**

**Product No.:** 2322

**Recommended use and restriction on use**

**Recommended use:** Not available.

**Restrictions on use:** Not known.

**Manufacturer/Importer/Supplier/Distributor Information**

**Manufacturer**

**Company Name:** Avantor Performance Materials, Inc.  
**Address:** 3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034

**Telephone:** Customer Service: 855-282-6867

**Fax:**  
**Contact Person:** Environmental Health & Safety  
**e-mail:** info@avantormaterials.com

**Emergency telephone number:**

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

## 2. Hazard(s) 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 1B

Toxic to reproduction Category 1A

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

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** May intensify fire; oxidizer.  
Harmful if swallowed.  
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:** Store locked up.

**Disposal:** 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.

**3. Composition/information on ingredients**

**Substances**

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
LEAD NITRATE		10099-74-8	100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

**General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

<b>Ingestion:</b>	Rinse mouth thoroughly. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Inhalation:</b>	Move to fresh air. Get medical attention if symptoms persist.
<b>Skin Contact:</b>	Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.
<b>Eye contact:</b>	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.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** Harmful if swallowed. Causes serious eye damage.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** 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.

**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. See Section 8 of the MSDS for Personal Protective Equipment.

**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.

**Notification Procedures:** Prevent entry into waterways, sewer, basements or confined areas. Stop leak if you can do so without risk. Inform authorities if large amounts are involved.

**Environmental Precautions:** 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 <sup>3</sup>	US. ACGIH Threshold Limit Values (2011)
LEAD NITRATE	TWA	0.05 mg/m <sup>3</sup>	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)
	OSHA_AC T	0.03 mg/m <sup>3</sup>	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)
LEAD NITRATE - as Pb	TWA	0.05 mg/m <sup>3</sup>	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.

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

#### Skin Protection

**Hand Protection:** Wear protective gloves.

**Other:** Wear suitable protective clothing.

**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

<b>Physical state:</b>	Solid
<b>Form:</b>	Crystals
<b>Color:</b>	White or colorless
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	3.0 - 4.0 (25 °C) 20% aqueous solution
<b>Melting point/freezing point:</b>	470 °C
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	No data available.
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	11.0 AIR=1
<b>Relative density:</b>	4.53 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	376.5 g/l (0 °C) 565 g/l (20 °C) 1,270 g/l (100 °C)
<b>Solubility (other):</b>	ammonia: Soluble
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other information</b>	
<b>Molecular weight:</b>	331.23 g/mol (HNO <sub>3</sub> )

## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of Hazardous Reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to Avoid:</b>	Contact with incompatible materials. Heat, sparks, flames.
<b>Incompatible Materials:</b>	Strong oxidizing agents. Flammable/combustible material. Organic compounds. Hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> )
<b>Hazardous Decomposition Products:</b>	Toxic metal fumes may form when heated to decomposition.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion:</b>	Harmful if swallowed. Lead is absorbed into the body by ingestion.
<b>Inhalation:</b>	Harmful if inhaled.
<b>Skin Contact:</b>	May cause irritation.
<b>Eye contact:</b>	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:** Not a skin sensitizer.

**Carcinogenicity**  
**Product:** May cause cancer.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

LEAD NITRATE Overall evaluation: 2A. Probably carcinogenic to humans.

**US. National Toxicology Program (NTP) Report on Carcinogens:**

LEAD NITRATE 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 - Single Exposure**  
**Product:** No data available.

**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:** There are no data on the degradability of this product.

#### BOD/COD Ratio

**Product:** No data available.

### Bioaccumulative Potential

#### Bioconcentration Factor (BCF)

**Product:** No data available on bioaccumulation.

#### Partition Coefficient n-octanol / water (log Kow)

**Product:** No data available.

**Mobility in Soil:** No data available.

**Other Adverse Effects:** Very toxic to aquatic life with long lasting effects.

## 13. Disposal considerations

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

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

## 14. Transport information

### DOT

UN Number:	UN 1469
UN Proper Shipping Name:	Lead nitrate
Transport Hazard Class(es):	
Class(es):	5.1, 6.1
Label(s):	5.1, 6.1
Packing Group:	II
Marine Pollutant:	Yes

### IMDG

UN Number:	UN 1469
UN Proper Shipping Name:	LEAD NITRATE
Transport Hazard Class(es):	
Class(es):	5.1, 6.1
Label(s):	5.1, 6.1
EmS No.:	F-A, S-Q
Packing Group:	II
Marine Pollutant:	Yes

### IATA

UN Number:	UN 1469
Proper Shipping Name:	Lead nitrate
Transport Hazard Class(es):	
Class(es):	5.1, 6.1
Label(s):	5.1, 6.1
Marine Pollutant:	No
Packing Group:	II

## 15. Regulatory information

### US Federal Regulations

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

#### CERCLA Hazardous Substance List (40 CFR 302.4):

LEAD NITRATE Reportable quantity: 10 lbs.

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

##### Hazard categories

Acute (Immediate)  Chronic (Delayed)  Fire  Reactive  Pressure Generating

##### SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

<b>Chemical Identity</b>	<b>RQ</b>
LEAD NITRATE	10 lbs.

**SARA 311/312 Hazardous Chemical**

<b>Chemical Identity</b>	<b>Threshold Planning Quantity</b>
LEAD NITRATE	500 lbs

**SARA 313 (TRI Reporting)**

<b>Chemical Identity</b>	<b>Reporting threshold for other users</b>	<b>Reporting threshold for manufacturing and processing</b>
LEAD NITRATE	10000 lbs 100 lbs	25000 lbs.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

LEAD NITRATE Reportable quantity: 10 lbs.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**

LEAD NITRATE	Carcinogenic.
LEAD NITRATE	Male reproductive toxin.
LEAD NITRATE	Female reproductive toxin.
LEAD NITRATE	Developmental toxin.

**US. New Jersey Worker and Community Right-to-Know Act**

LEAD NITRATE Listed

**US. Massachusetts RTK - Substance List**

LEAD NITRATE Listed

**US. Pennsylvania RTK - Hazardous Substances**

LEAD NITRATE Listed

**US. Rhode Island RTK**

LEAD NITRATE Listed

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



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

**Issue Date:** 10-15-2014

**Revision Date:** No data available.

**Version #:** 1.0

**Further Information:** No data available.

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