

Lead (II) Nitrate 0.1M

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lead (II) Nitrate 0.1M

Synonyms/Generic Names: Lead (2+) Nitrate; Lead dinitrate; Nitric acid, lead (2+); Plumbous nitrate

SDS Number: 403.10

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Carcinogen, Target organ effect, Toxic by inhalation, Harmful by ingestion, Irritant, Teratogen

Target Organs: Blood, Heart, Kidneys, Endocrine system, Immune system, Central nervous system

Signal Word: Danger

Pictograms:



GHS Classification:

Acute toxicity, Inhalation	Category 5
Serious eye damage	Category 1
Reproductive toxicity	Category 1A
Specific target organ toxicity-repeated exposure	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 2

GHS Label Elements, including precautionary statements:

Hazard Statements:

H318	Causes serious eye damage.
H333	May be harmful if inhaled.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/ attention.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	Toxic if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	Toxic if swallowed.

NFPA Ratings

Health	1
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	1
Fire	0
Reactivity	0
Personal	H

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Lead Nitrate	3-4	10099-74-8	233-245-9	Pb(NO ₃) ₂	331.20 g/mol
Water	Balance	7732-18-5	231-791-2	H ₂ O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment	Wear self-contained, approved breathing apparatus and full protective

and precautions for firefighters	clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (lead oxides, nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Lead and inorganic compounds	0.05 mg/m ³	TLV	ACGIH
	0.05 mg/m ³	PEL	OSHA
	0.05 mg/m ³	REL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles with face shield.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and body suit. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid.
Odor	Odorless.
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	1.00 g/mL @ 20°C (water = 1)
Solubility (ies)	Not Available
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Not Available
Incompatible Materials	Alkali metals, powdered metals, acetic anhydride, organic materials, alcohols, reducing agents, Acetonitrile, Acrylonitrile.
Hazardous Decomposition Products	Lead oxides, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available

Carcinogenicity

IARC	2A: Probably carcinogenic to humans (lead (II) nitrate).
ACGIH	A3: Confirmed animal carcinogen with unknown relevance to humans (lead (II) nitrate).
NTP	Reasonably anticipated to be a human carcinogen (lead (II) nitrate).
OSHA	1910.1025 (lead (II) nitrate).

Signs & Symptoms of Exposure

Skin	Redness, itching.
Eyes	Redness, tearing, itching, burning, conjunctivitis.
Respiratory	Irritation of mucous membranes, coughing, wheezing, shortness of breath.
Ingestion	Irritation and burning sensations of mouth and throat, nausea, vomiting, abdominal pain.

Chronic Toxicity	Not Available
Teratogenicity	Crosses the placenta and to induce embryo- and feto- mortality
Mutagenicity	Not Available
Embryotoxicity	Crosses the placenta and to induce embryo- and feto- mortality
Specific Target Organ Toxicity	May cause damage to organs through prolonged or repeated exposure.
Reproductive Toxicity	Known human reproductive toxicant
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product containers.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1469, Lead Nitrate Solution, 5.1, (6.1), pg II
TDG	UN1469, LEAD NITRATE SOLUTION, 5.1, (6.1), pg II
IMDG	UN1469, LEAD NITRATE SOLUTION, 5.1, (6.1), pg II
Marine Pollutant	Yes
IATA/ICAO	UN1469, Lead Nitrate Solution, 5.1, (6.1), pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Listed: Lead Nitrate
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Lead Nitrate
SARA 312	Lead Nitrate
SARA 313	Listed: Lead Nitrate
WHMIS Canada	Class C: Oxidizing material Class D-1A: Poisonous and infectious material- Immediate and serious effects- Very toxic Class D-2A: Poisonous and infectious material- Other effects- Very toxic

16. OTHER INFORMATION

Revision	Date
Revision 1	01/07/2013
Revision 2	07/01/2013

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