Safety Data Sheet

Lead Nitrate Crystal, ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lead Nitrate Crystal, ACS

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

Product Number: C4790

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer:

Lab Alley LLC
22111 Highway 71 West, Suite 601
Spicewood, Texas 78669
Tel.: 512-668-9918

In Case of Emergency Call:

InfoTrac: 800-535-5053

2. HAZARDS IDENTIFICATION

OSHA Hazards: Oxidizer, Carcinogen, Target Organ Effect, Toxic by inhalation, Harmful by ingestion, Irritant, Teratogen

Target Organs: Blood, Heart, Kidneys, Endocrine, Immune and Central nervous systems.

Signal Word: Danger

Pictograms:

GHS Classification:

Oxidizing solids	Category 2
Acute toxicity, Oral	Category 4
Acute toxicity, Inhalation	Category 4
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 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H272	May intensify fire; oxidizer.
H302 + H332	Harmful if swallowed or if inhaled
H318	Causes serious eye damage.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P201	Obtain special instructions before use.
P220	Keep/Store away from clothing/ combustible materials.
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.
P501	Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

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

NFPA Ratings

Health	3
Flammability	0
Reactivity	2
Specific hazard	OX

HMIS Ratings

Health	3
Fire	0
Reactivity	2
Personal	H

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Lead Nitrate	100	10099-74-8	233-245-9	$Pb(NO_3)_2$	331.21 g/mol

4. FIRST-AID MEASURES

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention immediately.
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 immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

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 and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

Specific hazards arising from the chemical	Emits toxic fumes (nitrogen oxides, lead 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	Pick up and arrange disposal without creating dust. Sweep up and place in suitable, closed containers 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 dusts.

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, complete suit protecting against chemicals.
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.)	Whit solid
Odor	Odorless.
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	470 °C (878 °F) - dec
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	4.53 g/cm^3
Density	Not Available
Solubility (ies)	Water: 500 g/l Ethanol: 0.4 g/l Methanol: 13.3 g/l
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	Strong reducing agents, organic materials, powdered metals
Hazardous Decomposition Products	Nitrogen oxides, lead oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available
Other	LD50 Intravenous - rat - 93 mg/kg LD50 Intraperitoneal - mouse - 74 mg/kg

Carcinogenicity

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

Signs & Symptoms of Exposure

Skin	Irritation, redness, itchiness.
Eyes	Irritation, redness, watering eyes, itchiness.
Respiratory	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
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/central nervous system and cause headache, lassitude, insomnia, muscle weakness, depression, irritability, lassitude, dizziness, reduced memory, disturbed sleep.

Chronic Toxicity	Not Available
Teratogenicity	Developmental Toxicity - rat Specific Developmental Abnormalities: Central nervous system. Known human reproductive toxicant
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	May cause damage to organs through prolonged or repeated exposure.
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	LC50 - Oncorhynchus mykiss (rainbow trout) - 1.5 mg/l - 96.0 h LC50 - Cyprinus carpio (Carp) - 0.4 - 1.3 mg/l - 96.0 h
Aquatic Invertebrate	EC50 - Daphnia magna (Water flea) - 0.5 - 2.0 mg/l - 48 h
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 with long lasting effects.

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 container.
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 container.

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, 5.1, (6.1), pg II
TDG	UN1469, LEAD NITRATE, 5.1, (6.1), pg II
IMDG	UN1469, LEAD NITRATE, 5.1, (6.1), pg II
Marine Pollutant	Yes
IATA/ICAO	UN1469, Lead nitrate, 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: Material causing immediate and serious toxic effects (VERY TOXIC). CLASSD-2A: Material causing other toxic effects (VERY TOXIC).

16. OTHER INFORMATION

Revision	Date
Revision 1	07-26-2012