

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (4N) 99.99% Lead Nitrate

Product Code: PB-NAT-04

CAS Number: 10099-74-8

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351
Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

,Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS08 Health hazard

Repr. 1A H360 May damage fertility or the unborn child.

STOT RE 2 H373 May cause damage to the kidneys, the liver, the blood and the brain through prolonged or repeated exposure. Route of exposure: Oral.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Hazards not otherwise classified

No data available

GHS label elements

GHS label elements, including precautionary statements

Hazard pictograms,



,GHS07

GHS08

Signal word

Danger

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H360 May damage fertility or the unborn child.

H373 May cause damage to the kidneys, the liver, the blood and the brain through prolonged or repeated exposure. Route of exposure: Oral.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P281 Use personal protective equipment as required.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

C - Oxidizing materials

D1B - Toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

2

0

2

Health (acute effects) = 2

Flammability = 0

Physical Hazard = 2

Other hazards

Results of PBT and vPvB assessment

PBT:

N/A

vPvB:

N/A,

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

,Substances

CAS No. / Substance Name:

10099-74-8 Lead(II) nitrate

Identification number(s):

EC number:

233-245-9

Index number:

082-001-00-6,

SECTION 4. FIRST AID MEASURES

,Description of first aid measures

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
In case of skin contact:
Immediately wash with soap and water; rinse thoroughly.
Seek immediate medical advice.
In case of eye contact:
Rinse opened eye for several minutes under running water. Consult a physician.
If swallowed:
Seek medical treatment.
Information for doctor
Most important symptoms and effects, both acute and delayed
No data available
Indication of any immediate medical attention and special treatment needed
No data available,

SECTION 5. FIREFIGHTING MEASURES

,Extinguishing media
Suitable extinguishing agents
Product is not flammable. Use fire-fighting measures that suit the surrounding fire.
For safety reasons unsuitable extinguishing agents
Halocarbon extinguisher
Special hazards arising from the substance or mixture
This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
If this product is involved in a fire, the following can be released:
Nitrogen oxides (NO_x)
Lead oxide fume
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.,

SECTION 6. ACCIDENTAL RELEASE MEASURES

,Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions:
Do not allow material to be released to the environment without official permits.
Methods and materials for containment and cleanup:
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
Prevention of secondary hazards:
Acts as an oxidizing agent on organic materials such as wood, paper and fats
Keep away from combustible material.
Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.,

SECTION 7. HANDLING AND STORAGE

,Handling

Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Information about protection against explosions and fires:

Substance/product can reduce the ignition temperature of flammable substances.

This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from flammable substances.

Store away from reducing agents.

Do not store with organic materials.

Store away from metal powders.

Store away from water/moisture.

Further information about storage conditions:

Store under dry inert gas.

This product is hygroscopic.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Protect from humidity and water.

Specific end use(s)

No data available,

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

,Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

10099-74-8 Lead(II) nitrate (100.0%)

PEL (USA) Long-term value: 0.05 mg/m³

as Pb; See 29 CFR 1910.1025

REL (USA) Long-term value: 0.05* mg/m³

as Pb;*8-hr TWA; See Pocket Guide App. C

TLV (USA) Long-term value: 0.05 mg/m³

as Pb; BEI

EL (Canada) Long-term value: 0.05 mg/m³

as Pb; IARC 2A, R

EV (Canada) Long-term value: 0.05 mg/m³

as Pb, Skin (organic compounds)

Ingredients with biological limit values:

10099-74-8 Lead(II) nitrate (100.0%)

BEI (USA) 30 µg/100 ml

Medium: blood

Time: not critical

Parameter: Lead

Additional information:

No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls.

Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.

Material of gloves

Nitrile rubber, NBR

Penetration time of glove material (in minutes)

No data available

Eye protection:

Safety glasses

Body protection:

Protective work clothing,

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

,Information on basic physical and chemical properties

Appearance:

Form: Various forms (powder/flake/crystalline/beads, etc.)

Color: White

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 470 °C (878 °F) (dec)

Boiling point/Boiling range: No data available

Sublimation temperature / start: No data available

Flammability (solid, gas)

Contact with combustible material may cause fire.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Danger of explosion: No data available.
Explosion limits:
Lower: No data available
Upper: No data available
Vapor pressure: N/A
Density at 20 °C (68 °F): 4.53 g/cm³ (37.803 lbs/gal)
Relative density
No data available.
Vapor density
N/A
Evaporation rate
N/A
Solubility in / Miscibility with Water at 0 °C (32 °F): 376 g/l Soluble
Partition coefficient (n-octanol/water): No data available.
Viscosity:
Dynamic: N/A
Kinematic: N/A
Other information
No data available,

SECTION 10. STABILITY AND REACTIVITY

,Reactivity
May intensify fire; oxidizer.
Chemical stability
Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions
Reacts with reducing agents
Reacts with flammable substances
Conditions to avoid
No data available
Incompatible materials:
Flammable substances
Reducing agents
Water/moisture
Organic materials
Metal powders
Hazardous decomposition products:
Nitrogen oxides
Lead oxide fume,

SECTION 11. TOXICOLOGICAL INFORMATION

,Information on toxicological effects
Acute toxicity:
Harmful if inhaled.
Harmful if swallowed.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

No data

Skin irritation or corrosion:

May cause irritation

Eye irritation or corrosion:

May cause irritation

Sensitization:

No sensitizing effects known.

Germ cell mutagenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity:

EPA-B2: Probable human carcinogen, sufficient evidence from animal studies; inadequate evidence or no data from epidemiologic studies.

NTP-R: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals.

ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans.

Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure. IARC-2A: Probably carcinogenic to humans: limited human evidence; sufficient evidence in experimental animals

Reproductive toxicity:

May damage fertility or the unborn child.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure:

May cause damage to the kidneys, the liver, the blood and the brain through prolonged or repeated exposure. Route of exposure: Oral.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.

Subacute to chronic toxicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.,

SECTION 12. ECOLOGICAL INFORMATION

,Toxicity

Aquatic toxicity:

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Ecotoxicological effects:

Remark:

Very toxic for aquatic organisms

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Do not allow product to reach groundwater, water courses, or sewage systems, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

May cause long lasting harmful effects to aquatic life.

Avoid transfer into the environment.

Very toxic for aquatic organisms

Results of PBT and vPvB assessment

PBT:

N/A

vPvB:

N/A

Other adverse effects

No data available,

SECTION 13. DISPOSAL CONSIDERATIONS

,Waste treatment methods

Recommendation

Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation:

Disposal must be made according to official regulations.

Recommended cleansing agent:

Water, if necessary with cleansing agents.,

SECTION 14. TRANSPORT INFORMATION

,UN-Number

DOT, IMDG, IATA

UN1469

UN proper shipping name

DOT

Lead nitrate

IMDG

LEAD NITRATE, MARINE POLLUTANT

IATA

LEAD NITRATE

Transport hazard class(es)

DOT

Class

5.1 Oxidising substances.

Label

5.1+6.1

Class

5.1 (OT2) Oxidizing substances

Label

5.1+6.1

IMDG

Class

5.1 Oxidising substances.

Label

5.1+6.1

IATA

Class

5.1 Oxidising substances

Label

5.1+6.1

Packing group

DOT, IMDG, IATA

II

Environmental hazards:

Environmentally hazardous substance, solid; Marine Pollutant

Marine pollutant (IMDG):

Symbol (fish and tree)

Special precautions for user

Warning: Oxidizing substances

EMS Number: F-A,S-Q

Segregation groups

Heavy metals and their salts (including their organometallic compounds), lead and its compounds

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

N/A

Transport/Additional information:

DOT

Marine Pollutant (DOT):

No

Remarks:

Special marking with the symbol (fish and tree).

UN "Model Regulation":

UN1469, Lead nitrate, 5.1 (6.1), II,

SECTION 15. REGULATORY INFORMATION

,Safety, health and environmental regulations/legislation specific for the substance or mixture

GHS GHS label elements, including precautionary statements

Hazard pictograms

GHS07

GHS08

Signal word

Danger

Hazard statements

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P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/
national/international regulations.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic
Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings)

10099-74-8 Lead(II) nitrate

California Proposition 65

Prop 65 - Chemicals known to cause cancer

10099-74-8 Lead(II) nitrate

Prop 65 - Developmental toxicity

Substance is not listed.

Prop 65 - Developmental toxicity, female

Substance is not listed.

Prop 65 - Developmental toxicity, male

Substance is not listed.

Information about limitation of use:

For use only by technically qualified individuals.

This product is subject to the reporting requirements of section 313 of the Emergency Planning and
Community Right to Know Act of 1986 and 40CFR372.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

This substance is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH).

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No
1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)

Substance is not listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is
believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The
information in this document is based on the present state of our knowledge and is applicable to the
product with regard to appropriate safety precautions. It does not represent any guarantee of the
properties of the product. American Elements shall not be held liable for any damage resulting from
handling or from contact with the above product. See reverse side of invoice or packing slip for
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