

# SAFETY DATA SHEET

Date Printed: 05/14/2024

Date Revised: 01/15/2022

## SECTION 1. IDENTIFICATION

**Product Identifier:** (2N) 99% Lanthanum Nickel Cobalt Alloy

**Product Code:** LA-NICO-02

**CAS Number:** 130469-99-7

**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

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Chemicals which, in contact with water, emit flammable gases (Category 1), H260

Acute toxicity, Inhalation (Category 2), H330

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 1B), H350

Reproductive toxicity (Category 1B), H360

Specific target organ toxicity - repeated exposure, Inhalation (Category 1), H372

Short-term (acute) aquatic hazard (Category 2), H401

Long-term (chronic) aquatic hazard (Category 2), H411

Pictogram



Signal word Danger

Hazard statement(s)

H260 In contact with water releases flammable gases which may ignite spontaneously.

H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.  
H372 Causes damage to organs through prolonged or repeated exposure if inhaled.  
H411 Toxic to aquatic life with long lasting effects.  
Precautionary statement(s)  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P223 Do not allow contact with water.  
P231 + P232 Handle under inert gas. Protect from moisture.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P284 Wear respiratory protection.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P335 + P334 Brush off loose particles from skin. Immerse in cool water/ wrap in wet bandages.  
P363 Wash contaminated clothing before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
P391 Collect spillage.  
P402 + P404 Store in a dry place. Store in a closed container.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.  
Hazards not otherwise classified (HNOC) or not covered by GHS - none

---

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : La<sub>2</sub>Co<sub>1</sub>Ni<sub>9</sub>

---

### **SECTION 4. FIRST AID MEASURES**

Description of first-aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

---

## SECTION 5. FIREFIGHTING MEASURES

#### Extinguishing media

##### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### Unsuitable extinguishing media

##### Water Foam

Special hazards arising from the substance or mixture

Nickel/nickel oxides

Cobalt/cobalt oxides

Lanthanum oxides

Not combustible.

May not get in touch with: Water

Ambient fire may liberate hazardous vapours.

#### Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

#### Environmental precautions

Do not let product enter drains. Risk of explosion.  
Methods and materials for containment and cleaning up  
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area.  
Avoid generation of dusts.  
Reference to other sections  
For disposal see section 13.

---

## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Keep workplace dry. Do not allow product to come into contact with water.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Never allow product to get in contact with water during storage.

Air and moisture sensitive.

Storage class (TRGS 510): 4.3: Hazardous materials, which set free flammable gases upon contact with water

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

---

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

Handle with impervious gloves.

Body Protection

protective clothing

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- a) Appearance Form: pieces
  - b) Odor No data available
  - c) Odor Threshold No data available
  - d) pH No data available
  - e) Melting  
point/freezing point  
Melting point/range: 1,300 °C (2,372 °F)
  - f) Initial boiling point and boiling range  
No data available
  - g) Flash point ( )No data available
  - h) Evaporation rate No data available
  - i) Flammability (solid,  
gas)  
The product is not flammable.
  - j) Upper/lower flammability or explosive limits  
No data available
  - k) Vapor pressure No data available
  - l) Vapor density No data available
  - m) Relative density No data available
  - n) Water solubility No data available
  - o) Partition coefficient: n-octanol/water  
No data available
  - p) Autoignition temperature  
140 °C (284 °F)  
Not applicable
  - q) Decomposition temperature  
No data available
  - r) Viscosity No data available
  - s) Explosive properties No data available
  - t) Oxidizing properties No data available
- Other safety information  
No data available

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

No data available

Conditions to avoid

Moisture.

Incompatible materials

Oxidizing agents, Strong oxidizing agents, Strong acids, Sulfur compounds, acids, Acetylene, Material readily reacts with acids generating flammable and/or explosive hydrogen gas., Halogens, Phosphorus, Mineral acids, Hydrazinium nitrate

Hazardous decomposition products

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Mixture

Acute toxicity

Acute toxicity estimate Oral - > 5,000 mg/kg

(Calculation method)

Acute toxicity estimate Inhalation - 4 h - 0.075 mg/l

(Calculation method)

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

Mixture may cause allergy or asthma symptoms or breathing difficulties if inhaled. Mixture may cause an allergic skin reaction.

Germ cell mutagenicity

Evidence of genetic defects.

Carcinogenicity

Possible carcinogen.

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Nickel)

1 - Group 1: Carcinogenic to humans (Nickel)

2B - Group 2B: Possibly carcinogenic to humans (Nickel)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (cobalt)

2A - Group 2A: Probably carcinogenic to humans (cobalt)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Nickel)

1 - Group 1: Carcinogenic to humans (Nickel)

2B - Group 2B: Possibly carcinogenic to humans (Nickel)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (cobalt)

2A - Group 2A: Probably carcinogenic to humans (cobalt)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Nickel)

RAHC - Reasonably anticipated to be a human carcinogen (Nickel)

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

May harm the unborn child.

May impair fertility.

Specific target organ toxicity - single exposure

No data available Specific target organ toxicity - repeated exposure

Mixture causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

Additional Information

Not available

Kidney injury may occur., Damage to the eyes., Lung irritation, chest pain, pulmonary edema, May cause irritation of the:., nose, Throat., sensation of heat

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

## Stomach - Irregularities - Based on Human Evidence

### Components

#### Nickel

##### Acute toxicity

LD50 Oral - Rat - male and female - > 9,000 mg/kg

(OECD Test Guideline 401)

Dermal: No data available

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

Germ cell mutagenicity

No data available

Carcinogenicity

Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Inhalation - Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

#### cobalt

##### Acute toxicity

LD50 Oral - Rat - female - 550 mg/kg

(OECD Test Guideline 425)

LC50 Inhalation - Rat - male and female - 4 h -  $\leq 0.05$  mg/l

(OECD Test Guideline 436)

Dermal: No data available

No data available

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)

Result: No skin irritation - 15 min

(OECD Test Guideline 439)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: irritating

(OECD Test Guideline 405)

Respiratory or skin sensitization

May cause allergic respiratory and skin reactions

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

May damage fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure  
May cause damage to organs through prolonged or repeated exposure.  
Aspiration hazard  
No data available

---

## SECTION 12. ECOLOGICAL INFORMATION

Toxicity  
Mixture  
No data available  
Persistence and degradability  
No data available  
Bioaccumulative potential  
No data available  
Mobility in soil  
No data available  
Results of PBT and vPvB assessment  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted  
Other adverse effects  
No data available  
Components  
Nickel  
Toxicity to fish LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h  
(OECD Test Guideline 203)  
Toxicity to daphnia and other aquatic invertebrates  
EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h  
cobalt  
Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h  
(OECD Test Guideline 203)  
Remarks: (above the solubility limit in the test medium)  
Toxicity to daphnia  
and other aquatic  
invertebrates  
static test NOEC - Daphnia magna (Water flea) - 3.2 mg/l - 48h  
(OECD Test Guideline 202)  
Remarks: (above the solubility limit in the test medium)  
Toxicity to algae Remarks: No data available

---

## SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods  
Product  
Waste material must be disposed of in accordance with the national and local regulations.  
Leave chemicals in original containers. No mixing with other waste. Handle uncleaned  
containers like the product itself. See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the  
return of chemicals and containers, or contact us there if you have further questions.

---



## SECTION 14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Further information

Not classified as dangerous in the meaning of transport regulations.

---

## SECTION 15. REGULATORY INFORMATION

SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III,

Section 313:

cobalt

CAS-No.

7440-48-4

Revision Date

1989-08-11

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

---

## 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 additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.