

SAFETY DATA SHEET

Date Printed: 05/17/2024 Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (4N) 99.99% Lanthanum Nanoprisms

Product Code: LA-M-04-NPR

CAS Number: 7439-91-0

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) Substances and mixtures, which in contact with water, emit flammable gases (Category 1), H260 For the full text of the H - Statements mentioned in this Section, see Section 16. GHS Label elements, including precautionary statements Pictogram



Signal word: Danger Hazard statement(s) H260 In contact with water releases flammable gases which may ignite spontaneously. Precautionary statement(s) P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire. P231 + P232 Handle under inert gas. Protect from moisture. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P335 + P334 Brush off loose particles from skin. Immerse in cool water/ wrap in wet bandages. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. P402 + P404 Store in a dry place. Store in a closed container. P501 Dispose of contents/ container to an approved waste disposal plan Hazards not otherwise classified (HNOC) or not covered by GHS Reacts violently with water.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances Formula: La Molecular Weight: 138.91 g/mol CAS-No.: 7439-91-0 EC-No.: 231-099-0 No ingredients are hazardous according to OSHA criteria. No components need to be disclosed according to the applicable regulations. For the full text of the H - Statements mentioned in this Section, see Section 1

SECTION 4. FIRST AID MEASURES

Description of first aid measures General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. In case of skin contact Wash off with soap and plenty of water. Consult a physician. In case of eye contact Flush eyes with water as a precaution. If swallowed Never give anything by mouth to an unconscious person. Rinse mouth with water. 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 2.2)

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 Dry powder Special hazards arising from the substance or mixture Lanthanum oxides Advice for firefighters Wear self contained breathing apparatus for fire fighting if necessary. Further information: no data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8 Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains Methods and materials for containment and cleaning up Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water. Keep in suitable, closed containers for disposa Reference to other sections For disposal see section 13

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling Provide appropriate exhaust ventilation at places where dust is formed.Keep away from sources of ignition - No smoking. For precautions see section 2.2 Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Air and moisture sensitive. Keep in a dry place. Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters Components with workplace control parameters Contains no substances with occupational exposure limit values Exposure controls Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Personal protective equipment Eye/face protection Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection
Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drain

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance Form: powder Colour: gray Odor: no data available Odor Threshold: no data available pH: no data available Melting point/freezing point Melting point/range: 920 °C (1,688 °F)-lit. Initial boiling point and boiling range: 3,464 °C (6,267 °F)-lit. Flash point: no data available Evaporation rate: no data available Flammability (solid, gas): no data available Upper/lower flammability or explosive limits: no data available Vapor pressure: no data available Vapor density: no data available Relative density: 6.19 g/mL at 25 °C (77 °F) Water solubility: no data available Partition coefficient: n-octanol/water: no data available Auto-ignition temperature: no data available Decomposition temperature: no data available Viscosity: no data available Explosive properties: no data available Oxidizing properties: no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity no data available Chemical stability Stable under recommended storage conditions. Possibility of hazardous reactions Reacts violently with water. Conditions to avoid Exposure to moisture. Incompatible materials Strong acids, Strong oxidizing agents, Halogens, Phosphorus, Sulphur compounds Hazardous decomposition products Other decomposition products-no data available In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicitv no data available Inhalation: no data available Dermal: no data available no data available Skin corrosion/irritation no data available Serious eye damage/eye irritation no data available Respiratory or skin sensitisation no data available Germ cell mutagenicity no data available Carcinogenicity IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity no data available no data available Specific target organ toxicity - single exposure no data available Specific target organ toxicity - repeated exposure no data available Aspiration hazard no data available Additional Information **RTECS:** Not available To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

SECTION 12. ECOLOGICAL INFORMATION

Toxicity 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

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Product Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contaminated packaging Dispose of as unused product

SECTION 14. TRANSPORT INFORMATION

DOT (US) UN number: 3208 Class: 4.3 Packing group: I Proper shipping name: Metallic substance, water-reactive, n.o.s. (Lanthanum) Reportable Quantity (RQ): Marine pollutant: No Poison Inhalation Hazard: No IMDG UN number: 3208 Class: 4.3 Packing group: I EMS-No: F-G, S-N Proper shipping name: METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S. (Lanthanum) Marine pollutant: No ΙΑΤΑ UN number:3208 Class: 4.3 Packing group: I Proper shipping name: Metallic substance, water-reactive, n.o.s. (Lanthanum) IATA Passenger: Not permitted for transport

SECTION 15. REGULATORY INFORMATION

SARA 302 Components SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. SARA 313 Components SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. SARA 311/312 Hazards Reactivity Hazard Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act. California Prop. 65 Components This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm

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.