

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (3N) 99.9% Lanthanum Chloride Solution

Product Code: LA-CL-03-SOL

CAS Number: 10025-84-0

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 in accordance with 29 CFR 1910 (OSHA HCS) GHS07 Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2A H319 Causes serious eye irritation. STOT SE 3 H335 May cause respiratory irritation. Hazards not otherwise classified No data available. GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictogram



GHS07 Signal word: Warning Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapors/spray. P280 Wear protective gloves/protective clothing/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. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D2B - Toxic material causing other toxic effects Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) HEALTH FIRE REACTIVITY 1 0 1 Health (acute effects) = 1Flammability = 0Physical Hazard = 1 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: 10025-84-0 Lanthanum(III) chloride heptahydrate Identification number(s): EC number: 233-237-5

SECTION 4. FIRST AID MEASURES

Description of first aid measures If inhaled: Supply 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 information available. Indication of any immediate medical attention and special treatment needed No information available.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing media Product is not flammable. Use fire-fighting measures that suit the surrounding fire. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Hydrogen chloride (HCI) Lanthanum oxide 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 Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow product to reach sewage system or any water course. Methods and material for containment and cleanup: Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. 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 Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure adequate ventilation. Information about protection against explosions and fires: The product is not flammable Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well-sealed containers. Specific end use(s) No information 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:

The product does not contain any relevant quantities of materials with critical values that should be monitored at the workplace.

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical general protective and industrial hygiene measures 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.

Avoid contact with the eyes and skin.

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): 480

Glove thickness: 0.11 mm

Eye protection: Safety glasses

Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance: Form: Liquid Odor: Odorless Odor threshold: No data available. pH: N/A Melting point/range: 91 °C (196 °F) Boiling point/range: No data available. Sublimation temperature / start: No data available. Flammability (solid, gas): No data available. Ignition temperature: No data available. Decomposition temperature: No data available. Auto igniting: No data available. Danger of explosion: No data available. **Explosion limits:** Lower: No data available. Upper: No data available. Vapor pressure: N/A. Density: No data available. Relative density: No data available. Vapor density: N/A. Evaporation rate: N/A. Solubility in Water (H₂O): Soluble Partition coefficient (n-octanol/water): No data available. Viscosity: Dynamic: N/A. Kinematic: N/A. Other information: No information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available. 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 strong oxidizing agents Conditions to avoid No information available. Incompatible materials: Oxidizing agents Hazardous decomposition products: Hydrogen chloride (HCl) Lanthanum oxide

SECTION 11. TOXICOLOGICAL INFORMATION Information on toxicological effects Acute toxicity: The following RTECS statement/statements refer to the anhydrous compound: 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: Causes skin irritation. Eve irritation or corrosion: Causes serious eve irritation. Sensitization: No sensitizing effects known. Germ cell mutagenicity: The following RTECS statement/statements refer to the anhydrous compound: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance. Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

The following RTECS statement/statements refer to the anhydrous compound:

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

Specific target organ system toxicity - repeated exposure:

N/A

Specific target organ system toxicity - single exposure:

May cause respiratory irritation.

Aspiration hazard:

N/A

Subacute to chronic toxicity:

The following RTECS statement/statements refer to the anhydrous compound:

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. Carcinogenic categories

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity Aquatic toxicity: No information available. Persistence and degradability: No information available. Bioaccumulative potential: No information available. Mobility in soil: No information available. Additional ecological information: General notes: Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPvB assessment: PBT: N/A. vPvB: N/A. Other adverse effects: No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation: Consult state, local or national 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, ADN, IMDG, IATA N/A UN proper shipping name DOT, ADN, IMDG, IATA N/A Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class N/A Packing group DOT, IMDG, IATA N/A Environmental hazards: N/A. Special precautions for user: N/A. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: N/A. Transport/Additional information: DOT Marine Pollutant (DOT): No UN "Model Regulation": -

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture **GHS** label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms GHS07 Signal word: Warning Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vapors/spray. P280 Wear protective gloves/protective clothing/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. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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) Substance is not listed. California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed. 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. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on themarket 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 additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.