

# SAFETY DATA SHEET

Version 8.1  
Revision Date 2024/12/18  
Print Date 2025/08/12  
Date of first issue 2023/04/21  
SDS No. Eternal-Element - ET-LaN-202501  
Product Number Eternal-Element - ET-LaN-202501

## Lanthanum(III) nitrate hexahydrate

---

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : Lanthanum(III) nitrate hexahydrate  
Product Number : ET-LaN-202501  
Brand : Eternal-Element  
CAS-No. : 10277-43-7

#### 1.2 Details of the supplier of the safety data sheet

Company : Shanghai Sheeny Metal Mateirals Co.,Ltd.  
Room 210, Kedi Building,  
No. 688 Huajiang Road, Jiading District,  
SHANGHAI  
201800 SHANGHAI CHINA  
上海斯年金属材料有限公司  
上海市嘉定区华江公路688号凯迪大厦210室  
邮政编码：201800

Telephone : +86 16602150044  
Fax : +86 16602150044

#### 1.3 Emergency telephone

Emergency Phone # : +86 4006632276

#### 1.4 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For R&D use only. Not for pharmaceutical, household or other uses.

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

**Appearance** : solid  
**Odor** : slight

May intensify fire; oxidizer. May be harmful if swallowed. Causes serious eye damage. Very toxic to aquatic life with long lasting effects.

### GHS Classification

Oxidizing solids : Category 2  
 Acute toxicity (Oral) : Category 5  
 Serious eye damage/eye irritation : Category 1  
 Short-term (acute) aquatic hazard : Category 1  
 Long-term (chronic) aquatic hazard : Category 1

### GHS label elements

Hazard pictograms :   
 Signal Word : Danger  
 Hazard Statements : H272 May intensify fire; oxidizer.  
 H303 May be harmful if swallowed.  
 H318 Causes serious eye damage.  
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**  
 P210 Keep away from heat.  
 P220 Keep/Store away from clothing/ combustible materials.  
 P221 Take any precaution to avoid mixing with combustibles.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/ eye protection/ face pro-



tection.

**Response:**

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/ doctor.

P312 Call a POISON CENTER/ doctor if you feel unwell.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P391 Collect spillage.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Reduced Labeling (<= 125 ml)**

Pictogram



Signal Word

Danger

Hazard Statements

H272 May intensify fire; oxidizer.

H303 May be harmful if swallowed.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

none

**Physical and chemical hazards**

May intensify fire; oxidizer.

**Health hazards**

May be harmful if swallowed. Causes serious eye damage.

**Environmental hazards**

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

**Other hazards which do not result in classification**

None known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Substance

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Lanthanum(III) nitrate hexahydrate	10277-43-7	<= 100

**4. FIRST AID MEASURES**

General advice : Show this material safety data sheet to the doctor in attendance.

If inhaled	: After inhalation: fresh air.
In case of skin contact	: In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact	: After eye contact: rinse out with plenty of water. Immediately 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 2.2) and/or in section 11
Protection of first-aiders	: For personal protection see section 8.
Notes to physician	: No data available

## 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: For this substance/mixture no limitations of extinguishing agents are given.
Specific hazards during fire fighting	: Not combustible.  Has a fire-promoting effect due to release of oxygen.
	Ambient fire may liberate hazardous vapours.
Hazardous combustion products	: Nitrogen oxides (NOx)  Lanthanum oxides
Specific extinguishing methods	: Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

---

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Advice for non-emergency personnel:  
Avoid inhalation of dusts.  
Avoid substance contact.  
Ensure adequate ventilation.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Advice for emergency responders :  
For personal protection see section 8.

Environmental precautions : Do not let product enter drains.

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 dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

---

## 7. HANDLING AND STORAGE

### Handling

For precautions see section 2.2.

Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.

### Storage

Further information on storage conditions : Tightly closed.  
Do not store near combustible materials.

Storage class : 5.1B, Oxidizing hazardous materials

Recommended storage temperature : Recommended storage temperature see product label.

Further information on storage stability : Hygroscopic.

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

**Engineering measures** : No data available

### Personal protective equipment

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.

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
Tightly fitting safety goggles

Skin and body protection : protective clothing

#### Hand protection

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0.11 mm  
Protective index : Full contact  
Manufacturer : KCL 741 Dermatril® L

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0.11 mm  
Protective index : Splash contact  
Manufacturer : KCL 741 Dermatril® L

#### Remarks

: This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Hygiene measures : Change contaminated clothing. Wash hands after working with substance.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Color : No data available

Odor : slight

Odor Threshold : No data available

pH : ca. 3.4 (25 °C)  
Concentration : 50 g/l

Melting point/ range : 65 - 68 °C

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Burning rate : No data available

Upper explosion limit /  
Upper flammability limit : No data available

Lower explosion limit /  
Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : ca. 1,230 g/l (20 °C)  
Method : OECD Test Guideline 105  
GLP: yes

Partition coefficient: n-octanol/water : Not applicable for inorganic substances

Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Explosive properties	: Not classified as explosive.
Oxidizing properties	: The substance or mixture is classified as oxidizing with the category 2.
Molecular weight	: 433.01 g/mol
Particle characteristics	
Particle size	: No data available

---

## 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	: Violent reactions possible with: Reducing agents combustible substances
Conditions to avoid	: hygroscopic  no information available
Incompatible materials	: No data available
Hazardous decomposition products	: In the event of fire: see section 5

---

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 4,500 mg/kg  
(OECD Test Guideline 401)

Remarks: (anhydrous substance)

Symptoms: Possible damages:, mucosal irritations

Dermal : No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Remarks: (anhydrous substance)

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

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

## 11.2 Additional Information

RTECS : OE5250000

prolonged or repeated exposure can cause:, Blood disorders, Aspiration or inhalation may cause chemical pneumonitis., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

The following applies to nitrites/nitrates in general: methaemoglobinemia after the uptake of large quantities.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

---

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Components:**

**Lanthanum(III) nitrate hexahydrate:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.0 mg/l

	Exposure time : 96 h Test Type: semi-static test Analytical monitoring : yes Method : OECD Test Guideline 203 GLP: yes Remarks: (anhydrous substance)
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 7 mg/l Exposure time : 48 h Test Type: semi-static test Analytical monitoring : yes Method : OECD Test Guideline 202 GLP: yes Remarks: (anhydrous substance)
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): 2.1 mg/l Exposure time : 72 h Test Type: static test Analytical monitoring : yes Method : OECD Test Guideline 201 GLP: yes Remarks: (anhydrous substance)
M-Factor (Acute aquatic toxicity)	: 1
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 0.33 mg/l Exposure time : 14 d Test Type: semi-static test Analytical monitoring : yes Method : OECD Test Guideline 211 Remarks: (referred to the cation) (anhydrous substance)
M-Factor (Chronic aquatic toxicity)	: 1

### **Persistence and degradability**

#### **Components:**

##### **Lanthanum(III) nitrate hexahydrate:**

Biodegradability	: Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.
------------------	-----------------------------------------------------------------------------------------------------------------

### **Bioaccumulative potential**

#### **Components:**

##### **Lanthanum(III) nitrate hexahydrate:**

Bioaccumulation	:	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF) : 0.4 - 828 Exposure time : 43 d Temperature : 11 °C Concentration : 0.3 mg/l Remarks: Accumulation in aquatic organisms is expected.
Partition coefficient: n-octanol/water	:	Remarks: Not applicable for inorganic substances

**Mobility in soil**

No data available

**Other adverse effects**

No data available

---

**13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues	:	Offer surplus and non-recyclable solutions to a licensed disposal company.
---------------------	---	----------------------------------------------------------------------------

---

**14. TRANSPORT INFORMATION****International Regulations****IATA-DGR**

UN/ID No.	:	UN 1477
Proper shipping name	:	Nitrates, inorganic, n.o.s.
Class	:	5.1
Packing group	:	II
Labels	:	Division 5.1 - Oxidizing substances
Packing instruction (cargo aircraft)	:	562
Packing instruction (passenger aircraft)	:	558

**IMDG-Code**

UN number	:	UN 1477
Proper shipping name	:	NITRATES, INORGANIC, N.O.S. (Lanthanum(III) nitrate hexahydrate)
Class	:	5.1
Packing group	:	II
Labels	:	5.1
EmS Code	:	F-A, S-Q
Marine pollutant	:	yes

**Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC Code**

Not applicable for product as supplied.

**National regulation**

**GB 6944/12268**

UN number	:	UN 1477
Proper shipping name	:	NITRATES, INORGANIC, N.O.S. (Lanthanum(III) nitrate hexahydrate)
Class	:	5.1
Packing group	:	II
Labels	:	5.1

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

---

**15. REGULATORY INFORMATION****National regulatory information****Regulations on Safety Management of Hazardous Chemicals**

Catalogue of Hazardous Chemicals : Listed

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

No. / Code Chemical name / Category Threshold quantity

W9.2 Oxidising solids and liquids 200 t

Hazardous Chemicals for Priority Management : Listed  
under SAWS

**Regulations on Occupational Labor Protection in the at workplaces where Toxic Substances Are Used**

Catalogue of Highly Toxic Chemicals : Not listed

**Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

China Severely Restricted Toxic Chemicals for Import and Export : Not listed

**Regulation on the Administration of Precursor Chemicals**

Catalogue and Classification of Precursor Chemicals : Not listed

---

**16. OTHER INFORMATION**

Revision Date : 2024/12/18

**Further information**

Other information : The information is believed to be correct but is not

exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Eternal-Element Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www. eternal-element.com](http://www. eternal-element.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Copyright Shanghai Sheeny Metal Materials Co.,Ltd.  
License granted to make unlimited paper copies for internal use only.

Date format : yyyy/mm/dd

### **Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United

States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

### **Disclaimer**

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [sales@eternal-element.com](mailto:sales@eternal-element.com).

CN / EN