

<a href="#">Lanthanum Chloride</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lanthanum Chloride Solution</a>	<a href="#">Pricing &gt;</a>

<b>Linear Formula</b>	LaCl <sub>3</sub> • 7H <sub>2</sub> O
<b>Pubchem CID</b>	165791
<b>MDL Number</b>	MFCD00149756
<b>EC No.</b>	N/A
<b>IUPAC Name</b>	lanthanum(3+) trichloride heptahydrate
<b>SMILES</b>	O.O.O.O.O.O.O.[Cl-].[Cl-].[Cl-].[La+3]
<b>Inchl Identifier</b>	InChI=1S/3ClH.La.7H2O/h3*1H;;7*1H2/q;;;+3;;;;;;;;;/p-3
<b>Inchl Key</b>	FDFPDGIMPRFRJP-UHFFFAOYSA-K

<b>Signal Word</b>	Danger
<b>Hazard Statements</b>	H290-H317-H318-H411
<b>Hazard Codes</b>	Xi
<b>Precautionary Statements</b>	P273-P280-P305 + P351 + P338
<b>Flash Point</b>	Not applicable
<b>Risk Codes</b>	36/37/38
<b>Safety Statements</b>	26-36
<b>RTECS Number</b>	OE4375000
<b>Transport Information</b>	UN 3260 8 / PGIII
<b>WGK Germany</b>	2

GHS Pictograms

[GHS05](#)  
[Corrosive](#)



[GHS07](#)  
[Exclamation](#)  
[Point](#)



[GHS09](#)  
[Environment](#)



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## SAFETY DATA SHEET

Date Accessed: 04/17/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #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:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

### 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  
GHS label elements, including precautionary  
statements  
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.  
WHMIS classification  
D2B - Toxic material causing other toxic effects  
Classification system  
HMIS ratings (scale 0-4)  
(Hazardous Materials Identification System)  
Health (acute effects) = 1  
Flammability = 0  
Physical Hazard = 1  
Other hazards  
Results of PBT and vPvB assessment  
PBT:  
N/A  
vPvB:  
N/A

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### **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

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## **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

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents

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 (HCl)

Lanthanum oxide

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **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 product to enter drains, sewage systems, or other water courses.  
Methods and materials 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.

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

Handling  
Precautions for safe handling  
Keep container tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation at the workplace.  
Information about protection against explosions and fires:  
The product is not flammable  
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 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 data available

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## **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:

None.

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.

Avoid contact with the eyes and skin.

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)

480

Glove thickness

0.11 mm

Eye protection:

Safety glasses

Body protection:

Protective work clothing.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

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

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 91 °C (196 °F)

Boiling point/Boiling 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  
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: No data available  
Relative density  
No data available.  
Vapor density  
N/A  
Evaporation rate  
N/A  
Solubility in Water (H<sub>2</sub>O): Soluble  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Other information  
No data available

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## **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 data available  
Incompatible materials:  
Oxidizing agents  
Hazardous decomposition products:  
Hydrogen chloride (HCl)  
Lanthanum oxide

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## **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.  
Eye irritation or corrosion:  
Causes serious eye 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:  
No effects known.  
Specific target organ system toxicity - single exposure:  
May cause respiratory irritation.  
Aspiration hazard:  
No effects known.  
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.

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## **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  
Additional ecological information:  
Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.  
Avoid transfer into the environment.  
Results of PBT and vPvB assessment  
PBT:  
N/A  
vPvB:  
N/A  
Other adverse effects  
No data available

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## **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.

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## **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

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## **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  
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 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.

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## 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.

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## Research

- Determination of thermodynamic stability of lanthanum chloride

- hydrates ( $\text{LaCl}_3 \cdot x\text{H}_2\text{O}$ ) by dynamic transpiration method. Deepak Kumar Sahoo, R. Mishra, H. Singh, N. Krishnamurthy. *Journal of Alloys and Compounds*, Volume 588, 5 March 2014, Pages 578-584.
- Determination of activity coefficient of lanthanum chloride in molten  $\text{LiCl-KCl}$  eutectic salt as a function of cesium chloride and lanthanum chloride concentrations using electromotive force measurements. Prashant Bagri, Michael F. Simpson. *Journal of Nuclear Materials*, Volume 482, 15 December 2016, Pages 248-256.
  - Evolution of the corrosion process of AA 2024-T3 in an alkaline  $\text{NaCl}$  solution with sodium dodecylbenzenesulfonate and lanthanum chloride inhibitors. Biner Zhou, Yishan Wang, Yu Zuo. *Applied Surface Science*, Volume 357, Part A, 1 December 2015, Pages 735-744.
  - Friction and wear performances of borates and lanthanum chloride in water. Boshui Chen, Jianhua Fang, Jiu Wang, Jia LI, Fang Lou. *Journal of Rare Earths*, Volume 26, Issue 4, August 2008, Pages 590-593.
  - Luminescent properties of ytterbium-doped ternary lanthanum chloride. A. Kaminska, J. Cybińska, Ya. Zhydachevskii, P. Sybilski, A. Suchocki. *Journal of Alloys and Compounds*, Volume 509, Issue 30, 28 July 2011, Pages 7993-7997.
  - Identification of prompt fission  $\gamma$ -rays with lanthanum-chloride scintillation detectors. A. Oberstedt, S. Oberstedt, R. Billnert, W. Geerts, J. Karlsson. *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, Volume 668, 11 March 2012, Pages 14-20.
  - Inhibition of thioredoxin reductase by lanthanum chloride. Anna Citta, Alessandra Folda, Guido Scutari, Luca Cesaro, Maria Pia Rigobello. *Journal of Inorganic Biochemistry*, Volume 117, December 2012, Pages 18-24.
  - Lanthanum trichloride: An efficient catalyst for the silylation of hydroxyl groups by activating hexamethyldisilazane (HMDS). Akkiralala Venkat Narsaiah. *Journal of Organometallic Chemistry*, Volume 692, Issue 17, 1 August 2007, Pages 3614-3618.
  - Lanthanum(III) chloride/chloroacetic acid as an efficient and reusable catalytic system for the synthesis of new 1-((2-hydroxynaphthalen-1-yl)(phenyl)methyl)semicarbazides/thiosemicarbazides. Behjat Pouramiri, Esmat Tavakolinejad Kermani. *Arabian Journal of Chemistry*, Volume 10, Supplement 1, February 2017, Pages S730-S734.
  - Mesoporous carbons modified with lanthanum(III) chloride for methyl orange adsorption. Joanna Goscianska, Michał Marciniak, Robert Pietrzak. *Chemical Engineering Journal*, Volume 247, 1 July 2014, Pages 258-264.
  - Thermal stability of polybenzoxazines with lanthanum chloride and their crosslinked structures. Qi-Chao Ran, Nian Gao, Yi Gu. *Polymer Degradation and Stability*, Volume 96, Issue 9, September 2011, Pages 1610-1615.