



<a href="#">Lanthanum Chloride, Anhydrous</a>		<a href="#">Pricing &gt;</a>
<a href="#">Ultra Dry Lanthanum Chloride</a>		<a href="#">Pricing &gt;</a>
<b>Linear Formula</b>	LaCl <sub>3</sub>	
<b>Pubchem CID</b>	165791	
<b>MDL Number</b>	MFCD00011068	
<b>EC No.</b>	233-237-5	
<b>IUPAC Name</b>	trichlorolanthanum	
<b>SMILES</b>	Cl[La](Cl)Cl	
<b>Inchl Identifier</b>	InChI=1S/3ClH.La/h3*1H;/ q;;;+3/p-3	
<b>Inchl Key</b>	ICAKDTKJOYSXGC-UHFFFAOYSA-K	
<b>Signal Word</b>	Danger	
<b>Hazard Statements</b>	H290-H318-H317	
<b>Hazard Codes</b>	Xi	
<b>Precautionary Statements</b>	P261-P280-P234-P305+P351+P338-P310-P363-P321-P333+P313-P406-P501	
<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>	UN3077 Class 9, PG III	
<b>WGK Germany</b>	2	
<b>GHS Pictograms</b>	<a href="#">GHS05 Corrosive</a>  <a href="#">GHS07 Exclamation Point</a> 	

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## SAFETY DATA SHEET

Date Accessed: 04/19/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American

Elements product codes for CAS #10099-58-8

**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

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## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS05 Corrosion

Met. Corr.1 H290 May be corrosive to metals.

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

Hazards not otherwise classified No data available

GHS label elements, including precautionary statements



Hazard pictograms

GHS05 GHS07

Signal word Danger

Hazard statements

H290 May be corrosive to metals.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

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.

P310 Immediately call a POISON CENTER/doctor

P406 Store in corrosive resistant container with a  
resistant inner liner.

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  
2  
0  
1  
Health (acute effects) = 2  
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:  
10099-58-8 Lanthanum(III) chloride, anhydrous  
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:

Pick up mechanically.

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

Handle under dry protective gas.

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 water/moisture.

Do not store together with acids.

Store away from oxidizing agents.

Store away from metals.

Further information about storage conditions:

Store under dry inert gas.

This product is hygroscopic.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Protect from humidity and water.

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.

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 airpurifying

respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.  
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.  
Material of gloves Nitrile rubber, NBR  
Penetration time of glove material (in minutes) 480  
Glove thickness 0.11 mm  
Eye protection: Tightly sealed goggles  
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.)

Color: White

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 860 °C (1580 °F)

Boiling point/Boiling range: 1000 °C (1832 °F)

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 at 20 °C (68 °F): 3.842 g/cm<sup>3</sup> (32.061 lbs/gal)

Relative density No data available.

Vapor density N/A

Evaporation rate N/A

Solubility in / Miscibility with

Water at 20 °C (68 °F): 861.06 g/l

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:  
Acids  
Water/moisture  
Oxidizing agents  
Metals  
Hazardous decomposition products:  
Hydrogen chloride (HCl)  
Lanthanum oxide

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

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:  
Acids  
Water/moisture  
Oxidizing agents  
Metals  
Hazardous decomposition products:  
Hydrogen chloride (HCl)  
Lanthanum oxide

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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 product to reach groundwater, water courses, or sewage systems.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic to aquatic life.  
May cause long lasting harmful effects to aquatic life.

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.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, IMDG, IATA UN3077  
UN proper shipping name  
DOT Environmentally hazardous substances, solid,  
n.o.s. (Lanthanum(III) chloride,  
anhydrous)  
IMDG, IATA ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, SOLID, N.O.S.  
(Lanthanum(III) chloride, anhydrous)  
Transport hazard class(es)  
DOT, IMDG  
Class 9 Miscellaneous dangerous substances and  
articles.  
Label 9  
Class 9 (M7) Miscellaneous dangerous substances  
and articles  
Label 9  
IATA  
Class 9 Miscellaneous dangerous substances and  
articles.  
Label 9  
Packing group  
DOT, IMDG, IATA III  
Environmental hazards:  
Special marking (ADR): Symbol (fish and tree)  
Special marking (IATA): Symbol (fish and tree)  
Special precautions for user Warning: Miscellaneous  
dangerous substances and articles  
EMS Number: F-A,S-F  
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": UN3077, Environmentally  
hazardous substances, solid, n.o.s. (Lanthanum(III)  
chloride, anhydrous), 9, III

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental  
regulations/legislation specific for the substance or  
mixture  
GHS label elements, including precautionary  
statements  
Hazard pictograms  
GHS05 GHS07  
Signal word Danger  
Hazard statements  
H290 May be corrosive to metals.  
H318 Causes serious eye damage.  
H317 May cause an allergic skin reaction.  
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.  
P310 Immediately call a POISON CENTER/doctor  
P406 Store in corrosive resistant container with a  
resistant inner liner.  
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

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- 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.

- Growth, thermo-stability and radiation damage of cerium-doped lanthanum chloride (LaCl<sub>3</sub>:Ce) scintillation crystal. Guohao Ren, Yu Pei, Xiaofeng Chen, Dongmin Yao, Zhongbo Li. Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, Volume 579, Issue 1, 21 August 2007, Pages 11-14.
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- 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.