


Lanthanum Calcium Manganite (LCM)	
Lanthanum Calcium Manganite Sputtering Target	
Linear Formula	La ₂ O ₃ / Mn ₃ O ₄ / CaO
Pubchem CID	N/A
MDL Number	N/A
EC No.	N/A
Signal Word	Warning
Hazard Statements	H315-H319-H335
Hazard Codes	Xi
Risk Codes	34-41
Safety Statements	26-36/37/39-45
RTECS Number	N/A
Transport Information	NONH for all modes of transport
WGK Germany	3
GHS Pictograms	<u>GHS07</u> <u>Exclamation</u> <u>Point</u> 

[Create Printable PDF](#)

SAFETY DATA SHEET

Date Accessed: 10/31/2020

Date Revised: 05/15/2015

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #123273-09-6

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

Label precautionary statements

Irritant

Irritating to eyes, respiratory, and skin.

In case of contact to eyes, rinse immediately

With plenty of water and seek medical advice.

Wear suitable protective clothing.



GHS07

Signal word: Warning

Acute toxicity (oral, dermal, inhalation), category 4

Skin and eye irritation, category 2

Skin sensitisation, category 1

Specific target organ toxicity - single exposure,
category 3

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: (La_{0.85}Ca_{0.15})_{0.97}MnO₃

SECTION 4. FIRST AID MEASURES

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes .

In case of contact, immediately skin with soap and copious amounts of water.

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Wash contaminated clothing before reuse.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Noncombustible.

Use extinguishing media appropriate to surrounding fire conditions.

Special fire fighting procedures:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Wear respirator, chemical safety goggles, rubber boots and chemical resistant gloves.

Sweep up, place in a bag and hold for waste disposal.

Avoid raising dust.

Ventilate area and wash spill site after material pickup is complete.

SECTION 7. HANDLING AND STORAGE

Keep tightly closed.

Store under nitrogen. Store in a cool dry place

See section 8.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical safety goggles.

Rubber gloves.

NIOSH/MSHA- approved respirator.

Safety shower and eye bath.

Mechanical exhaust required.

Do not breath dust.

Irritant dust.

Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor

Brown powder

Physical properties

Fine powder

SECTION 10. STABILITY AND REACTIVITY

Incompatibilities:

Strong acids.

Oxidizing agents.

Protect from moisture.

Hazardous combustion or decomposition products:

Nature of decomposition products not known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute effects

May be harmful by inhalation, ingestion, or skin absorption.

Causes eye and skin irritation.

Material is irritating to mucous membranes and upper respiratory tract.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

Data not available

SECTION 13. DISPOSAL CONSIDERATIONS

Bury in a landfill site approved for the disposal of chemical and hazardous wastes. Observe all federal, state and local environmental regulations.

SECTION 14. TRANSPORT INFORMATION

CDG UK

Non-hazardous for road freight

IMDG

Non-hazardous for sea freight

ICAO/IATA

Non-hazardous for air freight

SECTION 15. REGULATORY INFORMATION

European information

Irritant

R 36/37/38

Irritating to eyes, respiratory system and skin.

S26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36

Wear suitable protective clothing.

Reviews, standards and regulations

OEL=MAK

NOES 1983: HZD X2060; NIS 8; TNF 406; NOS 11;

TNE 22403; TFE

11140

EPA TSCA Section 8(B) Chemical Inventory

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 1997-2016 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

Research

- Calcium and strontium substituted lanthanum manganite–cobaltite $[La_{1-x}(Ca,Sr)_xMn_{0.5}Co_{0.5}O_3]$ nano-catalysts for low temperature CO oxidation. Ahmad Gholizadeh, Hamid Yousefi, Azim Malekzadeh, Faiz Pourarian. *Ceramics International*, Volume 42, Issue 10, 1 August 2016, Pages 12055-12063.
- Effect of exceeding the concentration limit of solubility of silver in perovskites on the dielectric and electric properties of half doped lanthanum–calcium manganite. H. Rahmouni, B. Cherif, M. Smari, E.

Dhahri, K. Khirouni. *Physica B: Condensed Matter*, Volume 473, 15 September 2015, Pages 1-6.

- Elastic behaviour of strontium-doped lanthanum calcium manganites in the vicinity of TC. G. Lalitha, P. Venugopal Reddy. *Journal of Physics and Chemistry of Solids*, Volume 70, Issue 6, June 2009, Pages 960-966.
- Impact of a small amount of vacancy in both lanthanum and calcium on the physical properties of nanocrystalline $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ manganite. J. Makni-Chakroun, W. Cheikhrouhou-Koubaa, M. Koubaa, A. Cheikhrouhou. *Journal of Alloys and Compounds*, Volume 650, 25 November 2015, Pages 421-429.
- Lanthanum-doped Calcium Manganite ($\text{La}_{0.1}\text{Ca}_{0.9}\text{MnO}_3$) Cathode for Advanced Solid Oxide Fuel Cell (SOFC). Muhammad Afzal, Chen Xia, Bin Zhu. *Materials Today: Proceedings*, Volume 3, Issue 8, 2016, Pages 2698-2706.
- Manganese-doped lanthanum calcium titanate as an interconnect for flat-tubular solid oxide fuel cells. Niloufar Raeis Hosseini, Nigel Mark Sammes, Jong Shik Chung. *Journal of Power Sources*, Volume 245, 1 January 2014, Pages 599-608.
- Phase formation mechanism and kinetics in solid-state synthesis of undoped and calcium-doped lanthanum manganite. Qifeng Shu, Jiayun Zhang, Baijun Yan, Jianhua Liu. *Materials Research Bulletin*, Volume 44, Issue 3, 5 March 2009, Pages 649-653.
- Role of spin-glass phase for magnetoresistance enhancement in nickel substituted lanthanum calcium manganite. Akash Yadav, Jyoti Shah, Rekha Gupta, Ajay Shukla, R. K. Kotnala. *Ceramics International*, Volume 42, Issue 11, 15 August 2016, Pages 12630-12638.
- Structure and magnetic properties of lanthanum and calcium-deficient $\text{La}_{0.5}\text{Ca}_{0.5}\text{MnO}_3$ manganites. I. Walha, H. Ehrenberg, H. Fuess, A. Cheikhrouhou. *Journal of Alloys and Compounds*, Volume 433, Issues 1–2, 16 May 2007, Pages 63-67.
- Synthesis of calcium doped lanthanum manganite by mechanosynthesis. A. M. Bolarín, F. Sánchez, S. Palomares, J. A. Aguilar, G. Torres-Villaseñor. *Journal of Alloys and Compounds*, Volume 436, Issues 1–2, 14 June 2007, Pages 335-340.
- Transport properties of silver–calcium doped lanthanum manganite. B. Cherif, H. Rahmouni, M. Smari, E. Dhahri, K. Khirouni. *Physica B: Condensed Matter*, Volume 457, 15 January 2015, Pages 240-244.