Lanthanum

SAFETY DATA SHEET

1 PRODUCT AND SUPPLIER IDENTIFICATION
Product Name: Lanthanum - pieces, rod, sheet, foil, target
Formula: La

Supplier: Ames Laboratory, US DOE
Materials Preparation Center
121 Metals Development
Ames, IA 50010 USA

Telephone: 515-294-5236
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Recommended Uses: Scientific Research

2 HAZARDS IDENTIFICATION
GHS Label Elements:

Signal Word: Warning
Hazard Statements: H228 Flammable solid.
Precautionary Statements: P210 Keep away from heat/sparks/open flames/hot surfaces - No smoking, P231+P232 Handle under inert gas. Protect from moisture, P370+P378 In case of fire: Use Class D dry chemical extinguishing agent for extinction, P422 Store contents under inert gas.

3 COMPOSITION/INFORMATION ON INGREDIENTS
Ingredient: Lanthanum
CAS#: 7439-91-0
%: 100
EC#: 231-099-0

4 FIRST AID MEASURES
General Measures: Under normal handling and use, exposure to solid forms of this material present few health hazards. Subsequent operations such as grinding, melting or welding may produce potentially hazardous dust or fumes which can be inhaled or come in contact with the skin or eyes.

INHALATION: Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult. Seek medical attention.

INGESTION: Quickly wipe material from mouth and rinse with water. Do not induce vomiting. Seek medical attention.

SKIN: Remove contaminated clothing, brush material off skin, wash affected area with soap and water. Seek medical attention if symptoms persist.

EYES: Flush eyes with lukewarm water, including under upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.
5  **FIREFIGHTING MEASURES**

Extinguishing Media: Use Class D dry powder extinguishing agent.

Unsuitable Extinguishing Media: Do not use water.

Specific Hazards Arising from the Material: Lanthanum will burn under fire conditions. May react with water under fire conditions liberating flammable hydrogen gas. May emit fumes of lanthanum oxide under fire conditions.

Special Protective Equipment and Precautions for Firefighters: Full face, self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.

6  **ACCIDENTAL RELEASE MEASURES**

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear appropriate respiratory and protective equipment specified in section 8. Avoid contact with skin and eyes. Avoid breathing dust or fume. Eliminate all sources of ignition. Isolate spill area.

Methods and Materials for Containment and Cleaning Up: Sweep or scoop spilled product and place in a closed container for further handling and disposal. Do not use water for spill clean-up. Use only non-sparking tools and natural bristle brushes.

Environmental Precautions: Do not flush to sewer, stream, or other bodies of water. Do not allow to enter drains or to be released to the environment.

7  **HANDLING AND STORAGE**

Precautions for Safe Handling: Handle under dry protective gas such as argon. Handle in an enclosed, controlled process. Use non-sparking tools. Protect from sources of ignition. Protect from water/moisture. Avoid contact with skin and eyes. Wash thoroughly before eating or smoking. See section 8 for information on personal protective equipment.

Conditions for Safe Storage, Including Any Incompatibilities: Lanthanum metal should be stored in tightly-closed containers under argon or mineral oil. Keep away from sparks, heat and flame. Storage area should be free of combustibles and ignition sources. Protect from water/moisture. Do not store together with acids or oxidizers. See section 10 for more information on incompatible materials.

8  **EXPOSURE CONTROLS AND PERSONAL PROTECTION**

Exposure Limits: Lanthanum

OSHA/PEL: No exposure limit established

ACGIH/TLV: No exposure limit established

Appropriate Engineering Controls: Handle in a humidity controlled atmosphere. Handle in an enclosed, controlled process under dry argon. Use local exhaust to maintain exposure at low levels. Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air. Prepare for the possibility of a fire. Keep extinguishing agents, tools for handling and protective clothing readily available.

Individual Protection Measures, Such as Personal Protective Equipment:

Respiratory Protection: Wear a NIOSH/MSHA approved respirator when high concentrations are present.

Eye Protection: Always wear approved chemical splash proof goggles.

Skin Protection: Rubber gloves, flame retardant protective work clothing.

9  **PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Solid in various forms

Form: Silver gray metallic

Odor: Not determined

Odor Threshold: Not determined

pH: N/A

Melting Point: 918 °C

Boiling Point: 3464 °C

Flash Point: N/A

Evaporation Rate: N/A
**10 STABILITY AND REACTIVITY**

**Reactivity:** No data

**Chemical Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Flammable when exposed to heat, spark or flame. Reacts vigorously with acids releasing flammable hydrogen gas. May react with water under fire conditions liberating flammable hydrogen gas.

**Conditions to Avoid:** Heat, sparks, flame. Dusting conditions. Exposure to moist air or water.

**Incompatible Materials:** Water/moisture, air, strong acids, strong oxidizing agents, acid chlorides, halogens.

**Hazardous Decomposition Products:** Lanthanum oxides, lanthanum hydroxides, hydrogen gas.

**11 TOXICOLOGICAL INFORMATION**

**Likely Routes of Exposure:** Inhalation, skin, eyes. Product as shipped does not present an inhalation hazard; however subsequent operations may create dusts or fumes which could be inhaled.

**Symptoms of Exposure:** May cause irritation.

**Acute and Chronic Effects:** No data

**Acute Toxicity:** No data

**Carcinogenicity:** NTP: Not identified as carcinogenic  IARC: Not identified as carcinogenic

To the best of our knowledge the chemical, physical and toxicological characteristics of the substance are not fully known.

**12 ECOLOGICAL INFORMATION**

**Ecotoxicity:** No data

**Persistence and Degradability:** No data

**Bioaccumulative Potential:** No data

**Mobility in Soil:** No data

**Other Adverse Effects:** Do not allow material to be released to the environment. No further relevant information available.

**13 DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:**

Product: Dispose of in accordance with Federal, State and Local regulations.

Packaging: Dispose of in accordance with Federal, State and Local regulations.

**14 TRANSPORT INFORMATION**

**DOT/ADR/IATA/IMDG Regulations:**

UN Number: UN 3178

UN Proper Shipping Name: Flammable solid, inorganic, n.o.s. (Lanthanum)

Transport Hazard Class: 4.1

Packing Group: II

Marine Pollutant: No

**Special Precautions:** Warning: Flammable solid.

**15 REGULATORY INFORMATION**

**TSCA Listed:** All components are listed.


**Canada WHMIS Classification (CPR, SOR/88-66):** Class B, Division 4 - Flammable material.
16 OTHER INFORMATION
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Prepared by: The Materials Preparation Center at Ames Laboratory
Revised/Reviewed: January 26, 2016