

Material Safety Data Sheet

Identity: Lutetium

Formula: Lu

SECTION I - GENERAL INFORMATION

Manufacturer: [Stanford Advanced Materials](#) (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 174.967

CAS #	OSHA PEL	ACGIH TLV	%
7439-94-3	N/A	N/A	0-100

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 3402 °C

Vapor Pressure (vs. air or mmHg): N/A

Melting Point: 1663 °C

Density: 9.84 g/cm³ at 20 °C

Evaporation Rate: N/A

Flash Point: Spontaneously flammable in air

Solubility in water: NO- Contact with water emits extremely flammable gases including Hydrogen (H)*Appearance and odor:* Dark grey powder and pieces/odorless

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Auto*Explosive Limits:* LEL: N/A

UEL: N/A

Extinguishing Media:

Use extinguishing powder. DO NOT USE WATER

Special Fire Fighting Procedures:

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazards: Material may spontaneously ignite in air emitting hazardous gases.

SECTION V - REACTIVITY DATA

Stability: May be unstable at times

Conditions to Avoid (stability): moisture, water, and leaving material unattended in open air

Incompatibility: water, moisture, air, oxidizing agents, acids and halogens

Hazardous Decomposition or Byproducts: Hydrogen when contacted with water

Hazardous Polymerization: N/A

Conditions to avoid (hazardous polymerization): N/A

SECTION VI - HEALTH HAZARD DATA

Health Hazards (Acute and Chronic):

Inhalation: Can lead to sensitivity to heat, itching, and increased awareness of odor and taste

Ingestion: Can cause delayed blood clotting leading to hemorrhages and also liver damage *Skin:*

May cause redness, itching, and/or swelling to skin and mucous membranes.

Eye: May cause redness, itching, swelling, and/or watering

Carcinogenicity: NTP? N/A

IARC Monographs? N/A

OSHA Regulated? N/A

Medical Conditions Aggravated by Exposure: Pre-existing respiratory and liver problems

Emergency and First Aid Procedures:

Inhalation: Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention

Ingestion: Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person

Skin: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist

Eye: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling. Do not flush and keep away from ignition sources and moisture

Handle under an inert gas such as DRY Argon (Ar)

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Use proper operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. 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.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established
