



LTS Research Laboratories, Inc.
Safety Data Sheet
Bismuth Lanthanum Alloy

1. Product and Company Identification

Trade Name: Bismuth Lanthanum Alloy
Chemical Formula: BiLa
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H228: Flammable solid
H260: In contact with water releases flammable gases which may ignite spontaneously.

Precautionary Statements: P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P223: Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231+P232: Handle under inert gas. Protect from moisture.
P233: Keep container tightly closed
P240: Ground/bond container and receiving equipment
P241: Use explosion-proof electrical/ventilating/light/equipment
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P335+P334: Brush off loose particles from skin. Immerse in cool water/ wrap in wet bandages.
P370+P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P402+P404: Store in a dry place. Store in a closed container.
P501: Dispose of contents/ container to an approved waste disposal plant.

HMIS Health Ratings (0-4):
Health: 1
Flammability: 4
Physical: 2

3. Composition

Chemical Family: Alloy
Additional Names: Lanthanum Bismuth Alloy

Bismuth (Bi):
Percentage: 0-100 wt%
CAS #: 7440-69-9
EC #: 231-177-4

Lanthanum (La):
Percentage: 0-100 wt%
CAS #: 7439-91-0
EC #: 231-099-0

4. First Aid Procedures

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep patient warm. Seek immediate medical attention.
Ingestion: Seek immediate medical attention.
Skin: Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.

5. Firefighting Measures

Flammability: Product is flammable.
Extinguishing Media: Do not use water for metal fires – use CO₂, sand, extinguishing powder.
Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. Keep away from ignition sources. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions: Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Handle under dry protective gas. Avoid contact with the eyes and skin. Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store under dry inert gas. Store away from air, water/moisture, acids, oxidizing agents, halogens, acids, chlorides. This store is moisture and air sensitive. Protect from humidity and water. Protect from electrostatic charges. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Respiratory Protection:	Dust Respirator
Protective Gloves:	Nitrile rubber gloves with minimum thickness of 0.11 mm
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Contact with water releases flammable gases
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	N/A

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Reacts violently with water. Oxidizing agents, acids, air, halogens, acids, chlorides, water/moisture, phosphorus, sulphur compounds
Incompatible Conditions:	Air, water/moisture
Hazardous Decomposition Products:	Metal oxide fume, bismuth oxide

11. Toxicological Information

Potential Health Effects:

Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	Kidney disorders, liver disorders, dermatitis

Signs & Symptoms:

N/A

Aggravated Medical Conditions:

N/A

Median Lethal Dose:

2,000 mg/kg for rat by mouth as Bi

Carcinogen:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

12. Ecological Information

Aquatic Toxicity:

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) \rightarrow 100 mg/l - 48 h (OECD Test Guideline 202)

Persistent Bioaccumulation Toxicity:

N/A

Very Persistent, Very Bioaccumulative:

N/A

Notes:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.

Avoid transfer into the environment.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous as powder only.



Hazard Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives
Packing Group: II
UN Number: UN3089
Proper Shipping Name: Metal powders, flammable, n.o.s. (Bismuth Lanthanum Alloy)

15. Regulatory Information

Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: N/A
Sec 313 Toxic Chemicals: No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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