



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Barium Sulfide

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1. Product and Company Identification

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Trade Name:	Barium Sulfide
Chemical Formula:	BaS
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)



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## 2. Hazards Identification

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Signal Word:

Danger



Hazard Statements:

H290: May be corrosive to metals.  
H301: Toxic if swallowed.  
H302+H332: Harmful if swallowed or if inhaled.  
H314: Causes severe skin burns and eye damage.  
H400: Very toxic to aquatic life.

Precautionary Statements:

P234: Keep only in original container.  
P260: Do not breathe dust/fume/gas/mist/vapors/spray.  
P264: Wash skin thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
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.  
P363: Wash contaminated clothing before reuse.  
P390: Absorb spillage to prevent material damage.  
P391: Collect spillage.  
P405: Store locked up.  
P406: Store in corrosive resistant stainless-steel container with a resistant inner liner.  
P501: Dispose of contents/ container to an approved waste disposal plant.

HMIS Health Ratings (0-4):

Health:	3
Flammability:	3
Physical:	2

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## 3. Composition

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Chemical Family: Nonmetal  
Additional Names: Barium monosulfide

Barium Sulfide (BaS):  
Percentage: 100 wt%  
CAS #: 21109-95-5  
EC #: 244-214-4

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#### 4. First Aid Procedures

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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.

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#### 5. Firefighting Measures

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Flammability:	Flammable
Extinguishing Media:	Do not use water for fires – use CO <sub>2</sub> , 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.

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#### 6. Accidental Release Measures

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If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. 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.

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#### 7. Handling and Storage

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Handling Conditions:	Handle under dry protective gas. Avoid contact with skin and eyes. 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 water/moisture, acids, humidity. 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.

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#### 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	0.5 mg/m <sup>3</sup> as Ba, long-term value
Threshold Limit Value:	0.5 mg/m <sup>3</sup> as Ba, long-term value
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.

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## 9. Physical and Chemical Characteristics

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Color	White
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Rotten eggs (sulphurous)
Water Solubility:	72.8 g/L
Boiling Point:	N/A
Melting Point:	1,200°C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	4.25 g/cc
Molecular weight:	169.39 g/mol

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents, Acids, Phosphorous oxides, Lead, Potassium chlorate, Potassium nitrate
Incompatible Conditions:	Water/moisture, Humidity
Hazardous Decomposition Products:	Metal oxide fume, Sulphur oxides, Barium oxide, Hydrogen sulfide

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	Harmful if swallowed
Inhalation:	Harmful if inhaled
Chronic:	N/A
Signs & Symptoms:	Nausea, Vomiting, Diarrhea
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	271 mg/kg for rat by mouth
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. 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.

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## 12. Ecological Information

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Aquatic Toxicity:	Very toxic for aquatic organisms.
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A
Notes:	Do not allow product to reach ground water, water course and sewage systems. Avoid transfer into the environment. Do not allow material to be released to the environment without proper governmental permits. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies.

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### 13. Disposal Considerations

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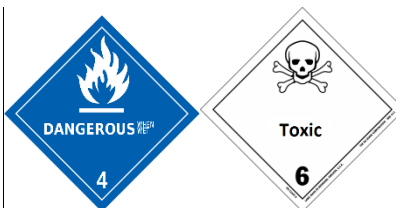
Dispose of in accordance with local, state, national, and international regulations.

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### 14. Transportation Data

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Hazardous: Hazardous for transportation



Hazard Class:	4.3 Substances which, in contact with water, emit flammable gases
Secondary class:	6.1 Toxic material
Packing Group:	II
UN Number:	UN2813
Proper Shipping Name:	Water-reactive solid, toxic, n.o.s. (Barium sulfide)

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### 15. Regulatory Information

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

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### 16. Other Information

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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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