



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Barium Boride

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1. Product and Company Identification

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Trade Name: Barium Boride  
Chemical Formula: BaB<sub>6</sub>  
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: Warning



Hazard Statements: H302+H332: Harmful if swallowed or if inhaled  
Precautionary Statements: P261 Avoid breathing dust/fume/vapor/spray  
P264 Wash thoroughly after handling  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P301+P312 If SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health:	2
Flammability:	0
Physical:	0

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3. Composition

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Chemical Family: Ceramic  
Additional Names: Barium Hexaboride

Barium Boride (BaB<sub>6</sub>):

Percentage:	100 wt%
CAS #:	12046-08-1
EC #:	234-965-6

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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:	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.
Ingestion:	Seek medical treatment
Skin:	Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.
Eyes:	Rinse opened eye for several minutes under running water. Then consult a doctor.

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#### 5. Firefighting Measures

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Flammability:	Non-flammable
Extinguishing Media:	Product is not flammable. Use fire-fighting measures that suit the surrounding fire.
Spec. Fire Fighting Procedure:	Wear self-contained respirator. Wear fully protective impervious suit.

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#### 6. Accidental Release Measures

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If Material Is Released/Spilled:	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.
Environmental Precautions:	Do not allow material to be released to the environment without proper governmental permits.

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#### 7. Handling and Storage

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Handling Conditions:	Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. 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.
Further Information on Storage:	Keep container tightly sealed Store in cool, dry conditions in well-sealed containers

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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:	None
Respiratory Protection:	Suitable respirator when high concentrations are present
Protective Gloves:	Impervious gloves
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	Black
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	2270 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	4.36 g/cm <sup>3</sup>
Molecular weight:	201.21 g/mol

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents
Incompatible Conditions:	Oxidizing agents
Hazardous Decomposition Products:	Barium Oxide

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## 11. Toxicological Information

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### Potential Health Effects:

Eyes:	Irritating effect
Skin:	Irritant to skin and mucous membranes
Ingestion:	Harmful if swallowed
Inhalation:	Harmful if inhaled
Chronic:	Barium compounds may cause severe gastroenteritis, including abdominal pain, vomiting and diarrhea, tremors, faintness, paralysis of the arms and legs, and slow or irregular heartbeat. Severe cases may produce collapse and death due to respiratory failure. Soluble barium compounds are more likely to cause these affects than insoluble compounds. Inhalation of fumes may cause sore throat, coughing, labored breathing, and irritation of the respiratory tract as well as above symptoms. Boron affects the central nervous system. Boron poisoning causes depression of the circulation, persistence vomiting and diarrhea, followed by profound shock and coma. The temperature may become subnormal and a scarlatina form rash may cover the entire body.

Signs & Symptoms: N/A

Median Lethal Dose: N/A mg/kg for rat by mouth

Carcinogen: EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.  
ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

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## 12. Ecological Information

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Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A
Notes:	<p>Do not allow material to be released to the environment without proper governmental permits.</p> <p>Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.</p> <p>Avoid transfer into the environment.</p>

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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: 6.1 Toxic Substances  
Packing Group: III  
UN Number: UN1564  
Proper Shipping Name: N/A

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### 15. Regulatory Information

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Sec 302 Extremely Hazardous: N/A  
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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