



LTS Research Laboratories, Inc.
Safety Data Sheet
Silicon Tetraboride

1. Product and Company Identification

Trade Name:	Silicon Tetraboride
Chemical Formula:	SiB ₄
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	LTS Research Laboratories, Inc.
Street:	2001 Oaks Parkway
City:	Belmont
State:	North Carolina
Zip Code:	28012
Country:	USA
Tel #:	+1 (704) 899 2840
24-Hour Emergency Contact:	800-424-9300 (US & Canada) +1-703-527-3887 (International)

2. Hazards Identification

GHS Classification in accordance
with 29 CFR 1910 (OSHA HCS):

Acute toxicity, oral, (Category 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Specific target organ toxicity - single exposure (Category 3),
Respiratory system, H335

Signal Word:

Warning



Hazard Statements:

H302: Harmful if swallowed
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation

Precautionary Statements:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell
P321: Specific treatment (see on this label)
P332+P313: If skin irritation occurs: Get medical advice/attention
P337+P313: If eye irritation persists get medical advice/attention
P362: Take off contaminated clothing and wash before reuse.

P403+P233: Store in a well ventilated place. Keep container tightly closed
P405: Store locked up
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health:	1
Flammability:	0
Physical:	1

3. Composition

Chemical Family:	Ceramic
Additional Names:	Silicon Boride

Silicon boride (SiB ₄):	
Percentage:	100 wt%
CAS #:	12007-81-7
EC #:	234-518-5

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. Seek medical attention
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Ingestion:	Rinse mouth with water. Seek medical attention.
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Skin:	Wash affected area with mild soap and water for at least 15 minutes. Remove any contaminated clothing. Seek medical attention
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Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention
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5. Firefighting Measures

Flammability:	Non-flammable
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Extinguishing Media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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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

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. 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.
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Environmental Precautions:	Isolate runoff to prevent environmental pollution.
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7. Handling and Storage

Handling Conditions:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. Wash thoroughly after handling.
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.
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:	None
Respiratory Protection:	Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber, NBR 0.11mm thick
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	Dark grey - black
Form:	Powder
Odor:	N/A
Water Solubility:	N/A
Boiling Point:	N/A
Melting Point:	1870°C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	2.4 g/cc
Molecular weight:	N/A

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Strong oxidizing agents
Incompatible Conditions:	None
Hazardous Decomposition Products:	Borane/boron oxides, Silicon oxides, Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas

11. Toxicological Information

Potential Health Effects:

Eyes:	Causes serious eye irritation
Skin:	Causes skin irritation
Ingestion:	Harmful if swallowed
Inhalation:	May cause respiratory irritation
Chronic:	N/A

Signs & Symptoms: Dermatitis, nausea, vomiting, diarrhea, cough, chest pain, difficulty in breathing

Aggravated Medical Conditions: N/A

Median Lethal Dose: N/A

Carcinogen: N/A

12. Ecological Information

Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A
Notes:	N/A

13. Disposal Considerations

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

14. Transportation Data

Hazardous:	Not hazardous for transportation.
Hazard Class:	N/A
Packing Group:	N/A
UN Number:	N/A
Proper Shipping Name:	N/A

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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