



# Super Conductor Materials, Inc.

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Chemtrec: (800) 424-9300  
Poison Center: (800) 562-8236  
Revision Date: January 8<sup>th</sup>, 2019

## SAFETY DATA SHEET

Identity: Aluminum boride

Formula: AIB2

### SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

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

### SECTION II - INGREDIENTS/SUMMARY OF HAZARDS INFORMATION

Molecular Weight: 48.60

CAS#	ACGIH TLV	OSHA PEL	%
12041-50-8	NE	NE	0.0-100%

### SECTION III – PHYSICAL DATA

PHYSICAL STATE: Solid

Boiling Point: NA	Vapor Pressure (vs. Air or mm Hg): NA
Melting Point: NA	Vapor Density (vs. Air =1): NE
Evaporation Rate (vs. Butyl Acetate=1): NA	Specific Gravity (Water =1):3.19 gm/cc
Solubility in water: Insoluble	

*Appearance and odor:* Copper-red powder and pieces, no odor

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

*Method Used:* Unknown

*Explosive Limits:* LEL: N/A

UEL: N/A

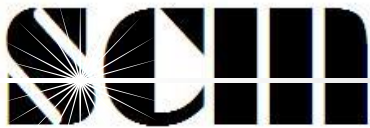
*Extinguishing Media:* Use suitable extinguishing agent for surrounding material and type of fire

*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.

*Flammable Properties and Hazards:*

Aluminum boride may emit toxic fumes and aluminum in a fire.



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Contact with acids may emit flammable hydrogen gas.

## SECTION V - REACTIVITY DATA

*Stability:* Stable

*Conditions to Avoid (stability):* None

*Incompatibility:* Acids

*Hazardous Decomposition or Byproducts:* Hydrogen gas, boron, aluminum and their oxides.

*Hazardous Polymerization:* Will not occur.

*Conditions to avoid (hazardous polymerization):* None

## SECTION VI - HEALTH HAZARD DATA

*Routes of entry:* Inhalation? Yes    Skin? Yes    Eyes? Yes    Ingestion? Yes    Other? No

### Health hazards/Acute and Chronic:

To the best of our knowledge the chemical, physical and toxicological properties of aluminum boride have not been thoroughly investigated and recorded.

Aluminum compounds have many industrial uses and are commonly found in industry. Many of these materials are active chemically and thus exhibit dangerous toxic and reactive properties. (Sax, Dangerous Properties of Industrial Materials, eighth edition.).

Boron compounds are very toxic and therefore considered an industrial poison. Boron is one of a group of elements, such as Pb, Mn, As, which affects the central nervous system. Boron poisoning causes depression of the circulation, persistent vomiting and diarrhea, followed by profound shock and coma. The temperature becomes subnormal and a scarletina form rash may cover the entire body. (Sax, Dangerous, Properties of Industrial Materials, eighth edition).

### Signs and Symptoms of Overexposure:

*Inhalation:* May cause coughing, sneezing and difficulty breathing. Boron poisoning may cause: depression of the circulation, persistent vomiting, diarrhea, shock and coma.

*Ingestion:* Boron poisoning may cause: depression of the circulation, persistent vomiting, diarrhea, shock and coma.

*Skin:* May cause redness, itching and burning.

*Eye:* May cause redness, itching, burning and watering.

### Health Hazards (Acute and chronic):

#### *Inhalation:*

*Acute:* May cause respiratory irritation and boron poisoning.

*Chronic:* May cause pulmonary granulomas.

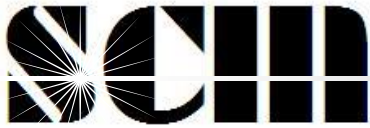
#### *Ingestion:*

*Acute:* May cause gastrointestinal irritation and boron poisoning.

*Chronic:* May affect the central nervous system.

#### *Skin:*

*Acute:* May cause mild irritation.



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*Chronic:* May cause dermatitis.

*Eye:*

*Acute:* May cause mild irritation.

*Chronic:* No chronic health effects recorded.

**Target Organs:** May affect the respiratory and central nervous system.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

**Medical Conditions Aggravated by Exposure:** Pre-existing respiratory disorders.

### 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:* If conscious give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never give anything by mouth or induce vomiting on 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-control measures. 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.

### *Ventilation:*

Local Exhaust: To maintain concentration at low exposure levels. Special: None

Mechanical (General): Recommended.

### *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