



Super Conductor Materials, Inc.

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Chemtrec: (800) 424-9300

Poison Center: (800) 562-8236

Revision Date: January 8th, 2019

SAFETY DATA SHEET

Identity: Lithium Tetraborate

Formula: Li₃BO₄

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 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

CAS #	OSHA PEL	ACGIH TLV	%
12007-60-2	NE	NE	NE

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A

Vapor Pressure (vs. air or mmHg): N/A

Melting Point: 930°C (1706°F)

Density: 2.4 g/cm³

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water at 20°C: 28.9g/l

Appearance and odor: White, odorless, powder

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: N/A Explosive Limits: LEL: N/A UEL: N/A

Extinguishing Media: Use suitable extinguishing agent for surrounding material and type of fire. Product is nonflammable.

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.

Unusual Fire and Explosive Hazards:

If this product is involved in a fire, Boron oxide and lithium oxide can be released.

SECTION V – STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions



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Conditions to Avoid (Instability): Decomposition will not occur if used and stored according to specifications.

Incompatibility: Acids, oxidizing agents, acid anhydrides, and alkali metals

Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.

Hazardous decomposition or byproducts: Lithium oxide and boron oxide

Hazardous Polymerization: Reacts with strong oxidizing agents

Conditions to avoid (Hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

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

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Signs and Symptoms of Overexposure:

Inhalation: May cause respiratory irritation

Ingestion: Harmful if swallowed

Skin: Causes skin irritation

Eyes: Causes serious eye irritation

Health Hazards (Acute and Chronic):

Acute:

Large amounts of lithium compounds may cause vomiting, diarrhea, ataxia, intestinal irritation, kidney injury, central nervous system depression and a drop in blood pressure. Central nervous system effects may include slurred speech, blurred vision, dizziness, sensory loss, convulsions and stupor. Chronic intake may cause neuromuscular effects such as tremor, ataxia, weakness, clonus and hyperactive reflexes. Lithium can cause kidney damage, gastrointestinal disturbances, fatigue, dehydration, weight loss, dermatological effects and thyroid damage. Lithium ion has shown teratogenic effects in rats and mice.

Chronic:

Boron affects the central nervous system. Boron poisoning causes depression of the circulation, persistent vomiting and diarrhea, followed by profound shock and coma. The temperature may become subnormal and a scarletina form rash may cover the entire body.

Target Organs: May cause respiratory irritation

Carcinogenicity: NTP? N/A LARC Monograph? N/A OSHA Regulated? N/A

Medical Conditions Aggravated By Exposure: N/A

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: Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to 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



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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. 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.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

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