1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Lithium Borate

Chemical Formula: $Li_2B_4O_7$

Manufacturer Item Number: LI-2830

Manufacturer:
Lorad Chemical Corporation
1200 19th Street North
Saint Petersburg, Florida, 33713
United States of America

Telephone: +1 (727) 826–5511

Fax: +1 (727) 826–5510

Emergency Contact:
(800) 255–3924 (US & Canada)
+1 (813) 248–0573 (International)

2. HAZARD IDENTIFICATION

Signal Word: Not a Hazardous Substance or Mixture.

Pictograms: N/A

Hazard Statements: N/A

Precautionary Statements: N/A

HMIS Health Ratings (0-4)
- Health: 0
- Flammability: 0
- Physical: 0

3. COMPOSITION

Additional Names: Lithium Tetraborate; Dilithium Tetraborate; Boron Lithium Oxide

Percentage: 100 wt%

CAS #: 12007-60-2

EC #: 234-514-3

4. FIRST AID PROCEDURES

General Treatment Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area.

Special Treatment: No Data Available.

Important Symptoms: No Data Available.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Skin: Wash off with soap and plenty of water. Consult a physician.

Eyes: Flush eyes with water as a precaution.

5. FIREFIGHTING MEASURES

Flammability: Not Flammable.

Special Hazards from Substance: Borane; Boron oxides; Lithium oxides

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

Special Fire Fighting Procedures: Wear self-contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

If Material is Released / Spilled: Use appropriate personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Isolate spill area and provide ventilation. Evacuate personnel to safe areas. Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable closed containers for disposal.

Environmental Precautions: Prevent further leakage or spills if safe to do so. Do not allow to enter drains, sewers, or watercourses.

7. HANDLING AND STORAGE

Handling Conditions: Use appropriate personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing. Avoid formation of dust and aerosols.

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place.

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 appropriate exhaust ventilation at places where dust is formed.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits:

Authority	Basis	Limit	Remarks
-	-	-	Contains no substances with occupational exposure limit values established by region specific regulatory bodies.

Threshold Limit Value:

Authority	Basis	Limit	Remarks
ACGIH	TLV	2.0 mg/m³	(up to 8-hour time weighted average)
ACGIH	STEL	6.0 mg/m³	(up to 15-minute time weighted average) (ceiling)

Special Equipment: No Data Available.

Respiratory Protection: Respiratory protection is not required. Where protection from nuisance levels of dust are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Protective Gloves: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye Protection: Safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Body Protection: Wear appropriate protective clothing.

9. PHYSICAL AND CHEMICAL CHARACTERISTICS

Color:	White	**Molecular Weight:**	169.11 g/mol
Forms:	Powder	**Density:**	0.25 g/cm^3 at 25ºC (77ºF)
Odor:	No Data Available.	**pH:**	No Data Available.
Water Solubility:	28 g/L at 20ºC	**Auto-Ignition Temperature:**	No Data Available.
Boiling Point:	No Data Available.	**Evaporation Rate:**	No Data Available.
Melting Point / Freezing Point:	> 917ºC (> 1,683ºF)	**Flammability or Explosive Limits:**	No Data Available.
Vapor Pressure:	No Data Available.	**Partition Coefficient: n-octanol/ water**	No Data Available.
Vapor Density:	No Data Available.	**Decomposition Temperature:**	No Data Available.
Flash Point:	No Data Available.	**Viscosity:**	No Data Available.

10. REACTIVITY

Stability: Stable under recommended storage conditions. Diluted solutions form mainly undissociated Boric acid. Concentrated solutions may polymerize.

Reacts with: Potassium; Metal hydrides; Acid anhydrides; Strong oxidizing agents; Strong acids

Incompatible Conditions: Avoid moisture (hygroscopic).

Hazardous Decomposition Products: Under fire conditions may form borane, boron oxides, lithium oxides.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: No Data Available.

Skin: No Data Available.

Ingestion: Ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, anderythematous lesions on the skin and mucous membrane.

Inhalation: No Data Available.

Chronic: Chronic or acute over-exposure to Borates may lead to circulatory collapse, tachycardia, cyanosis, delirium, convulsions, and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams.

Signs and Symptoms: Large doses of Lithium iron may cause dizziness and prostration, and can cause kidney damage if sodium intake is limited. Dehydration, weight loss, dermatological effects, and thyroid disturbances have been reported. Central nervous system effects that include slurred speech, blurred vision, sensory loss, ataxia, and convulsions may occur. Diarrhea, vomiting, and neuromuscular effects such as tremor, clonus, and hyperactive reflexes may occur as a result of repeated exposure to Lithium Iron.

Aggravate Medical Conditions: Stomach Irregularities (based on human evidence)

Median Lethal Dose: Toxicity reported for borates in certain instances leads to death in infants from less than 5 grams and in adults from 5 to 20 grams.

Carcinogen:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: No Data Available.

Persistence and degradability: Soluble in water but persistence is unlikely based on information available.

Bioaccumulative potential: No Data Available.

Notes: No Data Available.

13. DISPOSAL CONSIDERATIONS

Disposal: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Empty containers should be taken to an appropriate waste handling site for recycling or disposal. Dispose of in accordance with local, state, or national regulations.

14. TRANSPORTATION DATA

Hazardous:
DoT: Not Hazardous for Transportation.
IMDG: Not Hazardous for Transportation.
IATA: Not Hazardous for Transportation.

Pictogram: N/A

Hazard Class: N/A

Packing Group: N/A

UN Number: N/A

Proper Shipping Name:
DoT: N/A
IMDG: N/A
IATA: N/A

15. REGULATORY INFORMATION

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components This material does not contain any chemical component with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards Chronic Health Hazard.

Massachusetts Right to Know Components No components are subject to the Ma. Right to Know Act.

Pennsylvania Right to Know Components	Lithium Borate (CAS No. 12007-60-2).
New Jersey Right to Know Components	Lithium Borate (CAS No. 12007-60-2).
California Prop. 65 Components	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Revision Date: 07/11/2018