

**MATERIAL SAFETY DATA SHEET****I PRODUCT IDENTIFICATION**

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**Trade Name:** Boron Oxide  
**Formula:** B<sub>2</sub>O<sub>3</sub>**Chemical Nature:** Non-Metal Oxide  
**CAS #:** 1303-86-2**II HAZARDOUS INGREDIENTS**

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<u>Hazardous Component</u>	<u>%</u>	<u>OSHA/PEL</u>	<u>ACGIH/TLV</u>
Boron Oxide	0-100	15 mg/m <sup>3</sup> (for B <sub>2</sub> O <sub>3</sub> )	10 mg/m <sup>3</sup> (for B <sub>2</sub> O <sub>3</sub> )

**III PHYSICAL DATA**

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<b>Boiling Point 760 mm Hg:</b>	1500 °C	<b>Melting Point:</b>	450 °C
<b>Reaction with Water:</b>	Slowly reacts with H <sub>2</sub> O to give B(OH) <sub>3</sub>	<b>Density:</b>	1.85 gm/cc
<b>Appearance and Odor:</b>	Colorless powder, pieces, no odor.		

**IV FIRE AND EXPLOSION HAZARDS DATA**

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**Flash Point (method used):** Not applicable  
**Flammable Limits:** Not a fire hazard under most conditions  
**Autoignition Temperature:** N/A**Extinguishing Media:** N/A  
**Special Fire Fighting Procedures:** None  
**Unusual Fire and Explosion Hazards:** None**V HEALTH HAZARD INFORMATION**

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**Effects of Exposure:** Boron oxide may produce irritation of the nasal mucous membranes and the respiratory tract. Mild irritation to the skin, eye, and mucous membranes. Prolonged skin contact may result in redness and irritation.**Toxicity Data:** Skin-rabbit: 1 gm                      Eye-rabbit: 50 mg**EMERGENCY AND FIRST AID PROCEDURES:****INHALATION:** Remove to fresh air.**INGESTION:** Induce vomiting, seek immediate medical attention.**SKIN:** Remove any contaminated clothing, brush material off skin, flush with running water, wash carefully with soap and water.**EYES:** Flush with copious amounts of water for at least 15 minutes.**VII REACTIVITY DATA**

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**Stability:** Stable

**Incompatibility (Material to Avoid):** No data

**Hazardous Polymerization:** Will not occur

**Hazardous Decomposition Products:** None

## **VII SPILL OR LEAK PROCEDURES**

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**Steps to Be Taken If Spilled or Released:** Sweep or scoop up and remove.

**Waste Disposal Method:** In accordance with state, local, and federal waste disposal regulations.

## **VIII SPECIAL PROTECTION INFORMATION**

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**Respiratory Protection (specify type):** NIOSH approved dust, mist, vapor respirator.

**Ventilation:** Use local exhaust to maintain concentration at low levels. General exhaust is recommended.

**Protective Gloves:** Neoprene

**Eye/Protection:** Safety glasses.

**Other Protective Equipment:** Protective gear suitable to prevent contamination.

## **IX SPECIAL PRECAUTIONS**

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**Precautions to Be Taken in Handling and Storage:** Store in cool, dry well-ventilated area. Keep tightly sealed when not in use, read MSDS before using. Wash thoroughly after use.

**Work Practices:** Implement engineering and work practice controls to reduce and maintain concentration of exposure. 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. Maintain eyewash capable of sustained flushing, safety drench shower and facilities for washing.

The above information is believed to be correct, but does not purport to be all inclusive and shall only be used as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.

Issued by: S. Dierks  
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