



SAFETY DATA SHEET

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SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Boron Oxide**
PRODUCT NUMBER: 1294
CAS NUMBER: 1303-86-2
SYNONYMS: Boric acid anhydride, boron sesquioxide, boron trioxide

MANUFACTURER:

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

Danger

Hazard Statements

H360 May damage fertility or the unborn child.

Precautionary Phrases

P308+P313 IF exposed or concerned: Get medical advice/attention.

HMIS CLASSIFICATION:

Health: 1 Fire: 0 Reactivity Hazard: 0

NFPA RATING:

Health: 1 Flammability: 0 Reactivity Hazard: 0

EYE CONTACT: The dust may cause slight to mild irritation of the eyes. Symptoms include redness and pain.

SKIN CONTACT: The dust may cause irritation and dryness of the skin.

INHALATION: The dust may be irritating to the nose, mucous membranes, and respiratory tract. Symptoms include coughing, wheezing, and sore throat.

INGESTION: High doses may cause convulsions, cyanosis, coma, and death.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: B₂O₃

Molecular Weight: 69.62

CHEMICAL NAME	CAS#	%
Boron Oxide	1303-86-2	100

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove to fresh air and keep at rest. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: Product is not flammable

AUTO IGNITION TEMPERATURE: Not available

EXPLOSION LIMITS: Not available

EXTINGUISHING MEDIUM: Use fire fighting measures that suit the surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: None known

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Keep unprotected persons away.

ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or allowing to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Small spills can be mixed with vermiculite or sodium carbonate and swept up.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Use with adequate ventilation. Keep in a tightly sealed container.

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Store under dry inert gas. Protect from humidity and water. Hygroscopic.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE CONTROLS: Contains no substances with occupational exposure limit values.

Component	Exposure Limits	Basis	Entity
Boron Oxide	10 mg/m ³	TLV	ACGIH
	15* mg/m ³	PEL	OSHA
	10 mg/m ³	REL	NIOSH

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

EYE PROTECTION: Wear chemical safety glasses or goggles and face shield

SKIN PROTECTION: Wear nitrile or rubber gloves, apron, or lab coat.

VENTILATION: Provide local exhaust, preferably mechanical.

RESPIRATOR: Use an approved respirator.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: White to off-white solid

ODOR: None

MOLECULAR WEIGHT: 69.62

BOILING POINT: 1860° C

MELTING POINT: 450° C

SPECIFIC GRAVITY: 2.46 gm/ml

VAPOR DENSITY: No data available

SOLUBILITY: Soluble

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: None

INCOMPATIBILITY: Water, moisture, and active metals.

DECOMPOSITION PRODUCTS: None known.

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: LD50 Oral – rat -16m/kg. LD50 Dermal – rat – 550mg/kg.

CARCINOGENIC EFFECTS: No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

MUTAGENIC EFFECTS: Not available

TETRATOGENIC EFFECTS: Not available

CHRONIC TOXICITY: Boron oxide has a relatively low acute toxicity. Swallowing large amounts may cause gastrointestinal symptoms.

RTECS: ED7900000

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

Not a dangerous good.

SECTION 15 REGULATORY INFORMATION

TSCA: Listed in the TSCA inventory

SARA (TITLE 313): Not listed

CALIFORNIA PROP. 65: Not Listed

SECTION 16 OTHER INFORMATION

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