

Boric Oxide

1

PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Boric Oxide
Synonyms: Anhydrous boric acid, Boron trioxide, diboron trioxide
Common Name: Boric Oxide
SDS Number: rm-anhybor
Revision Date: 1/1/2022
Version: 1.3
CAS Number: 1303-86-2
EPA Number: 40 CFR 261
RCRA Number: 40 CFR 261
Chemical Family: Borates
Chemical Formula: B₂O₃

Supplier:

Rose Mill Company
100 Brook Street
West Hartford, CT 06110

860-232-9990 (Phone)
860-232-9995 (Fax)

www.RoseMill.com
info@RoseMill.com

2

HAZARDS IDENTIFICATION

Classification of Substance

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):
Health, Reproductive toxicity, 2

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **WARNING**

GHS Hazard Pictograms:



GHS Hazard Statements:

H361 - Suspected of damaging fertility or the unborn child

GHS Precautionary Statements:

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P332+313 - If skin irritation occurs: Get medical advice/attention.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Eyes; Mild eye irritant. Inhalation: Occasional mild irritation effects to nose and throat may occur from inhalation of dust levels greater than 10m/m³.
Target Organs: No target organs have been determined in humans.
Inhalation: Mild irritation to nose and throat may occur when the PEL or TLV are exceeded.
Skin Contact: Non-irritating to intact skin.
Eye Contact: May cause irritation.
Ingestion: Not intended for digestion. Amounts greater than one teaspoonful, when ingested, may cause gastrointestinal problems.

Chemical Ingredients		
CAS#	%	Chemical Name
1303-86-2	>99%	Boron oxide (B2O3)

FIRST AID MEASURES

Inhalation:	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.
Skin Contact:	Non-irritating to intact skin.
Eye Contact:	Flush with large amounts of water or saline solution, occasionally lifting upper and lower lids, until no evidence of powder remains (approx 15-20mins). Get medical attention if aggravation persists.
Ingestion:	Not intended for digestion. Small amounts (e.g.a teaspoonful) swallowed accidentally are not likely to cause effects. If large amounts are swallowed, give two glasses of water or milk to drink and seek medical attention.

FIRE FIGHTING MEASURES

Flammability:	None
Flash Point:	None

Any fire extinguishing media may be used on nearby fires.

ACCIDENTAL RELEASE MEASURES

Borates may damage trees and vegetation. For dry spills, sweep, vacuum, or shovel and place in containers for disposal in accordance with applicable regulations. Avoid contamination of bodies of water during cleanup. Can cause localized contamination of surrounding waters depending on amount dissolved in these waters. Some damage to local vegetation, fish, and other aquatic life may be expected. Under usual conditions, no protective equipment is required. Remove any intact containers from water where possible. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level. Product is a non-hazardous waste when spilled or disposed of, as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). Vacuum or sweep any dry material into a bag or other sealed container and dispose in accordance with local requirements.

HANDLING AND STORAGE

Handling Precautions:	No special handling precautions are required.
Storage Requirements:	Dry, indoor storage is recommended. To maintain package integrity and to minimize caking of the product, bags should be handled on a first-in, first-out basis. Good housekeeping procedures should be followed to minimize dust generation and accumulation. The product should be kept away from strong reducing agents.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94).

Personal Protective Equipment: Goggles; In poorly ventilated areas you must wear a supplied air respirator. Gloves;

Signs and symptoms of exposure: Symptoms of accidental over-exposure to anhydrous borax have been associated with ingestion or absorption through large areas of damaged skin. These may include nausea, vomiting, and diarrhea with delayed effects of skin redness and peeling.

9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White, odorless, granular or powdered substance.		
Specific Gravity or Density:	1.51	Odor:	Odorless
Vapor Pressure:	negligible @ 20C (68F)	Solubility:	4.0%@20C
Potential Hydrogenii:	5.1 Aqueous solution (1.0 % solutions)	Freezing or Melting Point:	450-465C (842-869F)
Molecular weight:	69.6		

10

STABILITY AND REACTIVITY

Chemical Stability:	Product is stable under normal conditions.
Materials to Avoid Identification:	Strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas that could create an explosive hazard.
Hazardous Decomposition:	None
Hazardous Polymerization:	None

11

TOXICOLOGICAL INFORMATION

Reproductive toxicity: Animal feeding studies in rats, mice and dogs at high doses have demonstrated effects on fertility and testes.

12

ECOLOGICAL INFORMATION

Boron is an essential micronutrient for healthy growth of plants, however, it can be harmful to boron sensitive plants in high quantities. Care should be taken to minimize the amount of borate product released to the environment. Boron occurs naturally in sea water at an average concentration of 5 mg B/l and fresh water at 1 mg B/l. In dilute aqueous solutions the predominant boron species present is undissociated boric acid.

13

DISPOSAL CONSIDERATIONS

Small quantities can usually be disposed of at landfill sites. No special disposal treatment is required, but local authorities should be consulted about any specific local requirements. Tonnage quantities of product are not recommended to be sent to landfills. Such product should, if possible, be used for an appropriate application.

14

TRANSPORT INFORMATION

Not hazardous product according to these transport classifications.

Component (CAS#) [%] - CODES

Boron oxide (B2O3) (1303-86-2) [>99%] MASS, OSHAWAC, PA, TSCA, TXAIR

Regulatory CODE Descriptions

MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level
COMPONENT / (CAS/PERC) / CODES

*Boron oxide (B2O3) (1303862 n/a%) MASS, OSHAWAC, PA, TSCA, TXAIR

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).