Bioland Scientific LLC

Material Safety Data Sheet

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name **Boric Acid**

Catalog Number CB03
Brand Bioland Chemicals

Company Bioland Scientific LLC
14925 Paramount Blvd., Suite C
Paramount, CA 90723
USA

Telephone 1-562-602-8882
Fax 1-562-733-6008
Emergency Phone # 1-562-377-2668

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Boracic acid; Orthoboric acid.; Hydrogen borate
Formula: H3BO3
Molecular Weight: 61.83g/mol

CAS-No.	EC-No.	Index-No.	%
10043-35-3	233-139-2		>99.5%

3. HAZARDS IDENTIFICATION

Emergency Overview
Target Organ Effect, Teratogen, Reproductive hazard

Target Organs: Testes.

HMIS Classification
Health Hazard: 2
Flammability: 0
Physical hazards: 0

NFPA Rating
Health Hazard: 2
Fire : 0
Reactivity Hazard: 0

Potential Health Effects
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: This material may cause eye irritation.
Ingestion: May be harmful if swallowed.

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
Move person to fresh air immediately. If not breathing give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water for at least 15 minutes while removing contaminated clothing.

In case of eye contact
Flush eyes with plenty of water for at least 20 minutes.

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

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. -Borane/boron oxides

Further information
The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES

Avoid dust formation. Avoid breathing vapors, mist or gas.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place. Moisture sensitive.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control Parameter	Basis
Boric acid	10043-35-3	STEL	6 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper Respiratory Tract irritation Not classifiable as a human carcinogen varies			
		TWA	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Not classifiable as a human carcinogen			
		STEL	6 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Not classifiable as a human carcinogen			
		TWA	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
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		TWA	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Upper Respiratory Tract irritation Not classifiable as a human carcinogen varies			
		STEL	6 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form: white powder

Safety data

pH: 5.1 at 1.8 g/l at 25 °C (77 °F)

Melting point: 160 °C (320 °F)

Boiling point: 300 °C (572 °F)

Flash point: no data available

Ignition temperature: no data available

Lower explosion limit: no data available

Upper explosion limit: no data available

Vapour pressure 3.5 hPa (2.6 mmHg) at 20 °C (68 °F)

Density 1.440 g/cm3

Water solubility: soluble

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Exposure to moisture

Incompatibilities with Other Materials: Potassium, Acid anhydrides

Hazardous Decomposition Products: Borane/boron oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - rat - 2,660 mg/kg

Inhalation LC50

no data available

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible

or confirmed human carcinogen by IARC.

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

Reproductive toxicity
Presumed human reproductive toxicant

Teratogenicity
Fetotoxicity; Presumed human reproductive toxicant

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin May be harmful if absorbed through skin. Causes skin irritation.
Eyes May causes eye irritation.
Ingestion May be harmful if swallowed.

Signs and Symptoms of Exposure
Toxicity reported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, anderythematous lesions on the skin and mucous membranes. Other symptoms include: 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.

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish LC50 - Ptychocheilus lucius - 279 mg/l - 96 h
LC0 - Lepomis macrochirus (Bluegill) - > 1,021 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates
LC50 - Daphnia magna (Water flea) - 53.2 mg/l - 21 d
EC50 - Daphnia magna (Water flea) - 133 mg/l - 48 h

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product: Dispose of in a manner consistent with federal, state, and local regulations.

Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US): Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Teratogen, Reproductive hazard

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

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

SARA 311/312 Hazards No SARA Hazards

Massachusetts Right To Know Components No Components Listed

Pennsylvania Right To Know Components
Boric acid; CAS-No. 10043-35-3

New Jersey Right To Know Components
Boric acid; CAS-No. 10043-35-3

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. Other information

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Bioland Scientific LLC provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. BIOLAND SCIENTIFIC LLC MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, BIOLAND SCIENTIFIC LLC WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.