

# MATERIAL SAFETY DATA SHEET

MONTEREY SUPER BORON WS

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Issue Date: 2/10

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### Chemical Product

MONTEREY BORON WS

Common Name: Boric acid.

Chemical Description: Boric acid (H<sub>3</sub>BO<sub>3</sub>).

TSCA/CAS No.: The primary CAS number is 10043-35-3.

### Manufactured For

Monterey AgResources

P. O. Box 35000

Fresno, CA 93745-5000

### Emergency Phone Numbers

Emergency Telephone: DAYS: (559) 499-2100 EVES: (559) 994-9144

CHEMTREC (24-Hour Emergency Number): (800) 424-9300

EPA National Response Center: (800) 424-8802

## SECTION 2. HAZARDOUS INGREDIENTS

CHEMICAL	CAS NO.	%	TLV OR PEL	RQ (lbs)
Nuisance particulates (particulates (insoluble) not otherwise classified) (inhalable fraction)	—	—	10 mg/m <sup>3</sup>	—

## SECTION 3. EMERGENCY/HAZARDS OVERVIEW

Free flowing white crystalline granules with no odor. Reacts with basic materials to form borate salts. Loses chemically combined water upon heating, forming metaboric acid (HBO<sub>2</sub>) at 212-221°F, then pyroboric acid (H<sub>2</sub>B<sub>4</sub>O<sub>7</sub>) at 285-320°F, and boric anhydride at higher temperatures. Not D.O.T. regulated.

HEALTH: 1 REACTIVITY: 0 FLAMMABILITY: 0 ENVIRONMENT: 0  
(0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme)

## SECTION 4. FIRST AID

- Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Get medical attention if irritation persists.
- Skin: Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. Get medical attention if skin becomes irritated.
- Ingestion: If large quantities of this material are swallowed, all a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Inhalation: Move person to fresh air. Blow nose to remove dust. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

**SECTION 5. FIRE AND EXPLOSION HAZARDS**

Flash Point:	Noncombustible.
Test Method:	Not pertinent.
LEL Flammable Limits:	Not pertinent.
UEL Flammable Limits:	Not pertinent.
Autoignition Temperature:	Not pertinent.
Flammability Classification:	Noncombustible.
Known Hazardous Products of Combustion:	None identified.
Properties that Initiate/Contribute to Intensity of Fire:	None identified.
Potential For Dust Explosion:	None identified.
Reactions that Release Flammable Gases or Vapors:	None identified.
Potential For Release of Flammable Vapors:	None identified.
Unusual Fire & Explosion Hazards:	None identified.
Extinguishing Media:	Use agents appropriate to surrounding fire.
Special Firefighting Procedures:	Stay upwind of smoke. Wear positive pressure, self-contained breathing apparatus and goggles. Contain any liquid runoff.

**SECTION 6. SPILLS AND LEAKS**

Containment:	Prevent product spillage from entering drinking water supplies or streams.
Clean Up:	Sweep up and use according to labeling or package for disposal.
Evacuation:	Not necessary.

**SECTION 7. STORAGE AND HANDLING**

Storage:	Store in a cool, dry place. Do not store near food or feeds. Do not stack pallets more than two (2) high.
Transfer Equipment:	Transfer solutions of product using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc.
Work/Hygienic Practices:	Keep out of reach of children. Harmful if swallowed or inhaled. Avoid breathing dust. Avoid contact with eyes, skin and clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**SECTION 8. PERSONAL PROTECTIVE EQUIPMENT**

Eyes:	Chemical dust/splash goggles to keep dust out of eyes. For solutions of product, use chemical/dust splash goggles or full-face shield. As a general rule, do not wear contact lenses when handling.
Skin:	Impervious gloves and clothes if abrasion or irritation occurs.
Respiratory:	Not normally needed but recommend NIOSH-approved respirator (such as 3M #8500) for nontoxic nuisance dust. If used in solutions generates an aerosol mist or respiratory irritation, use NIOSH-approved dust/mist respirator (such as 3M #8210 Plus).
Ventilation:	Provide local or general ventilation to keep dust below OSHA nuisance limit of 10 mg/m <sup>3</sup> .

**SECTION 9. PHYSICAL AND CHEMICAL DATA**

Appearance:	White crystalline granules.
Odor:	None.
pH:	6.1 (0.1% solution); 5.1 (1.0% solution); 3.7 (4.7% solution).
Vapor Pressure:	Not pertinent.
Vapor Density (Air = 1):	Not pertinent.
Boiling Point:	Not pertinent.
Freezing Point:	Not pertinent.
Water Solubility:	4.7% @ 25°C; 27.5% @ 100°C.
Density:	1.435.
Bulk Density:	780-815 kg/m <sup>3</sup> .
Evaporation Rate (butyl acetate = 1):	Not pertinent.
Viscosity:	Not pertinent.
% Volatile:	Not pertinent.
Octanol/Water Partition Coefficient:	Not available.
Saturated Vapor Concentration:	Not pertinent.

**SECTION 10. STABILITY AND REACTIVITY**

Stability:	Stable under ordinary conditions of use and storage. If moisture is present, boric acid can be corrosive to iron.
Conditions To Avoid:	None known.
Incompatibility:	Avoid potassium, acetic anhydride, alkalis, carbonates and hydroxides.
Hazardous Decomposition Products:	Loses chemically combined water upon heating, forming metaboric acid (HBO <sub>2</sub> ) at 212-221°F, then pyroboric acid (H <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ) at 285-320°F, and boric anhydride at higher temperatures.
Hazardous Polymerization:	Will not occur.

**SECTION 11. POTENTIAL HEALTH EFFECTS**Acute Effects:

Eyes:	Draize test in rabbits produced mild eye irritation effects. Fifty years of occupational exposure history reflect no indication of human eye injury from exposure to boric acid.
Skin:	Does not cause irritation. Low acute dermal toxicity. LD <sub>50</sub> in rabbits is > 2000 mg/kg. Boric acid is not absorbed through intact skin.
Ingestion:	If small amounts (e.g. teaspoonful) are swallowed accidentally, it is not likely to cause an effect. Large amounts may cause nausea, vomiting, diarrhea and headache. Low acute oral toxicity. LD <sub>50</sub> in rats is 3500-4100 mg/kg.
Inhalation:	Little irritation effects to nose and throat when inhaled at levels greater than 10 mg/m <sup>3</sup> . Studies show no increase in pulmonary disease in occupational populations with chronic exposure.

Chronic Effects:

Boric acid is not considered a carcinogenic substance. Long term studies on animals did not reveal any carcinogenic effects. A human study of occupationally exposed population showed no adverse reproductive effects. No target organs have been determined in humans. Long-term high dose animal ingestion studies demonstrated reproductive effects in males (the testes is the target organ).

**SECTION 12. ECOLOGICAL INFORMATION**

Algal/Lemna Growth Inhibition:	Not known.
Toxicity to Fish and Invertebrates:	48 hour EC <sub>50</sub> value for daphnia is > 100 mg/L. This material may be toxic to aquatic life.
Toxicity to Plants:	Boron is an essential micronutrient for plants. However, it can be harmful to boron sensitive plants in higher quantities.
Toxicity in Birds:	Not known.
Environmental Fate:	Boron is naturally occurring and ubiquitous in the environment. Boric acid decomposes in the environment to natural borate. Boric acid is soluble in water and is leachable through normal soil.

**SECTION 13. DISPOSAL**

Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of effluents or equipment washwaters. Dispose of effluents according to state and local regulations. Disposed material is not a RCRA hazardous waste. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal. Do not discharge.

**SECTION 14. TRANSPORTATION**

D.O.T. Shipping Description:	Not D.O.T. regulated.
Other Shipping Description:	Boric acid. NMFC Item 4020 Sub 2, LTL Class 70

**SECTION 15. REGULATORY INFORMATION**

CERCLA: None.

SARA TITLE III, Section 313 Toxic Chemicals: None.

PROPOSITION 65 (CA): WARNING: This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**SECTION 16. OTHER**

While the information contained herein is based on data considered accurate and was compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act, it is provided for guidance only. Monterey AgResources does not guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations; in so doing, user assumes all risk in use of the material. The information contained herein is not to be taken as a warranty or representation for which Monterey AgResources assumes legal responsibility.