Material Safety Data Sheet

Borid Insecticide

SDS # : 6604-A
Revision Date: 2012-06-08
Version 2.02

This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Borid Insecticide

Active Ingredient(s) Orthoboric Acid (Boric Acid), Tricalcium phosphate

Recommended use Insecticide

Manufacturer
FMC Corporation
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103
General Information:
Phone: (215) 299-6000
E-Mail: msdsinfo@fmc.com

Emergency telephone number
Medical Emergencies:
(800) 331-3148 (U.S.A. & Canada)
+1 (651) 632-6793 (All Other Countries - Collect)
For leak, fire, spill or accident emergencies, call:
+1 800 / 424 9300 (CHEMTREC - U.S.A.)
+1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

2. Hazards identification

Appearance powder white

Physical state dry powder

Odor odorless

Physical or Chemical Hazards .

Flammable properties Noncombustible

Potential health effects

Principle Routes of Exposure Eye contact, Skin contact, Ingestion, Inhalation.

Acute effects

- **Eyes** May cause slight irritation.
- **Skin** Substance may cause slight skin irritation.
- **Inhalation** May cause additional affects as listed under "Ingestion".
- **Ingestion** Ingestion may cause gastrointestinal discomfort including nausea, vomiting and diarrhea if large amounts are ingested. May cause central nervous system depression.

Chronic effects Contains a known or suspected reproductive toxin.

3. Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS-No	Weight %
Boric acid	10043-35-3	99
Tricalcium Phosphate	7758-87-4	<=1

4. First aid measures

Eye contact — Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Skin contact — Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation — Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Ingestion — Call 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 induce vomiting or give anything by mouth to an unconscious person.

5. Fire-fighting measures

Flammable properties — Noncombustible

Sensitivity to Mechanical Impact — not applicable
Sensitivity to Static Discharge — not applicable

Suitable extinguishing media — Carbon dioxide (CO_2). Foam. Dry chemical. Use water spray or fog; do not use straight streams.

Protective equipment and precautions for firefighters — Wear self-contained breathing apparatus and protective suit. Isolate fire area. Evaluate downwind.

NFPA

Health Hazard	1
Flammability	1
Stability	0
Special Hazards	-

6. Accidental release measures

Personal precautions — Isolate and post spill area. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

Environmental precautions — Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.

Methods for cleaning up — Sweep up and shovel into suitable containers for disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

Other — For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

7. Handling and storage

Handling Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal. Reference to other sections.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Store in original container only.

8. Exposure controls/personal protection

Exposure guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Boric acid 10043-35-3	STEL 6 mg/m³ TWA: 2 mg/m³			
Chemical Name	**British Columbia**	**Quebec**	**Ontario TWAEV**	**Alberta**
Boric acid 10043-35-3	TWA: 2 mg/m³ STEL: 6 mg/m³		TWA: 2 mg/m³ STEL: 6 mg/m³	

Occupational exposure controls

Engineering measures Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Personal Protective Equipment

General Information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Respiratory protection For dust, splash, mist or spray exposures wear a filtering mask.

Eye/face protection For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield.

Skin and body protection Wear long-sleeved shirt, long pants, socks, shoes, and gloves.

Hand protection Protective gloves

Hygiene measures Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

9. Physical and chemical properties

Appearance powder white
Color white
Physical state dry powder
Odor odorless
pH No information available.
Melting Point/Range 171 °C
Freezing point No information available
Boiling Point/Range not applicable
Flash Point not applicable
Evaporation rate not applicable
Autoignition Temperature not applicable
Flammable properties Noncombustible
Vapor pressure No information available
Vapor density No information available

Water solubility	partly soluble
Percent volatile	No information available
Partition coefficient:	not applicable
Viscosity	No information available
Oxidizing properties	not applicable

10. Stability and reactivity

Stability	Stable.
Conditions to avoid	Heat, flames and sparks
Materials to avoid	Strong reducing agents, Bases Metals
Hazardous decomposition products	None known .
Hazardous polymerization	Hazardous polymerization does not occur.
Hazardous reactions	Reacts with strong reducing agents forming flammable hydrogen gas. Reacts as a weak acid which may cause corrosion of base metals.

11. Toxicological information

Acute Toxicity

Large amounts of boric acid absorbed into the blood stream from ingestion or skin absorption through damaged skin may cause effects to the central nervous sytem including dizziness, depression, vomiting, nausea or diarrhea.

Eye contact	May cause slight irritation.
Skin contact	May cause slight irritation.
Ingestion	Ingestion may cause gastrointestinal discomfort including nausea, vomiting and diarrhea if large amounts are ingested.
Inhalation	May cause irritation of respiratory tract.
	> 2000 mg/kg (rat) Boric acid
LD50 Oral	3160 mg/kg (rat) Boric acid
LC50 Inhalation:	> 2.03 mg/L (4-hr) (rat) Boric acid
Sensitization	Not expected to be sensitizing based on the components.

Chronic Toxicity - Other Ingredient(s)

Chronic Toxicity	Contains a known or suspected reproductive toxin.
Carcinogenicity	Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).
Reproductive toxicity	Animal studies have shown that ingestion of large amounts of Borates over prolonged periods of time cause a decrease in sperm production and testicle size in males.
Developmental Toxicity	Animal studies have shown that ingestion of large amounts of Borates produced developmental effects in fetuses of pregnant animals.
Target Organ Effects	Central nervous system (CNS), Gastrointestinal tract (GI), Reproductive System.

12. Ecological information

Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Boric acid				EC50 115 - 153 mg/L 48 h

Environmental Fate

Chemical Name	log Pow
Boric acid	-0.757

13. Disposal considerations

Waste disposal methods Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

Contaminated packaging Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

14. Transport information

DOT not regulated

TDG not regulated

ICAO/IATA not regulated

IMDG/IMO not regulated

15. Regulatory information

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	no
Chronic Health Hazard	yes
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

International Regulations

Mexico - Grade Slight risk, Grade 1

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
WHMIS Hazard Class D2A Very toxic materials

16. Other information

Revision Date: 2012-06-08
Reason for revision: (M)SDS sections updated.

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End of Material Safety Data Sheet