

## **SECTION 1: CHEMICAL PRODUCT - COMPANY IDENTIFICATION**

**PRODUCT:** Granular 10% Boron

**TRADE NAMES:** Agri-B 10% Boron

**SYNONYMS:** Sodium Calcium Borate

**CHEMICAL FAMILY:** Inorganic Mineral

**RECOMMENDED USE:** For blending with finished fertilizers

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## **SECTION 2: HAZARDS IDENTIFICATION**

**NFPA RATINGS:** (SCALE 0-4): HEALTH=1, FIRE=0, REACTIVITY=0

**EMERGENCY OVERVIEW:** Light Gray free-flowing granules. Avoid contact with eyes and/or skin.

May cause respiratory tract, skin and eye irritation, possibly severe. Wash thoroughly after handling.

Work in a well ventilated area.



Environmental Hazard

## **SECTION 3: COMPOSITION, INFORMATION ON INGREDIENTS**

**COMPONENTS:**

**FORMULA:** NaCaB<sub>5</sub>O<sub>9</sub>MgO •8H<sub>2</sub>O

**CAS NUMBER:** 1319-33-1

**PERCENTAGE:** 32% Boron Oxide (B<sub>2</sub>O<sub>3</sub>), <5% Calcium, <5% Magnesium, <10% Silica

## **SECTION 4: FIRST AID MEASURES and EFFECTS of OVEREXPOSURE**

**INHALATION:** Remove from exposure area to fresh air immediately. If breathing is difficult, give oxygen. If breathing has stopped, perform artificial resuscitation. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

**Short Term Effects:** As with all dusts-may cause irritation of the nasal membranes and upper respiratory tract..

**Long Term Effects:** Same as short term effect.

**SKIN CONTACT:** Wash affected area with soap or mild detergent and water until no evidence of product remains

**Short Term Effects:** May cause irritation.

**Long Term Effects:** Same effects as short term exposure.

**EYE CONTACT:** Flush eyes immediately with large amounts of water or normal saline solution, occasionally lifting upper and lower lids until no evidence of product remains.

**Short Term Effects:** As with all dusts, may cause irritation, tearing or blurred vision.

**Long Term Effects:** Same effects as short term exposure.

## **INGESTION:**

**Short Term Effects:** Not likely to be toxic, but may cause irritation of the mouth, throat, and stomach. May cause nausea, vomiting, diarrhea, stomach pain.

**Long Term Effects:** Same effects as reported in short term ingestion.

## **SECTION 5: FIRE FIGHTING MEASURES**



**FIRE AND EXPLOSION HAZARD:** None. A fire retardent.

**EXTINGUISHING MEDIA:** Dry chemical, carbon dioxide, water spray or foam, as appropriate for surrounding material. For larger fires, use water spray, fog or regular foam (1996 North American Emergency Response Guidebook, RSPA P 5800.7, Guide Number 171).

**FIREFIGHTING:** Move product from fire area if you can without risk. Extinguish fire using agent suitable for type of surrounding fire and/or chemicals. Do not use water directly on material. Avoid breathing vapors; keep upwind. Dike area with suitable material to prevent runoff and contamination of water sources. Cover and secure all drains with impermeable material to prevent run-off from entering the drains.

**HAZARDOUS COMBUSTION PRODUCTS:** Thermal decomposition of surrounding material may include toxic and hazardous metallic oxides and sulfur.

### **FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGERS TO LIFE OR HEALTH:**

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

**OCCUPATIONAL SPILL:** Do not touch spilled material. Pick-up spills by scooping, shoveling or vacuuming and place into containers for reuse or disposal. Wear respirator, protective clothing and gloves. Keep unnecessary people away. Isolate hazard area and deny entry to avoid material dispersal. Wash thoroughly after handling. Maintain adequate ventilation.

## **SECTION 7: HANDLING AND STORAGE**

**STORAGE:** Store under roof to avoid any run-off. Run-off could contaminate streams and/or ground water. It is recommended that this product be stored in a dry area and product transfer be done on an impervious surface so any spills can be contained. Boron has been shown to be detrimental to plant growth at very high levels.

**WARNING:** No smoking, eating or drinking in the areas where products are stored and/or handled. Observe all federal, state and local regulations when storing this product.

## **SECTION 8: EXPOSURE LIMITS, PERSONAL PROTECTION**

**EXPOSURE LIMITS (TWA):** OSHA PEL- None-Sodium Calcium Borate, 10 mg/m<sup>3</sup> Calcium,

10 mg/m<sup>3</sup> Magnesium, 5 mg/m<sup>3</sup> Silica

ACGIH PLV- None-Sodium Calcium Borate, 10 mg/m<sup>3</sup> Calcium, 10 mg/m<sup>3</sup> Magnesium, 01 mg/m<sup>3</sup> Silica

NIOSH TWA- ND Sodium Calcium Borate, 5 mg/m<sup>3</sup> Calcium, 10 mg/m<sup>3</sup> Magnesium. 01 mg/m<sup>3</sup> Silica

**VENTILATION:** Provide local exhaust or process enclosure ventilation.

**EYE PROTECTION:** Wear safety glasses with splash shields or safety goggles/shield to prevent contact with this product.

**EMERGENCY WASH FACILITIES:** Where there is any possibility that an employee's eyes and/or skin may be exposed to this product, the employer should provide an eye wash fountain and quick drench shower within the immediate work area for emergency use.

**CLOTHING:** Wear long pants, long sleeved shirt, boots and other appropriate protective clothing and equipment to prevent repeated or prolonged skin contact with this product. Although skin contamination is not generally a problem, it increases the possibility of ingestion through poor personnel hygiene. Contaminated work clothing and shoes should not be taken from the workplace.

**GLOVES:** Wear appropriate protective gloves to prevent contact with this product.

**RESPIRATOR:** The respirator selected must be based on contamination levels found in the work place and specific to the job assignment. Do not exceed the working limits of the respirator. Respirators must also be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).

**Hazards:** May cause respiratory tract, skin and eye irritation. Wash thoroughly after handling. Avoid contact with eyes, skin and nasal passages. Work in a well ventilated area.

**FOR IMMEDIATELY DANGERS TO LIFE OR HEALTH:** Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**DESCRIPTION:** Light Gray Granules

**MOLECULAR FORMULA:**  $\text{NaCaB}_5\text{O}_9\text{MgO} \cdot 8\text{H}_2\text{O}$

**pH:** 5.0 @ 10% solution

**MELTING POINT:** Not Determined

**BOILING POINT:** Not applicable

**VAPOR PRESSURE:** No applicable

**VAPOR DENSITY:** Not applicable

**WATER SOLUBILITY:** 2% by weight

**SOLVENT SOLUBILITY:** Insoluble in alcohol

**SPECIFIC GRAVITY:** 1.2

## **SECTION 10: STABILITY AND REACTIVITY**

**REACTIVITY:** Stable under normal temperatures and pressures.

**CONDITIONS TO AVOID:** Will not burn or ignite. Avoid contact with strong oxidizers, alkaloids or acids, and/or excessive heat. Do not allow spilled material to contaminate water sources. Boron has been shown to be detrimental to plant growth at very high levels.

**INCOMPATIBILITIES:**

**None:** Will react with acids or alkylides.

**HAZARDOUS DECOMPOSITION:** Thermal decomposition products may include toxic and hazardous metallic from surrounding materials.

**POLYMERIZATION:** Has not been reported to occur under normal temperatures and pressures.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **TOXICITY DATA:**

**Acute:** LD 50 in rats is 3200-3400 mg/kg of body weight

**Oral LD 50:** LD 50 in rats is 3200-3400 mg/kg of body weight

**Inhalation LC50:** None Found. Inhalation above those for all nuisance dusts should be avoided.

**Ingestion:** None found

**Eye Effects:** Sodium Calcium Borate is an unlikely eye irritant

**Skins Effect:** Sodium Calcium Borate is an unlikely skin irritant but can cause irritation if open wounds are subject to exposure to the dust from the product.

### **Carcinogenicity:**

**IARC:** Silica

**NTP:** Silica

**OSHA:** Silica

**Teratogenic Effects:** None listed.

**LOCAL EFFECTS:** Low Corrosive-inhalation, skin, eye, ingestion

**ACUTE TOXICITY LEVEL:** Low toxicity by ingestion

**TARGET EFFECTS:** None found

### **HEALTH EFFECTS:**

#### **INHALATION:**

**Acute Exposure:** Inhalation of dust may cause irritation or the respiratory tract with sore throat, coughing and dryness of the mucous membranes.

**Chronic Exposure:** None Found

**INGESTION:** Ingestion of more than a teaspoon of dust may cause diarrhea and stomach upset. Seek medical attention.

#### **SKIN CONTACT:**

**Acute Exposure:** Direct contact may cause dry skin.

**Chronic Exposure:** Effects depend on concentration and duration of exposure. None found.

#### **EYE CONTACT:**

**Acute Exposure:** As with all dust direct contact may cause irritation, redness, pain, blurred vision possibly severe. The degree of injury depends on the concentration and duration of contact. The full extent of the injury may not be immediately apparent. Application of a 20% zinc oxide solution to corneas infected with herpetic keratitis ulcers resulted in edema and residual scarring upon healing.

**Chronic Exposure:** Effects depend on concentration and duration of exposure. Repeated or prolonged contact may result in conjunctivitis or effects as in acute exposure.

#### **INGESTION:**

**Acute Exposure:** Ingestion may cause a burning pain in the mouth and throat, fever, nausea, violent vomiting with severe abdominal pain. If more than a teaspoon ingested drink milk or water. DO NOT INDUCE VOMITTING. Seek medical attention.

**Chronic Exposure:** Depending on the concentration, repeated ingestion may cause effects as with acute ingestion.

## **SECTION 12: ECOLOGICAL INFORMATION**

**ENVIRONMENTAL IMPACT RATING (0-4):** No data available

**ACUTE AQUATIC TOXICITY:** No data available

**DEGRADABILITY:** No data available

**LOG BIOCONCENTRATION FACTOR (BCF):** No data available

**LOG OCTANOL/WATER PARTITION COEFFICIENT:** No data available

## **SECTION 13: DISPOSAL INFORMATION**

Observe all federal, state and local regulations when disposing of this product.

## **SECTION 14: TRANSPORT INFORMATION**

**DOT Shipping Name:** Fertilizer Compounds, nec

DOT Hazard Class or Division: NA

DOT Identification Number: NA

DOT Packing Group: NA

Guide Number: NA

DOT Reportable Quantity: NA

DOT Labeling Requirements: NA

DOT Packaging Authorizations: Refer to

Exceptions: 49 CFR 173.115 NA

Non-Bulk Packaging: 49 CFR 173.213 NA

Bulk Packaging: 49 CFR 173.240 NA

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## **SECTION 15: REGULATORY INFORMATION**

	TSCA STATUS:	No
40 CFR 302.4	CERCLA SECTION 103:	Yes
40 CFR 355.30	SARA SECTION 302:	No
40 CFR 355.40	SARA SECTION 304:	No
40 CFR 372.65	SARA SECTION 313:	Yes
29 CFR 1910.119	OSHA Process Safety:	No
	California Proposition 65:	No
40 CFR 370.21	SARA HAZARD CATEGORIES, SARA SECTIONS 311/312	
	ACUTE HAZARD:	Yes
	CHRONIC HAZARD:	Yes
	FIRE HAZARD:	No
	REACTIVITY HAZARD:	No
	SUDDEN RELEASE HAZARD:	No

## **SECTION 16: OTHER INFORMATION**

**DISCLAIMER:** The information contained on this Safety Data Sheet is based on our current knowledge and data obtained from other sources. The information is believed to be accurate but Agri-Business Technologies, Inc. makes no representations as to its accuracy and/or completeness. Users must use their own independent judgment as to its appropriateness for a particular use or purpose and assume all risks in the use, handling, storage and disposal of the product. Users must use their own independent judgment its appropriateness for a particular use or purpose and assume all risks in the publication, use of, or reliance on the information contained on this Safety Data Sheet.

SDS Prepared: June, 2014

Prepared by: JMW