

FARM-AG INTERNATIONAL (Pty) Ltd

P.O. Box 1523, Durban 4000

Head Office : 61 Marshall Dr., Old Mill Industrial Park, Mount Edgecombe **South Africa**

Registration Number: 2005/011761/07

Tel + 27 31 003 3486 • Fax + 27 31 502 5825

SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

Product Name: **BORFAST**
 Product Use: Fertilizer
 Creation Date: June 2000
 Revision Date: August 2017

24 Hr Emergency Number: 082 771 2712

In case of poisoning:

Poison Information Centre: 082 446 8946
 Tygerberg Hospital: (021) 931 6129
 Poison Emergency Enquiries (021) 689 5227

In case of Spillage:

HAZMAT: 0800 147 112

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Common Name: Boron
 Chemical Name: Boron acid (H₃BO₃) reaction with ethanolamine (IUPAC)
 CAS No.: 94095-04-2
 Chemical family: Boron ethanolamine
 Use: Agricultural Micronutrient Fertilizer
 Formulation: **Boron 150 g/l**
 Symbol: Not regulated
 Indication of Danger: Not available
 RISK-PHRASE(S) Not classified as dangerous according to the criteria of regulation (EC) No 1272/2008

SECTION 3 - HAZARD IDENTIFICATION**Toxicity class:**

Not regulated

Likely routes of exposure:

Eye contact, skin contact, ingestion, and inhalation.

Ingestion:

Eye contact: Slight irritation

Skin contact: Slight irritation

Ingestion: May cause Nausea and Vomiting.

Inhalation: Slight irritation

SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS**Description of first aid measures****4.1 First-aid measures general:**

Check the vital functions.

Unconscious: maintain adequate airway and respiration.

Respiratory arrest: artificial respiration or oxygen.

Cardiac arrest: perform resuscitation.

Victim conscious with laboured breathing: half-seated.

Victim in shock: on his back with legs slightly raised.

Vomiting: prevent asphyxia/aspiration pneumonia.

Prevent cooling by covering the victim (no warming up).

Keep watching the victim.

Give psychological aid.

Keep the victim calm, avoid physical strain.

Depending on the victim's condition: doctor/hospital

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First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Rinse with water. Soap may be used. Remove all contaminated clothing and footwear. Take victim to a doctor if irritation persists.

First-aid measures after eye contact: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion: If victim conscious and alert, give 1-2 glasses of water to drink. If swallowed, do NOT induce vomiting. Immediately consult a doctor/medical service.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation: Slight irritation, Exposure to high concentrations may lead to irritation of the respiratory tract causing dry/sore throat, coughing and respiratory difficulties

Symptoms/injuries after skin contact: May be slight irritant and cause red skin.

Symptoms/injuries after eye contact: May cause redness of the eye tissue, slight irritant and visual disturbances.

Symptoms/injuries after ingestion: May cause Nausea and Vomiting.

Chronic symptoms: On continuous/repeated exposure/contact: dry skin. Skin rash/inflammation.

4.3. Indication of any immediate medical attention and special treatment needed

Follow the advices in chapter 4.1.

Treat symptomatically.

SECTION 5 - FIRE-FIGHTING MEASURES**Flash point: Not Flammable****Extinguishing agents:**

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for fire-fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Special hazards arising from the substance or mixture

Fire hazard: Direct fire hazard: Non-combustible.

Explosion hazard: No direct explosion hazard.

Reactivity: On burning: release of toxic and corrosive gases/vapours (nitrous vapours).

Extinguishing media:

Carbon dioxide, dry chemical powders, foam and water spray.

Personal protective equipment:

Fire-fighters and others that may be exposed should wear full protective impervious clothing, including gloves and eye protection, and self-contained breathing apparatus. Contact with the fumes and vapours should be avoided by staying upwind. Clean all clothing before re-use. Severely contaminated clothing cannot be adequately decontaminated, and must be disposed as a hazardous waste. Shower with soap and water after contact with this product.

SECTION 6 - ACCIDENTAL RELEASE MEASURES (SPILLAGE)**Personal precautions:**

Avoid contact with skin and eyes. Do not inhale spray or fumes. For personal protection see Section 8.

Environmental precautions:

Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

Occupational spill:

For small liquid spills, soak up with lime, damp earth or sand, or other non-combustible absorbent material and place into containers for later disposal. For large liquid spills, contain the liquid for later disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away.

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SECTION 7 - HANDLING AND STORAGE REQUIREMENTS**Handling:**

Harmful if swallowed. Irritant to eyes and skin. Avoid contact with eyes and skin, and inhalation of dust, spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing.

Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage:

Keep out of reach of unauthorized persons, children and animals. Store in its original labelled container in shaded, well-ventilated area. Store in dry area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

Conditions for safe storage, including any incompatibilities:

Storage conditions: Keep preferably in the original container.

Storage temperature: -10 to 30 °C

Storage area: Store in dry, cool, well-ventilated area. Keep out of direct sunlight.

Special rules on packaging: Meet the legal requirements, correctly labeled and closed. Secure fragile packaging in solid containers.

Packaging materials: Polyethylene, polypropylene and stainless steel.

Specific end use(s): Fertilizers.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:**Respirator:**

Where exposure through inhalation may occur when handling and/or when preparing the spray mixture, wear a face mask. If the product is used in dusty or confined conditions or spillage and fire conditions a respirator suitable for protection from dusts and mists of pesticides is adequate.

Clothing:

Employee must wear appropriate protective (impervious) clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

Gloves:

Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

Eye protection:

The use of safety goggles (full-face shield) is recommended.

Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state: Liquid

Colour: Blue colour.

Odour: Characteristic

pH: ± 8

Crystallization temperature: -15 °C

Explosive limits: No data available

Vapour pressure: No data available

Relative vapour density at 20 °C: No data available

Density: 1,360 kg/l

Solubility: Water: complete

Log Pow: No data available

Decomposition temperature: No data available

Viscosity: ± 934 mPa.s Brookfield 15°C

Explosive properties: Not explosive.

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Oxidising properties: Not oxidizing.**SECTION 10 - STABILITY AND REACTIVITY****Storage stability:** The product is stable at normal handling- and storage conditions.**Reactivity:** On burning: release of toxic and corrosive gases/vapours (nitrous vapours).**Possibility of hazardous reactions:** Thermal decomposition can lead to the escape of irritating gases and vapours (oxides of nitrogen).

This product can react with strong reducing or oxidizing agents. May react violently with acids and with (some) bases.

Conditions to avoid: Avoid high temperatures.**Incompatible materials:** No additional information available**Hazardous decomposition products:** On burning: release of toxic and corrosive gases/vapours (nitrous vapours, ammonia, carbon monoxide - carbon dioxide).**SECTION 11 - TOXICOLOGICAL INFORMATION****Acute oral LD₅₀ :** Not classified (Based on available data, the classification criteria are not met)

pH: ± 8

Acute dermal LD₅₀: Not classified (Based on available data, the classification criteria are not met)

pH: ± 8

Acute inhalation LC₅₀ (4h): Not classified (Based on available data, the classification criteria are not met)**Acute skin irritation:** Not classified (Based on available data, the classification criteria are not met)**Acute eye irritation:** Not classified (Based on available data, the classification criteria are not met)**Dermal sensitisation:** Not classified (Based on available data, the classification criteria are not met)**Carcinogenic effects:** Not classified (Based on available data, the classification criteria are not met)**Mutagenic effects:** Not classified (Based on available data, the classification criteria are not met)**Potential Adverse human health effects and symptoms:** When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.**SECTION 12 - ECOLOGICAL INFORMATION****Mobility, Degradability & Accumulation:****Toxicity****Classification concerning the environment:** not applicable.**Borfast****LC₅₀ fish:** 1 > 100 mg/l**EC₅₀ *Daphnia*:** 1 457 - 563**ErC₅₀ (*algae*):** 21 - 31 mg/l**NOEC chronic *algae*:** 3,2 mg/l**Persistence and degradability**

Borfast

Persistence and degradability: In accordance with column 2 of REACH Annex VII, the ready biodegradability test does not need to be conducted as the substance is inorganic.**Bioaccumulative potential:** Not applicable.**SECTION 13 - DISPOSAL CONSIDERATION****Pesticide and container disposal:**

Open dumping or burning of this pesticide is prohibited. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers.

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

TRIPLE RINSE empty containers in the following manner:

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Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a third of the volume of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.

Do not re-use the empty container for any other purposes but destroy it by perforation, flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils. Comply with local legislation applying to waste disposal.

SECTION 14 - TRANSPORT INFORMATION

UN NUMBER: Not regulated

Road Transport ADR/IRD: Not regulated

Air Transport ICAO/IATA: Not regulated

Maritime Transport IMDG/IMO: Not regulated

SECTION 15 - REGULATORY INFORMATION

Risk phrase(s):

R 20/22 Harmful by inhalation and if swallowed.

Safety phrases:

S 1/2 Keep out of reach children.

S 13 Keep away from food, drink and animal feeding stuffs.

S 22 Do not breathe dust.

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

SECTION 16 - OTHER INFORMATION

Packaging:

Packed in 1, 2, 5, 10, 20 and 25 litres plastic containers and labeled according to South African regulations and guidelines.

Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

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