

Delfin

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Registered and Distributed By: Madumbi Sustainable Agriculture
Postnet Suite 148, Private Bag X9118
Pietermaritzburg 3200
Emergency Telephone no.:27 (0)33 342 3984

Manufactured By: Certis USA
Suite 175, 9145 Guilford Road
Columbia, Maryland 21046
United States of America

2. COMPOSITION/INFORMATION ON INGREDIENTS

Product description: *Bacillus thuringiensis* subspecies kurstaki strain SA-11 solids, spores and lepidopteran active toxins.

Dangerous ingredients: None

3. HAZARDS IDENTIFICATION

Important hazards: None

4. FIRST AID MEASURES

Symptoms and effects: Exposure may result in eye, skin and respiratory irritation. Treat symptomatically.

Inhalation: Remove to fresh air. Apply artificial respiration if necessary.

Skin Contact: Remove contaminated clothing. Wash with soap and water including hair and under finger nails. Do not apply any medicating agent unless recommended by a physician.

Eye Contact: Flush with water, hold eyelids apart to rinse surface of the eyes and lids. Do not apply any medicating agent unless recommended by a physician.

Ingestion: If person is conscious give large amounts of water to drink and induce vomiting.

5. FIRE FIGHTING MEASURES

Type of material: Non-combustible solid

Extinguishing Media: Dry chemical, Foam or Carbon dioxide

Hazardous Decomposition Products: None known

Special Fire Fighting Procedures: Wear full protective clothing and self-breathing apparatus. Evacuate nonessential personnel to prevent exposure to fire, smoke, fumes and products of combustion. Prevent use of contaminated buildings, area, and equipment until decontamination.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Avoid infiltration of large volumes into drains, surface water, groundwater and soil.

Personal precautions: Protective clothing with head covering, rubber gloves and boots, respiratory protection and safety goggle are recommended.

Destruction and clean up: Sweep or vacuum, without creating dust, into approved chemical container. Wash area with water containing a strong detergent, absorb with absorbent material i.e. pet litter, sweep up and place in a chemical container. Seal container and dispose of in accordance with local regulations. Flush area with water to remove residues. Do not allow water to contaminate water supplies.

7. HANDLING AND STORAGE

Handling Precautions:	Ensure adequate ventilation when handling. Respiratory protection is recommended. Wash hands thoroughly after handling.
Storage:	Store under cool, dry conditions out of direct sunlight. Store in a secure area away from children and pets. Do not allow eating drinking or smoking in areas where there is potential exposure to product.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Personal protection	
Respiratory Protection:	Respiratory protection is recommended. Wear an approved dust or pesticide respirator with dust pre-filters.
Hand protection:	Wear rubber gloves.
Eye Protection:	Wear safety goggles with side shields or chemical goggles.
Skin and body protection:	Wear rubber boots, long sleeved shirt with head covering and long pants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Granules
Colour:	Brown
Odour:	Fishmeal Odour
pH	5.5-5.6
Density:	approx. 0,32 g/cc
Solubility:	N/A
Solubility in organic solvents:	N/A
Partition coefficient:	Not applicable
Vapour pressure:	Not applicable
Boiling point:	Not applicable
Melting point:	Not available
Flash point:	Not flammable
Explosive properties:	Not explosive
Auto-ignition temp:	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous decomposition products:	None known
Materials to avoid:	None known
Conditions to avoid:	None known

11. TOXICOLOGICAL INFORMATION

Oral LD₅₀ (rat):	>5100mg/kg body weight
Dermal LD₅₀ (rat):	5 000 mg/kg body weight
Inhalation LC₅₀ (rat):	Not available
Skin contact:	Not available
Skin sensitization:	Not available mutagenic
Eye contact:	Not available
Hazard potential	Not available
Toxicity of other components:	
Surfactant:	Repeated or prolonged inhalation of dust can cause irritation of nose, throat and lungs. Exposure can result in headache, nausea, dizziness and slight irritation to eyes and skin.

12. ECOLOGICAL INFORMATION

Fish and Wildlife:	Low toxicity
Oral LD₅₀ (bobwhite):	>16 665 mg/kg
Oral LD₅₀ (mallard):	> 16 665 mg/kg

Invertebrate) (Daphnia magna): Life cycle NOEL 1.6E08 CFU/L
Environmental fate: Not available

13. DISPOSAL CONSIDERATIONS

Do not reuse product containers. Dispose of product containers, waste containers and residues according to local regulations.

14. TRANSPORT INFORMATION

There are no transport regulations for this product.

15. REGULATORY INFORMATION

National Legislation: Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act 36 of 1947)

16. OTHER INFORMATION

All information provided in this Material Safety Data Sheet (MSDS) is based on the current state of scientific and technical knowledge and is presented in good faith and believed to be correct. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come into contact with this product.

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