XenTariâ DF
MSDS# BIO-0023 Rev. 1 **ISSUED 03/19/04**

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL NAME: XenTari DF Biological Insecticide
EPA REG No.: 73049-40
Code Number: 77782
List Number: 12048

SYNONYMS: XenTari Dry Flowable

MANUFACTURER: Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, Illinois 60048

EMERGENCY TELEPHONE NUMBERS
Emergency Health or Spill:
Outside the United States: 651-632-6184
Within the United States: 877-315-9819

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME: Bacillus thuringiensis, subsp. aizawai
CONCENTRATION: 54.00 %
CAS NUMBER: 68038-71-1
OSHA-PEL 8HR TWA: N/L
STEL: N/L
CEILING: N/L
ACGIH-TLV 8HR TWA: N/L
STEL: N/L
CEILING: N/L
OTHER 8HR TWA: N/A
LIMITS STEL: N/A
CEILING: N/A

INGREDIENT NAME: Inert/Other Ingredients - identity a Trade Secret
CONCENTRATION: 46.00 %
CAS NUMBER: N/A
OSHA-PEL 8HR TWA: 15 mg/m3 total dust, 5 mg/m3 respirable fraction
STEL: N/L
CEILING: N/L
ACGIH-TLV 8HR TWA: 2 mg/m3 respirable fraction
STEL: N/L
CEILING: N/L
OTHER 8HR TWA: N/A
LIMITS STEL: N/A
CEILING: N/A

3. HAZARDS INFORMATION

EMERGENCY OVERVIEW: Product is non-toxic by ingestion, skin contact, or inhalation. Direct contact may cause moderate eye irritation.

ROUTE(S) OF ENTRY: Skin: No
Inhalation: No
Ingestion: No

SKIN CONTACT: Non-irritant

SKIN SENSITIZATION: Possible sensitizer

EYE CONTACT: Mild to moderate irritant

TARGET ORGANS: N/D.

CARCINOGENICITY RATING: NTP: N/L IARC: N/L OSHA: N/L ACGIH: N/L
None

SIGNS AND SYMPTOMS: N/D.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/D.

4. FIRST AID MEASURES

EYES: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

SKIN: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INGESTION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INHALATION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

5. FIRE FIGHTING PROCEDURES

FLASH POINT: N/A
FLASH POINT METHOD: N/D
LOWER EXPLOSIVE LIMIT(%): N/D
UPPER EXPLOSIVE LIMIT(%): N/D
AUTOIGNITION TEMPERATURE: N/D

FIRE & EXPLOSION HAZARDS: Non-flammable.

EXTINGUISHING MEDIA: Use appropriate medium for the underlying cause of the fire.

FIRE FIGHTING INSTRUCTIONS: Wear protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR RELEASE PROCEDURES: Recover product and place in an appropriate container for disposal. Avoid breathing dust. Ventilate and wash the spill area.

7. HANDLING AND STORAGE

HANDLING: N/D

STORAGE: Store product in closed container in a cool and dry place.

SPECIAL PRECAUTIONS: N/D

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust.

RESPIRATORY PROTECTION: Not usually required. If necessary, use a MSHA/NIOSH approved (or equivalent) respirator with a dust/mist filter.

SKIN PROTECTION: Impervious gloves, clothing to minimize skin contact.

EYE PROTECTION: Not usually required. If necessary, use safety glasses or goggles.

OTHER PROTECTION: Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Tan to light brown fine granules
ODOR: Faint organic/malt odor
BOILING POINT: N/A
MELTING/FREEZING POINT: N/A
VAPOR PRESSURE (mm Hg): N/D
VAPOR DENSITY (Air=1): N/D
EVAPORATION RATE: N/A
BULK DENSITY: 0.430 ± 0.02 g/mL
SPECIFIC GRAVITY: N/D
SOLUBILITY: Suspends readily in water.
pH: 4.1 (10% slurry @ 24° C)
VISCOSITY: N/A

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable. No oxidizing or reducing properties.

INCOMPATIBILITIES: Alkalinity inactivates product.

HAZARDOUS DECOMPOSITION PRODUCTS: None that are known.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

ORAL LD50: N/D > 5,000 mg/kg (rat) for a similar formulation. EPA Toxicity Category IV

DERMAL LD50: N/D > 2,000 mg/kg (rabbit) for a similar formulation. EPA Toxicity Category III

INHALATION LC50: N/D. In a test with an almost identical formulation,the test facility was unable to generate a sufficiently high enough concentration of respirable particles due to the non-dusty characteristics of the product. Animal test not warranted.

CORROSIVENESS: N/D. Not expected to have any corrosive properties.

DERMAL IRRITATION: N/D. Transient, slight or mild irritation noted in a dermal irritation study with a similar formulation. EPA Toxicity Category IV.

11. TOXICOLOGICAL INFORMATION, continued

OCULAR IRRITATION: N/D. Transient, mild to moderate irritation was observed in test animals in a study with a similar formulation. Classified as slightly to moderately irritating.

DERMAL SENSITIZATION: In a study with a similar product the reaction to the challenge dose was slight, but because it was greater than that of the control animals, it was concluded that the potential to cause skin sensitization exists.

SPECIAL TARGET ORGAN EFFECTS: N/D

CARCINOGENICITY INFORMATION: N/D. None of the components are classified as carcinogens.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: N/D

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Dispose of product in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN NUMBER: N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY: N/A

IATA/ICA0 STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN NUMBER: N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY: N/A

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14. TRANSPORTATION INFORMATION, continued

IMO STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN NUMBER: N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY: N/A
FLASH POINT: N/D

15. REGULATORY INFORMATION

TSCA STATUS: Exempt
CERCLA STATUS: N/D
SARA STATUS: N/D
RCRA STATUS: N/D
PROP 65 (CA): N/D

16. OTHER INFORMATION

REASON FOR ISSUE: Updated Composition (Section 2), Hazards (Section 3), Phys/Chem (Section 9), and Toxicology (Section 11).
APPROVAL DATE: 03/19/04
SUPERSEDES DATE: 06/12/01

LEGEND: N/A = Not Applicable
N/D = Not Determined
N/L = Not Listed
L = Listed
C = Ceiling
S = Short-term
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