1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Identifier

MATERIAL NAME: VectoMax® FG

Synonyms: VectoMax® G; VectoMax® WSP

EPA Reg No.: 73049-429

Code Number: N/A

List Number: 05750

Chemical Family: Not applicable; microbial product

Substance Registration Number(s)[REACH]: N/A

1.2 Relevant Identified Uses and Uses Advised Against

Identified Uses: Biological mosquito larvicide

Uses Advised Against: It is a violation of Federal law to use this product in a manner inconsistent with its FIFRA pesticide labeling.

1.3 Details of the supplier of the Safety Data Sheet

Supplied By: Valent BioSciences Corporation

870 Technology Way

Libertyville, Illinois 60048

1.4 EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:

Outside the United States: 651-632-6184

Within the United States: 877-315-9819

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Not Classified

2.2 Labeling Elements

Symbol(s)

Symbols not required

Signal Word

WARNING

Hazard Statement(s)

None
2.3 Precautionary Statement:

**Prevention**
Wash hands and face thoroughly after handling

**Response**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

**Disposal**
Dispose of contents/container in accordance with local/regional/national regulations.

2.4 Other Hazards
None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component Name</th>
<th>Classification</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td><em>Bacillus sphaericus</em> 2362, strain ABTS-1743</td>
<td>Irritating to Eyes – Cat 2A Skin Sensitizer – Cat 1A</td>
<td>2.7%</td>
</tr>
<tr>
<td>None</td>
<td><em>Bacillus thuringiensis</em> subsp. israelensis, strain AM65-52</td>
<td>Irritating to Eyes – Cat 2B Skin Sensitizer – Cat 1B</td>
<td>4.5%</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>Other ingredients</td>
<td>Not classified</td>
<td>92.8%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

**GENERAL:** In all cases of doubt, seek medical attention.

**EYES:** Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

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

**INGESTION:** Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. 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. If person is not breathing, call 911, then give artificial respiration.

4.2 Most important Symptoms and Effects, both Acute and Delayed

Acute
Possible eye irritation and skin sensitization

Delayed
No information on significant adverse effects

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed
Treat symptomatically and supportively

5. FIRE FIGHTING PROCEDURES

5.1 Extinguisher Media

Suitable Extinguisher Media
Dry chemical, water spray, foam or carbon dioxide. Use appropriate medium for the underlying cause of the fire.

Unsuitable Extinguisher Media
None known

5.2 Specific Hazards Arising from the Chemical

Thermal decomposition products
Carbon oxides, nitrogen oxides

5.3 Advice to Firefighters

Protective Equipment and precautions for firefighters
Fire fighter should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

Fire & Explosive hazard
Not expected to be flammable.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures
Wear a dust/mist filtering respirator, eye protection and gloves.
6.2 Environmental Precautions
   Dispose of excess product and washwaters according to local regulations.

6.3 Methods and Materials for Containment and Cleaning Up
   Wear appropriate personal protective equipment. Sweep up material and place in appropriate container for disposal. Avoid generating dust. Do not flush to sewer.

6.4 Reference to Other Sections
   See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.
   US Regulations may require reporting spills of hazardous materials: See Section 15: REGULATORY INFORMATION for details on reportable quantities, if any.

7. HANDLING AND STORAGE

7.1 Precautions for Safe handling
   Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat, drink or smoke while working with product, obey reasonable safety precautions and practice good housekeeping.

7.2 Conditions for Safe Storage, Including Incompatibilities
   Store in a cool, dry place.

   Incompatibilities
   None Known

7.3 Specific End Use(s)
   Mosquito larvicide

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters
   Component Exposure Limits
   None

   Derived No Effect Levels (DNELs)
   No DNELs available

   Predicted No Effect Concentrations (PNECs)
   No PNECs available
8.2 Exposure Controls
   Appropriate Engineering Controls
   Provide general ventilation.

   SKIN PROTECTION:
   Wear protective clothing, including boots and gloves. Wash thoroughly with soap and water after handling.

   EYE PROTECTION:
   Wear goggles, safety glasses with side shields or full-face shield when splashing or spraying of materials is likely.

   RESPIRATORY PROTECTION:
   Use dust/mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C or a NIOSH approved respirator with any N, P, R or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/Odor</td>
<td>Yellow/Brown granular solid</td>
</tr>
<tr>
<td>pH</td>
<td>≈ 5 (1% dispersion in water)</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>None discernible</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Octanol/H₂O Coeff</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Auto Ignition</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not Determined</td>
</tr>
<tr>
<td>VOC</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Solubility (H₂O)</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>32 +/- 3 lbs/cu ft.</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Decomposition Temp.</td>
<td>Not Determined</td>
</tr>
<tr>
<td>LFL</td>
<td>Not Determined</td>
</tr>
<tr>
<td>UFL</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammability Class</td>
<td>Non-flammable (per similar formulation)</td>
</tr>
</tbody>
</table>

10. CHEMICAL STABILITY AND REACTIVITY

10.1 Reactivity
   Material does not pose a significant reactivity hazard.

10.2 Chemical Stability
   Stable under ordinary conditions of use and storage. Spontaneous reaction not possible.

10.3 Possibility of Hazardous Reactions
   Does not undergo hazardous polymerization

10.4 Conditions to Avoid
   None known
10.5 Incompatible Materials
None known

10.6 Hazardous Decomposition Products
Carbon oxides and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

**LIKELY ROUTES OF EXPOSURE**
- Eye Contact: Yes
- Skin Contact: Yes
- Inhalation: No
- Ingestion: No

**ACUTE EFFECTS**  
Product Toxicology Studies
- **ORAL TOXICITY:** LD$_{50}$ > 5,000 mg/kg (rat)
- **DERMAL TOXICITY:** LD$_{50}$ > 2,000 mg/kg (rabbit)
- **INHALATION TOXICITY:** LC$_{50}$ > 2.84 mg/L air (rat)
- **CORROSIVENESS:** Not corrosive.
- **DERMAL IRRITATION:** Not-irritating, (Category IV)
- **OCULAR IRRITATION:** Mildly-irritating, (Category IV)
- **DERMAL SENSITIZATION:** Not a sensitizer (guinea pig)

**MUTAGENICITY INFORMATION:** Components of this product are not listed as mutagens.

**CARCINOGENICITY INFORMATION:** Components of this product are not listed as carcinogenic by NTP, IARC or OSHA.

**DEVELOPMENTAL/REPRODUCTIVE TOXICITY:** This material is not pathogenic

**SPECIAL TARGET ORGAN EFFECTS:** Eye and mucus membrane Irritation.

**ASPIRATION HAZARD:** Not Applicable

**REPEAT DOSE STUDIES:** Not Applicable, Pathogenicity Toxicity testing was all negative

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity (Data for a Concentrated Bti Technical Powder)

- **Fish:** LC$_{50}$ >300 mg/L (96-H, Rainbow Trout)
- **Bird:** LC$_{50}$ >3077 mg/kg (6.2 x 1011 cfu/kg) (Acute Oral - Bobwhite Quail)  
  LC$_{50}$ >3077 mg/kg (6.2 x 1011 cfu/kg) each day for 5 days (Sub-Acute Oral (dietary) - Bobwhite Quail)
- **Invertebrates:** EC$_{50}$ >50 mg/L (48-H) (Daphnia)
(Data for a Concentrated Bsp Technical Powder)
Fish: LC\textsubscript{50} >15.5 mg/L (96-H, Rainbow Trout)
Bird: LC\textsubscript{50} >9000 mg /kg (Acute Oral – Mallard)
Invertebrates: EC\textsubscript{50} >15.5 mg/L (48-H) (Daphnia)

12.2 Persistence and Degradability
No data available

12.3 Bioaccumulation potential
No data available

12.4 Mobility in Soil
No data available

12.5 Results of PBT and vPvB assessment
Assessments not performed

12.6 Other adverse effects
None known

13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Methods
Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.

US EPA WASTE NUMBER & DESCRIPTIONS:
There is no applicable EPA waste number. This product, if discarded, is not expected to be a characteristic or listed hazardous waste.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not regulated for domestic ground transport by US DOT
UN PROPER SHIPPING NAME: N/A
REMARKS: N/A

IATA/ICA0 STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

IMDG STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A
SAFETY DATA SHEET

VectoMax® FG Biological Larvicide Fine Granules

SDS# VBC-0018 Revision 2 ISSUED 03/10/16

(Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012))

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations / Specific Legislation

- TSCA STATUS: Exempt
- CERCLA STATUS: Not regulated as hazardous
  - SARA STATUS: Acute: No  Chronic: No  Fire: No  CDT: No
- RCRA STATUS: Not regulated as hazardous
- State Right-To-Know: Not Listed
  - Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.

OSHA HAZARD COMMUNICATION STANDARD: Not defined by the OSHA Hazard Communication Standard, 29 CFR

15.2 EPA Pesticide Regulations

- EPA Registration Number 73049-429
- EPA Pesticide Label signal word
  - CAUTION
  - Product must have EPA Approved Pesticide Label attached to or accompanying all containers.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions and limitations for its use.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

- CAUTION

Causes moderate eye irritation. Harmful if absorbed through the skin or inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Mixers/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

ENVIRONMENTAL HAZARDS

Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.
DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform mosquito control applications, or by persons under their direct supervision.

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel, or persons under contract to these entities only.

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in a cool, dry place.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA Hazard</th>
<th>Ratings</th>
<th>HMIS Hazard</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health:</td>
<td>1</td>
<td>Health:</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>Instability</td>
<td>0</td>
</tr>
</tbody>
</table>

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Extreme

REASON FOR ISSUE: Update hazard classification and warranty
APPROVAL DATE: 03/10/16
SUPERSEDES DATE: 04/14/15
SAFETY DATA SHEET

VectoMax® FG Biological Larvicide Fine Granules

SDS# VBC-0018 Revision 2

ISSUED 03/10/16

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

LEGEND: N/A = Not Applicable   N/D = Not Determined
N/L = Not Listed         L = Listed
C = Ceiling             S = Short-term
(R) = Registered Trademark of Valent BioSciences Corp.
(TM) = Registered Trademark of Valent BioSciences Corp.

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent BioSciences Corporation and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Valent BioSciences Corporation nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users’ own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences Corporation to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, “Hazcom”). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.

870 Technology Way
Libertyville, IL 60048 – 800-323-9597

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