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

1.1 Product Identifier
MATERIAL NAME: VectoMax® FG
   Synonyms: VectoMax® G; VectoMax® WSP; VBC-60035
   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 LLC
   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>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Bacillus sphaericus 2362, strain ABTS-1743</td>
<td>2.7</td>
</tr>
<tr>
<td>None</td>
<td>Bacillus thuringiensis subsp. israelensis, strain AM65-52</td>
<td>4.5</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>Other ingredients</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>Odor Threshold:</td>
<td>None discernible</td>
</tr>
<tr>
<td>pH</td>
<td>≈ 5 (1% dispersion in water)</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>
<tr>
<td>Decomposition Temp.:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Auto Ignition:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flash Point:</td>
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</tr>
<tr>
<td>VOC:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Kinematic Viscosity:</td>
<td>Not Determined</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, (EPA Tox Category IV)
OCULAR IRRITATION: Mildly-irritating, (EPA Tox 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 10$^{11}$ 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$_{50}$ >15.5 mg/L (96-H, Rainbow Trout)  
Bird: LC$_{50}$ >9000 mg/kg (Acute Oral – Mallard)
Invertebrates: EC$_{50}$ >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/ICAO STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A
SAFETY DATA SHEET  
VectorMax® FG Biological Larvicide Fine Granules

SDS# VBC-0018 Revision 3  
ISSUED 02/28/18

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

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.
### NFPA Hazard Ratings

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>0</td>
<td>Minimal</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>Slight</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

### HMIS Hazard Ratings

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>0</td>
<td>Minimal</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>Slight</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

**REASON FOR ISSUE:** General Update

**APPROVAL DATE:** 02/28/18

**SUPERSEDES DATE:** 03/10/16

**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 LLC
- (TM) = Registered Trademark of Valent BioSciences LLC

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 LLC 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 LLC 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 LLC 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.