1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL NAME: VectoBac® GS
EPA Registration No. 73049-10

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. israelensis
CONCENTRATION: 2.80 %
CAS/RTECS NUMBERS: 68038-71-1 / N/A
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 Ingredients - identity withheld as a Trade Secret
CONCENTRATION: 97.20 %
CAS/RTECS NUMBERS: N/A / N/A
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
2. COMPOSITION/INFORMATION ON INGREDIENTS, continued
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EEC (European Community): N/A
  Symbol Designation: N/A
  Risk Phrases: N/A
  Safety Phrases: N/A

3. HAZARDS INFORMATION
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EMERGENCY OVERVIEW: Product is non-toxic by ingestion, skin contact, or inhalation. Direct contact with eyes or skin may cause mild irritation.

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

SKIN CONTACT: Non-irritant

SKIN SENSITIZATION: N/D

EYE CONTACT: Non-irritant

TARGET ORGANS: N/D

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

SIGNS AND SYMPTOMS: Direct contact with eyes or skin may cause mild irritation.

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 and no explosive properties.

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

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

6. ACCIDENTAL RELEASE MEASURES

SPILL OR RELEASE PROCEDURES: Recover product. Place into appropriate container for disposal. Avoid dust. Ventilate and wash spill area.
7. HANDLING AND STORAGE
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HANDLING: N/D.

STORAGE: Store in a cool, dry place.

SPECIAL PRECAUTIONS: N/A

8. EXPOSURE CONTROLS/PERSOAL PROTECTION
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ENGINEERING CONTROLS: Use local exhaust.

RESPIRATORY PROTECTION: Not usually required. However, mixers/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist respirator meeting NIOSH standards of at least N-95, R-95 or P-95.

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
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APPEARANCE/PHYSICAL STATE: Granular solid.

   ODOR: Mild

   BOILING POINT: N/A

   MELTING/FREEZING POINT: N/A

   VAPOR PRESSURE (mm Hg): N/A

   VAPOR DENSITY (Air=1): N/A

   EVAPORATION RATE: N/D

   BULK DENSITY: 27 ± 4 lb/cu.ft.

   SPECIFIC GRAVITY: N/D

   SOLUBILITY: N/A

   pH: 5.4 ± 1.0 (10% slurry)

   VISCOSITY: N/A
10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

INCOMPATIBILITIES: Alkalinity inactivates product.

HAZARDOUS DECOMPOSITION PRODUCTS: N/D.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

ORAL LD50: LD50 (rat) > 5,000 mg/kg

DERMAL LD50: LD50 (rabbit) > 5,000 mg/kg

INHALATION LC50: N/D. No lethality was observed in rats after a 4 hour exposure at the highest obtainable inhalation exposure chamber concentration (2.84 mg/l) to VectoBac® Technical Powder.

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

DERMAL IRRITATION: N/D. Transient, slight or mild irritation noted in a dermal toxicity study with VectoBac® Technical Powder.

OCULAR IRRITATION: N/D. VectoBac® Technical Powder was mildly irritating in an eye irritation test in rabbits.

DERMAL SENSITIZATION: N/D

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

Do not contaminate potable water, food or feed by storage or disposal. Dispose of product in accordance with federal, state, and local regulations.

WASTE DISPOSAL METHODS:

Pesticide Disposal: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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

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/A
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: MSDS Reviewed.
APPROVAL DATE: 01/02/12
SUPERSEDES DATE: 06/24/11

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
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