1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL NAME: Gnatrol®

EPA Registration No. 73049-11

Drug Code: 15574 List Number: 11008

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: .6000 % 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

LIMITS STEL: N/A CEILING: N/A

2. COMPOSITION/INFORMATION ON INGREDIENTS, continued

INGREDIENT NAME: Inert Ingredients - identity withheld as a Trade

Secret

CONCENTRATION: 99.4000 % 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: For a minor component: 50 ppm total vapor and

aerosol, 10 mg/m3 aerosol (AIHA WEEL)

LIMITS STEL: N/A

CEILING: N/A

EEC (European Community): N/A

Symbol Designation: N/A

Risk Phrases: N/A Safety Phrases: N/A

3. HAZARDS INFORMATION

EMERGENCY OVERVIEW: This material is a skin sensitizer.

ROUTE(S) OF ENTRY:

Skin: No

Inhalation: N/D

Ingestion: No

INGESTION RATING: None

SKIN ABSORPTION RATING: None

INHALATION RATING: Possibly toxic

CORROSIVENESS RATING: None

SKIN CONTACT RATING: None

SKIN SENSITIZATION RATING: Sensitizer

3. HAZARDS INFORMATION, continued

EYE CONTACT RATING: None

TARGET ORGANS: Skin, possibly hematopoietic system

CARCINOGENICITY RATING: NTP: N/L IARC: N/L OSHA: N/L

ACGIH: N/L

None

- SIGNS AND SYMPTOMS: N/D. Data suggest that direct contact with the skin may cause mild irritation and repeated contact could result in dermatitis.
- MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/D. Data suggest pre-existing skin lesions and hypersensitivity to B.t. israelensis formulations.

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/D

FLASH POINT METHOD: N/D

LOWER EXPLOSIVE LIMIT(%): N/D

UPPER EXPLOSIVE LIMIT(%): N/D

AUTOIGNITION TEMPERATURE: N/D

FIRE & EXPLOSION HAZARDS: N/D.

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 and place into an appropriate container for disposal. Avoid contact with skin. Wear appropriate personal protective equipment. Ventilate and wash spill area.

7. HANDLING AND STORAGE

HANDLING: N/D.

STORAGE: Store in cool, 59-86 F or 15-30 C, dry place.

SPECIAL PRECAUTIONS: Wash hands and face after handling this compound. Keep gloves on until all potentially contaminated personal protective equipment is removed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust.

RESPIRATORY PROTECTION: Air purifying respirator with high efficiency particulate filter (P100).

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION, continued

SKIN PROTECTION: Wear 2 pairs; latex inner, thicker glove outside.

EYE PROTECTION: Goggles or full-face respirator.

OTHER PROTECTION: Wear saranex tyvek coverings if contact may occur.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Brown aqueous suspension.

ODOR: N/D

BOILING POINT: N/D

MELTING/FREEZING POINT: N/A

VAPOR PRESSURE (mm Hg): N/D

VAPOR DENSITY (Air=1): N/D

EVAPORATION RATE: N/D

BULK DENSITY: 1.03-1.06 g/mL

SPECIFIC GRAVITY: N/D

SOLUBILITY: Disperses well in water

pH: Approximately 5

VISCOSITY: 200-400 cps at 25 C

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: N/D

INCOMPATIBILITIES: N/D.

HAZARDOUS DECOMPOSITION PRODUCTS: N/D.

HAZARDOUS POLYMERIZATION: N/D

11. TOXICOLOGICAL INFORMATION

ORAL TOXICITY: LD50 > 5,000 mg/kg in rats.

DERMAL TOXICITY: LD50 > 2,000 mg/kg in rabbits.

11. TOXICOLOGICAL INFORMATION, continued

INHALATION TOXICITY: LCLo = 3.9 mg/l/4 hours (one of ten animals died when exposed to this maximum attainable concentration).

CORROSIVENESS: N/D

DERMAL IRRITATION: Slightly irritating with some sloughing found in a skin irritation test (4-hour application) in rabbits. Redness, swelling and sloughing of the skin were also noted in a dermal toxicity study in rabbits.

OCULAR IRRITATION: Non-irritating in eye irritation tests in rabbits.

DERMAL SENSITIZATION: Eight of ten animals positive in a dermal sensitization study in quinea pigs.

SPECIAL TARGET ORGAN EFFECTS: N/D. A minor ingredient produced Heinz body formation or erythrocyte destruction in animals at repeated dosages of 500 mg/kg or more.

CARCINOGENICITY INFORMATION: N/D

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/D

HAZARD CLASS: N/D

UN NUMBER: N/D

PACKING GROUP: N/D

REPORTABLE QUANTITY: N/D

IATA/ICA0 STATUS: Not Regulated

PROPER SHIPPING NAME: N/D

HAZARD CLASS: N/D

UN NUMBER: N/D

PACKING GROUP: N/D

REPORTABLE QUANTITY: N/D

IMO STATUS: Not Regulated

PROPER SHIPPING NAME: N/D

HAZARD CLASS: N/D

UN NUMBER: N/D

PACKING GROUP: N/D

REPORTABLE QUANTITY: N/D

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

LEGEND: N/A = Not Applicable

N/D = Not Determined

N/L = Not Listed

L = Listed

C = Ceiling

S = Short-term

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APPROVED BY: RHW