

MATERIAL SAFETY DATA SHEET

Certis USA
9145 Guilford Road, Suite 175
Columbia, MD 21046

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME : BioVector
PRODUCT CODE : 100159
PRODUCT FAMILY : Entomogenous Nematodes (*Steinernema carpocapsae*, *Neoaplectana carpocapsae*, *Steinernema feltiae*)
CHEMICAL NAME : N/A
FORMULA : N/A

EMERGENCY TELEPHONE NUMBERS:

Emergency Information Chem Tel (800) 255-3924
Outside North America Call Collect (813) 248-0585

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>COMPONENT</u>	<u>CAS #</u>	<u>WT.%</u>	<u>OSHA PEL</u>	<u>TLV's TWA</u>	<u>STEL</u>
<i>Steinernema carpocapsae</i>	N/A	20	N/A	N/A	N/A
Hydrated Amorphous Silicon	007631-86-9			6 mg/m ³	

3. HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW

This product is a naturally occurring living organism (nematode) suspended in a light brown dry granular material which is intended for use as a pesticide to control insects. This nematode has not been genetically modified in any way. This product is exempt from EPA requirements of registration (FIFRA Section 25(b)(1)).

SIGNAL WORD: CAUTION

Potential Health Effects

ROUTE(S) OF ENTRY : Inhalation, eyes, skin, oral

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE : None Known

ACUTE EYE CONTACT : Non Irritating (EPA Toxicity Category IV)

CHRONIC EYE CONTACT : Chronic exposure not likely from normal use

ACUTE SKIN CONTACT : Non Irritating (EPA Toxicity Category IV)

CHRONIC SKIN CONTACT : Chronic exposure not likely from normal use

ACUTE ORAL : LD₅₀ > 5.0 mg/kg body weight (EPA Toxicity Category IV)

CHRONIC INGESTION : Chronic exposure not likely from normal use

ACUTE INHALATION : Not Available. Avoid breathing spray mist. Dust may be harmful if inhaled.



CHRONIC INHALATION..... : Chronic exposure not likely from normal use

CARCINOGENICITY

NTP..... : N/A
IARC : N/A
OSHA : N/A

MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE..... : None noted

4. FIRST AID MEASURES:

FIRST AID FOR EYES : Flush eyes with plenty of running water. Get medical attention if irritation persists.

FIRST AID FOR SKIN : Wash with soap and water, including hair and under fingernails. Get medical attention if irritation persists.

FIRST AID FOR INHALATION..... : Dust may be harmful if inhaled. Move victim to fresh air. Seek medical attention if irritation persists.

FIRST AID FOR INGESTION : If victim is fully conscious, drink 2-3 glasses of water. Seek medical attention for further treatment.

5. FIRE FIGHTING MEASURES:

NFPA HAZARD CLASSIFICATION : HEALTH HAZARD 1 FIRE HAZARD 0
..... REACTIVITY 0

EXTINGUISHING MEDIA : Use water, foam, or carbon dioxide

UNUSUAL FIRE AND EXPLOSION HAZARDS..... : None known

SPECIAL FIRE FIGHTING PROCEDURES..... : Thermal decomposition may yield carbon dioxide, ammonia, and/or nitrogen oxides. Do not breathe fumes or burning granules.

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES : Some dust may be spilled from the boxes during handling and shipping. This is not hazardous and may be cleaned with standard janitorial equipment and supplies. A 0.5% solution of household bleach will kill the nematodes from a spill and disinfect the surface.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE (MIN. / MAX.) : 40/85 °F 4/29 °C

SHELF LIFE..... : Stable

SPECIAL SENSITIVITY : Do not freeze. Do not store at temperatures above 85°F. These conditions will destroy the product. Store material in a clean manner to prevent contamination by mold, fungus, or other pathogens.

HANDLING AND STORAGE PRECAUTIONS : Store in a cool, dry location out of direct sunlight. This product may be stored at room or refrigerated temperatures (40-75°F) for up to three months. Do not expose to extreme temperatures for long



periods of time. This product will tolerate continuous external temperatures of 85°F for up to 3 weeks. Temperatures below freezing or exceeding 90°F (35°C) will destroy the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

- EYE PROTECTION REQUIREMENTS**..... : The use of safety goggles and/or splash shield is recommended.
- SKIN PROTECTION REQUIREMENTS** : The use of chemical-resistant gloves is recommended.
- RESPIRATORY / VENTILATION REQUIREMENTS** : Use with adequate ventilation. If dusty conditions or aerosol generation is present, a dust mask or other controls is recommended.
- EXPOSURE LIMITS** : N/A

9. PHYSICAL AND CHEMICAL PROPERTIES:

- PHYSICAL FORM** : Granular (1/8 to 1/4 inch diameter)
- COLOR** : Light Brown
- ODOR** : N/A
- BOILING POINT RANGE**..... : N/A °F °C
- MELT POINT / FREEZE POINT** : N/A °F °C
- FLASH POINT** : N/A °F °C
- AUTO IGNITION** : N/A °F °C
- UPPER EXPLOSIVE LIMITS (UEL)**..... : Not determined
- LOWER EXPLOSIVE LIMITS (LEL)**..... : Not determined
- pH**..... : 7.00
- SOLUBILITY IN WATER**..... : 100% dispersible
- SPECIFIC GRAVITY**..... : N/A
- BULK DENSITY** : N/A
- % VOLATILE BY WEIGHT**..... : 35%
- VAPOR PRESSURE at 20 °C** : N/A
- VAPOR DENSITY** : N/A

10. STABILITY AND REACTIVITY:

- STABILITY** : Stable
- HAZARDOUS POLYMERIZATION** : Will not occur
- INCOMPATIBILITIES**..... : Active ingredient is a living organism. Do not expose to heat or excessive cold or sunlight for an extended period of time.
- DECOMPOSITION PRODUCTS**..... : Thermal decomposition may yield carbon dioxide, ammonia, and/or nitrogen oxides.
- CONDITIONS TO AVOID** : Active ingredient is a living organism. Do not expose to heat or excessive cold or sunlight for an extended period of time.



11. TOXICOLOGICAL INFORMATION:

Dust may be harmful if inhaled. Avoid breathing spray mist. Avoid contact with skin or eyes. If contact occurs, immediately flush eyes or skin with water.

Acute Oral LD₅₀ (rat) > 5000 mg/kg body weight

Acute Dermal LD₅₀ (rabbit) > 2000 mg/kg body weight

Acute Dermal Irritation (rabbit) = Non Irritating

Acute Eye Irritation (rabbit) = Non Irritating

Dermal Sensitization = Not a Sensitizer

Acute Inhalation = Not Available

12. ECOLOGICAL INFORMATION:

No information available.

13. DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHOD..... : No special methods are required. Product and container waste resulting from the use of this product, or unused, outdated product, may be disposed of on site or at any approved waste disposal facility in accordance with federal and local regulations.

14. TRANSPORTATION INFORMATION:

D.O.T. PROPER SHIPPING NAME..... : N/A
TECHNICAL SHIPPING NAME..... : BioVector
D.O.T. HAZARD CLASS : Not regulated
U.N. /N.A. NUMBER..... : N/A
PRODUCT RQ (lbs.)..... : N/A
D.O.T. LABEL..... : N/A
D.O.T. PLACARD..... : N/A

15. REGULATORY INFORMATION:

OSHA STATUS : N/A
TSCA STATUS : N/A
CERCLA REPORTABLE QUANTITY..... : N/A
SARA TITLE III:
SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES..... : N/A
SECTION 311/312 HAZARD CATEGORIES : N/A
SECTION 313 TOXIC CHEMICALS..... : N/A
RCRA STATUS..... : N/A



Product Name: BioVector
Emergency Information: Chem Tel (800) 255-3924
Outside North America Call Collect (813) 248-0585

STATE REGULATORY INFORMATION:

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For detail on your regulatory requirements you should contact the appropriate agency in your state.

<u>COMPONENT NAME / CAS NUMBER</u>	<u>CONCENTRATION</u>	<u>STATE CODE</u>
--	----------------------	-------------------

16. OTHER INFORMATION:

REASON FOR ISSUE..... : Company Change
APPROVAL DATE..... : 6/15/01
SUPERSEDES DATE : 4/6/00
MSDS NUMBER : 70051-BioVector25

To the best of our knowledge, the information contained herein is accurate. However, neither Certis USA or any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All material may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

