

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

MATERIAL SAFETY DATA SHEET

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

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME : **Deliver LC Biological Insecticide**
PRODUCT CODE..... : N/A
CHEMICAL FAMILY..... : Biological Insecticide
CHEMICAL NAME..... : Bacillus thuringiensis
FORMULA : N/A

EMERGENCY TELEPHONE NUMBERS:

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2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>COMPONENT</u>	<u>CAS #</u>	<u>OSHA PEL</u>	<u>TLV's TWA</u>	<u>STEL</u>	
Bacillus thuringiensis	68038-71-1		N/A	N/A	N/A

3. HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW

This product is a brown/tan liquid with a slight fish odor, which is intended for use as a pesticide. There is no specific antidote if this product is ingested. Seek medical attention. Treat symptomatically. No known unusual fire, explosion, and reactivity hazards.

EPA Signal Word: Caution

Potential Health Effects

ROUTE(S) OF ENTRY..... : Eyes, skin, oral, inhalation

HUMAN EFFECTS AND

SYMPTOMS OF OVEREXPOSURE..... : May cause eye irritation or a skin sensitization (allergic) reaction in sensitive individuals.

ACUTE EYE CONTACT..... : Slightly irritating. May cause irritation.

CHRONIC EYE CONTACT..... : Chronic exposure not likely from normal use.

ACUTE SKIN CONTACT..... : Slightly irritating. May cause irritation.

CHRONIC SKIN CONTACT..... : Chronic exposure not likely from normal use.

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

ACUTE INHALATION..... : LC₅₀ > 260 CFU/Liter

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..... : Immediately rinse eyes with a large amount of running water. Hold eye lids apart to rinse the entire surface of the eyes and lids. Do not apply any medicating agents except on the advice of a physician.

FIRST AID FOR SKIN..... : Wash with plenty of soap and water, including hair and under fingernails. Do not apply any medicating agents except on the advice of a physician. Remove contaminated clothing and decontaminate prior to use.

FIRST AID FOR INHALATION..... : Move victim from contaminated area to fresh air. Apply artificial respiration if necessary.

FIRST AID FOR INGESTION..... : If victim is fully conscious, give a large quantity of water to drink and induce vomiting. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES:

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

EXTINGUISHING MEDIA..... : Dry chemical, foam, or carbon dioxide

UNUSUAL FIRE AND EXPLOSION HAZARDS : None known

SPECIAL FIRE FIGHTING PROCEDURES..... : Wear full protective clothing and self-contained breathing apparatus. Evacuate non-essential personnel from the area to prevent human exposure to fire, smoke, fumes, or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated.

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES..... : Wear chemical safety glasses with side shields or chemical goggles, rubber gloves, rubber boots, long-sleeved shirt, long pants, head covering, and a NIOSH-approved chemical cartridge pesticide respirator or a supplied-air respirator. For small spills, cover with an absorbent material such as pet litter. Sweep up, and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal the container and handle in an approved manner. Flush the area with



water to remove any residue. Do not allow wash water to contaminate water supplies.

7. **HANDLING AND STORAGE:**

STORAGE TEMPERATURE (MIN. - MAX.) : N/A °F/ N/A °C 90 °F / 32 °C

SHELF LIFE : Stable

SPECIAL SENSITIVITY..... : Temperatures >90 °F (impairs activity of this product)

HANDLING AND STORAGE PRECAUTIONS... : Store the material in a well-ventilated, secure area out of the reach of children and domestic animals. Do not store food, beverages, or tobacco products in the storage area. Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is potential for exposure to the material. Always wash thoroughly after handling.

8. **EXPOSURE CONTROLS / PERSONAL PROTECTION:**

ORAL PROTECTION REQUIREMENTS : Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.

EYE PROTECTION REQUIREMENTS : To avoid eye contact, wear safety glasses with side shields or chemical goggles.

SKIN PROTECTION REQUIREMENTS..... : To avoid skin contact, wear rubber gloves, rubber boots, long-sleeved shirt, long pants, and a head covering.

RESPIRATORY / VENTILATION REQUIREMENTS : To avoid breathing mist or vapors, wear a NIOSH-approved chemical cartridge pesticide respirator or a supplied-air respirator.

EXPOSURE LIMITS..... : N/A

9. **PHYSICAL AND CHEMICAL PROPERTIES:**

PHYSICAL FORM	: Liquid	
COLOR	: Brown/Tan	
ODOR	: Slight Fish Odor	
BOILING POINT RANGE	: 212 °F	100 °C
MELT POINT / FREEZE POINT	: N/A °F	N/A °C
FLASH POINT	: N/A °F	N/A °C
AUTO IGNITION	: N/A °F	N/A °C
UPPER EXPLOSIVE LIMITS (UEL)	: Not determined	
LOWER EXPLOSIVE LIMITS (LEL)	: Not determined	
pH	: 4.5	
SOLUBILITY IN WATER	: N/A	
SPECIFIC GRAVITY	: 1.15	
BULK DENSITY	: N/A	
% VOLATILE BY WEIGHT	: N/A	
VAPOR PRESSURE at 20 °C	: N/A	
VAPOR DENSITY	: N/A	



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10. STABILITY AND REACTIVITY:

STABILITY : Stable
HAZARDOUS POLYMERIZATION..... : Will not occur
INCOMPATIBILITIES..... : None known
DECOMPOSITION PRODUCTS..... : None known
CONDITIONS TO AVOID..... : Temperatures >90 °F (impairs activity of this product)

11. TOXICOLOGICAL INFORMATION:

Oral LD50 (rat) = 4.7E+11 CFU/kg (slightly toxic)
Dermal LD50 (rat) = 3.4E+11 CFU/kg (slightly toxic)
Inhalation LC50 (rat) = 260 CFU/Liter (slightly toxic)
Eye Irritation (rabbit) = slightly irritating
Dermal Irritation (rabbit) = non-irritating
Skin Sensitization = not available
Mutagenic Potential = None observed
Reproductive Hazard Potential = Not available
Chronic/Subchronic Toxicity Studies = Not available
Carcinogenic Potential = Not available
Other Toxicity Information = Not available
Toxicity of Other Components = Not available
Target Organs:
Active Ingredient-Not available
Inert Ingredients-Not available



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12. ECOLOGICAL INFORMATION:

Fish and Wildlife = Low toxicity
Bobwhite Quail Oral LD50 > 16,665 mg/kg
Mallard Oral LD50 > 16,665 mg/kg
Invertebrate (Daphnia magna) Life Cycle NOEL = 1.6E+8 CFU/Liter
Environmental Fate = Not available

13. DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHOD..... : Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

14. TRANSPORTATION INFORMATION:

D.O.T. PROPER SHIPPING NAME..... : N/A
TECHNICAL SHIPPING NAME..... : DELIVER LC Biological Insecticide
D.O.T. HAZARD CLASS..... : Insecticides or Fungicides; Agricultural, N.O.S.
U.N. /N.A. NUMBER..... : N/A
PRODUCT RQ (lbs.)..... : N/A
D.O.T. LABEL..... : N/A
D.O.T. PLACARD..... : Not required

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..... : Acute Health Hazard
SECTION 313 TOXIC CHEMICALS..... : N/A
RCRA STATUS..... : N/A



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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 /</u> <u>CAS NUMBER</u>	<u>CONCENTRATION</u>	<u>STATE CODE</u>
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16. OTHER INFORMATION:

REASON FOR ISSUE : Company Change
APPROVAL DATE : 6/18/01
SUPERSEDES DATE : 5/12/00
MSDS NUMBER..... : 70051-69

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