

MATERIAL SAFETY DATA SHEET

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

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME : **Deliver**
PRODUCT CODE : 6150
CHEMICAL FAMILY : Bacillus thuringiensis kurstaki
CHEMICAL NAME : Not Applicable
FORMULA : Not Applicable

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>
Bacillus thuringiensis	68038-71-1	18.0	Not established	Not established	Not established

3. HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW

This product is a brown granular material with a fishmeal odor, which is intended for use as a pesticide. If poisoning is suspected, contact a physician, the nearest hospital, or the nearest Poison Control Center. There is no specific antidote for the product, treat symptomatically.

EPA Signal Word: Caution

Potential Health Effects

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

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE : May cause irritation of eyes, skin, or respiratory tract.

ACUTE EYE CONTACT : May cause eye irritation.

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

ACUTE SKIN CONTACT : A skin sensitization (allergic) reaction may occur in sensitive individuals.

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

CHRONIC INGESTION : Chronic exposure not likely from normal use

ACUTE INHALATION : May cause irritation.

CHRONIC INHALATION : Chronic exposure not likely from normal use



CARCINOGENICITY

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

MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE: Individuals with allergic history or pre-existing dermatitis should use extra care in handling this product.

4. FIRST AID MEASURES:

If poisoning is suspected, immediately contact a physician, the nearest hospital, or the nearest Poison Control Center. Tell the person contacted the complete product name and the type and amount of exposure. Describe any symptoms and follow the advice given.

FIRST AID FOR EYES : Immediately rinse eyes with a large amount of running water. Hold eyelids apart to rinse the entire surface of the eyes and lids. Do not apply any medicated 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, immediately 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 : Thermal decomposition products may include, but are not limited to, CO₂, H₂O, and particulate fillers.

SPECIAL FIRE FIGHTING PROCEDURES : None

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 dust or pesticide respirator with a dust prefilter. For small spills, sweep up, keeping dust to a minimum, 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.)..... : 32 / 90 °F 0 / 32 °C

SHELF LIFE..... : Stable

SPECIAL SENSITIVITY : None known. Avoid sunlight and heat to maintain activity.

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 a 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 safety goggles. The use of safety goggles or glasses with side shields is recommended.

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

RESPIRATORY / VENTILATION REQUIREMENTS : To avoid breathing dust, use with adequate ventilation and/or wear a NIOSH-approved dust or pesticide respirator with a dust prefilter.

EXPOSURE LIMITS : N/A

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM..... : Granular

COLOR..... : Brown

ODOR..... : Fishmeal

BOILING POINT RANGE : N/A

MELT POINT / FREEZE POINT : N/A

FLASH POINT..... : N/A

AUTO IGNITION..... : N/A

UPPER EXPLOSIVE LIMITS (UEL)..... : Not determined

LOWER EXPLOSIVE LIMITS (LEL)..... : Not determined

pH..... : 6.0-6.5

SOLUBILITY IN WATER : Soluble

SPECIFIC GRAVITY/DENSITY : 20.00lbs./cu.ft.

BULK DENSITY : Not determined

% VOLATILE BY WEIGHT : Not determined

VAPOR PRESSURE at 20 °C..... : Not determined

VAPOR DENSITY : Not determined

10. STABILITY AND REACTIVITY:

STABILITY : Stable

HAZARDOUS POLYMERIZATION : Will not occur



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INCOMPATIBILITIES : None known

DECOMPOSITION PRODUCTS : None known

CONDITIONS TO AVOID : None known

11. TOXICOLOGICAL INFORMATION:

Acute Toxicity/Irritation Studies

Ingestion: Practically non
Oral LD50 (rat) > 5000 mg/kg body weight
Dermal: Not Available
Inhalation: Not Available
Eye Contact: non-irritating (Rabbit)
Skin Contact: mildly irritating (Rabbit)
Skin Sensitization: sensitizing (Guinea Pig)

Mutagenic Potential

Bacillus thuringiensis: None Observed

Reproductive Hazard Potential

Bacillus thuringiensis: Not Available

Chronic/Subchronic Toxicity Studies

Bacillus thuringiensis: Not Available

Carcinogenic Potential

Bacillus thuringiensis: Not Available

Other Toxicity Information

Not Available

Toxicity and Other Components

Surfactant

Direct contact with eyes may result in moderate to severe irritation with some corneal injury lasting several days to a week. Prolonged exposure to skin may result in dermatitis. Inhalation may irritate the upper respiratory tract.

Target Organs

Active Ingredients

Bacillus thuringiensis Not Available

Inert Ingredients

Surfactant Skin and Eyes



12. ECOLOGICAL INFORMATION:

Summary of Effects

Bacillus thuringiensis: Low toxicity to fish and wildlife

Eco-Acute Toxicity

Bacillus Thuringiensis: Bobwhite Oral LD50>16,665 mg/kg
Mallard Oral LD50>16,665mg/kg

Environmental Fate

Bacillus thuringiensis: Not Available

13. DISPOSAL CONSIDERATIONS:

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

14. TRANSPORTATION INFORMATION:

D.O.T. PROPER SHIPPING NAME : N/A
TECHNICAL SHIPPING NAME :
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 : N/A
TSCA STATUS : Exempt
CERCLA REPORTABLE QUANTITY : None
SARA TITLE III:
SECTION 302 EXTREMELY HAZARDOUS : N/A
SECTION 311/312 HAZARD CATEGORIES : Acute Health Hazard
SECTION 313 TOXIC CHEMICALS : N/A
RCRA STATUS : N/A

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.

16. OTHER INFORMATION:

REASON FOR ISSUE : Company Change



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APPROVAL DATE..... : 6/18/01
SUPERSEDES DATE..... : 11/10/99
MSDS NUMBER : 70051-69

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