

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: Crymax
Product Type: Water dispersible granule
EPA Registration No. 70051-86
Active Ingredient: *Bacillus thuringiensis* subspecies *kurstaki* strain EG7841
CAS No.: 68038-71-1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Bio-insecticide
Uses advised against: Any uses not listed on the label

1.3. Details of the supplier of the safety data sheet

Name: Certis U.S.A., LLC
Address: 9145 Guilford Road, Suite 175
Columbia, Maryland 21046
U.S.A.
Phone Number: +01 (800) 255-3924
Website: <http://www.certisusa.com>

1.4. Emergency telephone number

Emergency number: +1 800 255-3924

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Hazard Classification: Not classified by OSHA
EPA Signal Word: Caution (refer to Section 15)
Hazard Statements: None
Pictogram: None
Precautionary Statements: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling

2.2 Other Hazards: Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. This product must not be applied aerially within ¼ mile of any habitats of endangered or threatened Lepidoptera. No manual application can be made within 300 ft of any habitats of endangered or threatened Lepidoptera.

SECTION 3: Composition/information on ingredients

Ingredient	Cas#	% w:w
<i>B.thuringensis</i> var. <i>kurstaki</i> Strain (EG7841)	68038-71-1	40

SECTION 4: First aid measures

4.1. Description of first aid measures

Generic measures

Eye Contact: Hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lens after 5 minutes then continue rinsing eye. Call doctor or poison control center for further treatment advice.

4.2. Most important symptoms and effects, both acute and delayed

May cause eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media: All methods

Unsuitable Extinguishing Media: None known.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: None known

5.3. Advice for firefighters:

Protection of Firefighters: None specified

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Avoid generation of dusts. Do not inhale dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area and observe emergency procedures.

For emergency responders: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Environmental precautions

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water. This product is not to be applied aerially within ¼ mile of any habitats of endangered or threatened Lepidoptera. No manual application may be made within 300 feet of any threatened or endangered Lepidoptera. Keep out of drains, sewers, ditches, and waterways

6.3. Methods and material for containment and cleaning up

Methods for Containment: Contain spill. Reclaim material if possible. Use absorbent material to minimize runoff of mixed product.

Methods for Clean-Up: Collect mechanically. Sweep, vacuum, or shovel material into a container for disposal. Avoid generation of dusts. Clean up affected area with plenty of water. Flush the area with water to remove any residue. Do not allow wash water to contaminate water supplies.

Other Information: Dispose of in accordance with Federal State and local regulations for disposal of non-hazardous waste.

6.4. Reference to other sections

See Section 8 for occupational exposure limits and risk management measures.
Refer to Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing dust. Avoid contact with skin and eyes. Avoid contact with open wounds. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. See Section 8 for appropriate personal protective equipment. Keep away from excessive heat and open flames.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool dry place that is inaccessible to children.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OSHA Permissible Exposure Limits (PELs): Not determined

ACGIH Threshold Limit Values: Not determined

Other Exposure Limits: Not determined

8.2. Exposure controls

Engineering Controls:	Ensure ventilation is adequate to keep airborne dust levels low.
Personal Protective Equipment	
Eye/Face Protection:	None specified
Skin Protection	Wear long sleeved shirt, long pants, shoes and socks
Hand Protection:	Water proof gloves
Body Protection:	Wear long sleeved shirt, long pants, shoes and socks
Respiratory Protection:	Mixer loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95. Repeated exposure to high concentrates of microbial proteins can cause allergic sensitization.
Thermal Hazards:	None
General Hygiene Considerations:	Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing /PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothes. Remove PPE immediately after handling this product. Wash the outside of the gloves before removing. Asa soon as possible change into clean clothing. Wash PPE thoroughly according to manufacturer's instructions before reuse. Contaminated clothing should be washed separately before reuse.
Environmental exposure controls:	Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water. This product is not to be applied aerially within ¼ mile of any habitats of endangered or threatened Lepidoptera. No manual application may be made within 300 feet of any threatened or endangered Lepidoptera. Keep out of drains, sewers, ditches, and waterways

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Brown granules (solid).
Odour:	Earthy
Odour Threshold:	Not established
pH:	7.4-7.5, 1% dilution
Melting Point / Freezing Point:	Not applicable
Initial Boiling Point:	Not applicable
Boiling Range:	Not applicable
Flash Point:	Not applicable
Evaporation Rate:	Unknown
Flammability (solid, gas):	Not determined

Lower & Upper Flammability Limits:	Not determined
Vapour Pressure:	Not applicable
Vapour Density:	Not applicable
Density:	0.523-0.578 g/cc or 31.5-28.5 lb./ft ³
Solubility:	Not determined
Partition Coefficient (n-octanol/water):	Not determined
Auto-ignition Temperature:	Not determined
Decomposition Temperature:	Not determined
Viscosity:	Not applicable
Other relevant properties:	None known

9.2. Other information

Not available.

SECTION 10: Stability and reactivity

<u>10.1. Reactivity</u>	No known hazardous reactions when handled and stored according to stated provisions.
<u>10.2. Chemical stability</u>	Stable when handled and stored according to stated provisions.
<u>10.3. Possibility of hazardous reactions</u>	No known hazardous reactions
<u>10.4. Conditions to avoid</u>	Avoid exposure to moisture. Exposure to excessive heat or open flame.
<u>10.5. Incompatible materials</u>	No known incompatible materials.
<u>10.6. Hazardous decomposition products</u>	No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Toxicological information on the substance or mixture:

LD₅₀ (oral)	LD ₅₀ > 5050 mg/kg, rat
LD₅₀ (dermal)	LD ₅₀ > 5050 mg/kg, rat
LC₅₀ (inhalation)	No evidence of toxicity or pathogenicity in study conducted with the Technical Product
Skin corrosion / irritation:	Slightly irritating, Toxicity Category IV, rabbit

Eye irritation: Irritating to the eyes, rabbit
Respiratory or skin sensitization: No data available.

Other information on adverse health effects:

Carcinogenicity

NTP Listed: Not applicable
IARC Listed: Not applicable
OSHA: Not applicable

11.2 Reference to other sections

See Section 4 for symptoms and acute and delayed effects.

SECTION 12: Ecological information

12.1. Toxicity

Test species	Test method	Test substance	LC ₅₀
Northern Bobwhite	35 day, pathogenicity	Btk strain EG 7841	No pathogenicity or infectivity observed at mean dosage of 1.32 x 10 ⁹ CFU
<i>Oncorhynchus mykiss</i>	30 day, static renewal	Btk strain EG 7841	LC ₅₀ > 7.8 x 10 ⁹ CFU/L
<i>Daphnia magna</i>	21 day, static renewal	Btk strain EG 7841	EC ₅₀ > 5.0 x 10 ⁸ CFU/L
<i>Apis mellifera</i> L	6 days	Btk strain EG 7841	Dietary LC ₅₀ : 1322 ppm

12.2. Persistence and degradability

Bacillus thuringiensis subspecies *kurstaki* (Btk) shows a rapid loss of activity in response to UV light

12.3. Bioaccumulative potential

Btk is not pathogenic and does not reproduce in living organisms other than target Lepidopteran larvae.

12.4. Mobility in soil

Low based on scientific data for Btk

12.5. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal Instructions: Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a cool, dry place inaccessible to children.

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

Container Handling: Non-refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or 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.

SECTION 14: Transportation information

14.1. UN number

Not regulated.

14.2. UN proper shipping name

Not regulated.

14.3. Transport hazard class(es)

Not regulated.

14.4. Packing group

Not regulated.

14.5. Environmental hazards

Not regulated.

14.6. Special precautions for user

Not regulated.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not regulated.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EPA: This product is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticidal chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION, KEEP OUT OF REACH OF CHILDREN

Causes moderate eye irritation.

Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

<u>OSHA:</u>	N/A
<u>TSCA Status:</u>	Exempt
<u>CERCLA Reportable Quantity:</u>	N/A
<u>SARA Title III:</u>	
Section 302:	N/A
Section 311/312:	N/A
Section 313:	N/A
<u>RCRA Status:</u>	N/A

SECTION 16: Other information

Disclaimer:

To the best of our knowledge, the information contained herein is accurate. However, neither Certis USA nor 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.

SDS Authoring Information:

Revision date: March 23, 2015
Date of Previous version: August 20, 2010
Reason for Revision OSHA Hazard Communication Standard 2012
SDS Prepared by: Certis U.S.A., LLC