

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

1.1. Product identifier

Product name: CYD-X
EPA Registration No: 70051-44
Product Type: Bio-Insecticide
Active Ingredient: *Cydia pomonella* granulosis virus
CAS No.: Not applicable

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

Identified uses: Bio-insecticide for control of codling moth
Uses advised against: Any use not specified 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 as hazardous by OSHA
EPA Signal Word: Caution* (refer to section 15)
Hazard Statements: None
Pictogram: None
Precautionary Statements: Harmful if inhaled. Avoid breathing spray mist. Avoid contact with skin eyes or clothing. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

2.2 Other Hazards: None Known

SECTION 3: Composition/information on ingredients

3.1 Substances

Component	CAS#	% by weight
<i>Cydia pomonella</i> granulosus virus	Not applicable	0.06

SECTION 4: First aid measures

4.1. Description of first aid measures

Generic measures	Call poison control center or doctor for treatment advice. Have the product container or label with you when calling or going to a treatment center.
Eye Contact:	Hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses after 5 minutes if present and continue rinsing eye.
Skin Contact:	Take off contaminated clothing. Rinse skin immediately for 15-20 minutes with plenty of water.
Inhalation:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth, if possible.
Ingestion:	Call poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going to a treatment center.

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

Eye irritation

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

None known

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media: Water mist, alcohol resistant foam, dry powder, carbon dioxide
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: Keep unauthorized people away from the concerned area. Use personal protections as indicated in Section 8. Evacuate the danger area and observe emergency procedures.

For emergency responders: Use personal protection recommended in Section 8.

6.2. Environmental precautions None specified

6.3. Methods and material for containment and cleaning up

Methods for Containment: Recover free product. Use absorbent material to minimize runoff of product.

Methods for Clean-Up: Do not allow wash water to contaminate water supplies. Dispose of in accordance with local regulations for disposal of non-hazardous waste.

Other Information: None

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

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible wash thoroughly and change into clean clothing.

7.2. Conditions for safe storage, including any incompatibilities

Store in original sealed containers only. Store in a cool dry area that is inaccessible to children and pets. Store at temperatures below 86°F. Bioactivity may be impaired by storage above 86°F. Storing the product in freezer or refrigerator will extend shelf life.

7.3. Specific end use(s)

Those uses listed on the label

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:

When handlers use closed systems or enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6), the handler PPE requirements may be reduced or modified as specified in the WPS. **IMPORTANT:** when reduced PPE is worn because closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in case of an emergency, such as a spill or equipment break-down.

Personal Protective Equipment

Eye/Face Protection:

Applicators and other handlers.

Skin Protection

None specified

Hand Protection:

Long sleeved shirt and long pants

Body Protection:

Waterproof gloves

Respiratory Protection:

Shoes plus socks

Applicators must wear a dust/mist respirator meeting NIOSH standards of at least N-95, R- 95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Thermal Hazards:

None

General Hygiene Considerations:

Wash clothing and PPE immediately after use and before reuse. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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 cleaning equipment or disposing of equipment wash waters or rinsate.

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local and national health and environmental regulations

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: Grey/brown liquid

Odour: Mild earthy

Odour Threshold: Not determined

pH: 6.0-8.0

Melting Point / Freezing Point: Not determined

Initial Boiling Point: Not determined

Boiling Range: Not determined

Flash Point:	Not determined
Evaporation Rate:	Not determined
Flammability (solid, gas):	Not applicable
Lower & Upper Flammability Limits:	Not applicable
Vapour Pressure:	Not determined
Vapour Density:	Not determined
Density:	1.102-1.218 g/ml
Solubility:	99%
Partition Coefficient (n-octanol/water):	Not known
Auto-ignition Temperature:	Not determined
Decomposition Temperature:	Not determined
Viscosity:	Not determined
Other relevant properties:	None known None known

9.2. Other information

Not available.

SECTION 10: Stability and reactivity

<u>10.1. Reactivity</u>	Not reactive
<u>10.2. Chemical stability</u>	Stable
<u>10.3. Possibility of hazardous reactions</u>	None known
<u>10.4. Conditions to avoid</u>	Elevated temperatures
<u>10.5. Incompatible materials</u>	None known
<u>10.6. Hazardous decomposition products</u>	None known

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Toxicological information on the substance or mixture:

LD₅₀ (oral)	Toxicity not expected based on published literature.
LD₅₀ (dermal)	Toxicity not expected based on published literature.
LC₅₀ (inhalation)	Toxicity not expected based on published literature.
Skin corrosion /	Non-irritating, Toxicity Category IV (test conducted with highly similar product)

irritation:

Eye irritation: Non-irritating, Toxicity Category IV (test conducted with highly similar product)
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

Toxicity to non-target organisms not expected based on published literature and the known specificity CpGV.

12.2. Persistence and degradability

Rapid degradation, in part due to inactivation from exposure to UV light.

12.3. Bioaccumulative potential

Bioaccumulation not expected. Do not apply directly to water.

12.4. Mobility in soil

Granuloviruses have the ability to leach through soil but risk of reaching groundwater is low.

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 this product in original sealed container in a cool, dry place inaccessible to children and pets. Store at temperatures below 86°F. Bioactivity may be impaired by storage above 86°F. Storing the product in a freezer or refrigerator will extend its shelf life.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local government, or by industry.)

Container Handling: Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by State and local ordinances.

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

Harmful if inhaled. Harmful if absorbed through skin. 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:

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SDS Prepared by:	Certis U.S.A., LLC