

# CYD-X®

## INSECTICIDAL VIRUS

### An Aqueous Suspension Biological Insecticide for Control of the Codling Moth In Home Garden Settings

 FOR ORGANIC GARDENING



**Active Ingredient\*:**

*Cydia pomonella granulovirus*.....0.06%

**Other Ingredients:** .....99.94%

**Total**.....100.00%

\*Contains at least  $3 \times 10^{13}$  viral occlusion bodies (OBs) per Liter.

### KEEP OUT OF REACH OF CHILDREN CAUTION

CYD-X is an insecticidal virus product for control of larvae of the codling moth. Read this label carefully. Refer to the Technical Bulletin for Additional Guidelines for Use.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

**Net Contents: 1.5 fl. oz. and 2.0 fl. oz.**

EPA Reg. No. 70051-44

EPA Est. No. 70051-CA-001

Lot No.:

Manufactured by  
Certis USA, L.L.C.  
9145 Guilford Road  
Suite 175  
Columbia, MD 21046

**CERTIS**

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS (AND DOMESTIC ANIMALS):

###### CAUTION:

Harmful if inhaled. Avoid breathing spray mist. Harmful if absorbed through skin. 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, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

###### FIRST AID

**If inhaled:** 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.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

Call a 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 for treatment. Hot Line Number: 1-800-255-3924

#### ENVIRONMENTAL HAZARDS:

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

#### GENERAL INFORMATION

##### CYD-X® BIOLOGICAL INSECTICIDE

#### PRODUCT DESCRIPTION

CYD-X® contains an insecticidal baculovirus (scientific name: *Cydia pomonella granulovirus*) that is specific to larvae of the codling moth (*Cydia pomonella*). Because of this specificity to the codling moth, CYD-X® provides a unique opportunity for biological control of codling moth without harmful effects on humans, domestic animals, wildlife, beneficial insects and plants.

## BIOLOGICAL PROPERTIES and MODE OF ACTION

CYD-X® is a biological insecticide, which must be ingested by larvae in order to be effective. Upon ingestion, the viral occlusion bodies (OBs) dissolve in the larval midgut and release infectious virions. These enter the cells lining the digestive tract and replicate in the nuclei of those cells. The resulting progeny virus infect other tissues within the larva, which stops feeding and eventually dies from massive viral infection. After death, the larva disintegrates, releasing billions of new OBs, which may infect other codling moth larvae upon ingestion. Death occurs 3 to 7 days after ingestion of CYD-X®, depending on dosage and ambient temperature. Death may occur more quickly at higher temperatures and higher dosage.

Baculoviruses have been found only in invertebrates; currently, there are no reports of members of this family infecting vertebrates or plants. CYD-X® virions do not reproduce in mammalian cells. This product can be inactivated by continuous exposure to temperatures above 86°F. For best results, keep the product refrigerated or frozen when not in use.

## MIXING INSTRUCTIONS

**CYD-X® must be mixed with water and applied as a spray to fruit and foliage. Use non-chlorinated water at a pH near 7.0 in the spray-tank mix.**

### ***Application Rate:***

For apple, pear, plum, prune, and walnut trees.

Mix 1 teaspoon of CYD-X® per 5 gallons of water and apply directly to each tree using a hand pump sprayer or other suitable spray equipment. Spray just enough to wet all leaves and fruit with minimal run-off or dripping. Total coverage depends on the size of trees to be sprayed and the type of sprayer used.

### ***When to spray:***

Apply CYD-X® first in late spring or early summer, when eggs of the first generation of codling moth begin to hatch. For maximum effectiveness, apply CYD-X® at least twice during each larval generation. When pest pressure persists, additional applications of CYD-X® may be necessary in mid- to late summer. Consult your local Cooperative Extension Service for more information about the best timing of codling moth sprays.

CYD-X® breaks down under direct exposure to sunlight. If codling moths are still flying and laying eggs, reapply after 7 to 8 sunny days.

CYD-X® can be applied up to and including the day of harvest and storage.

## STORAGE AND DISPOSAL

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

### **PESTICIDE STORAGE:**

Keep in original container. Store away from direct sunlight, feed, or foodstuffs. Keep container tightly sealed when not in use.

### **PESTICIDE DISPOSAL AND CONTAINER HANDLING:**

Nonrefillable container. Do not reuse or refill container.

### **If empty:**

Place in trash or offer for recycling, if available.

### **If partly filled:**

Call your local solid waste agency or 1-800-CLEAN-UP for disposal instructions. Never place unused product down any indoor or outdoor drain.

## WARRANTY

Certis USA L.L.C. warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.