



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 10, 2019

Tammy Robinson  
Product Registration Coordinator  
Kentucky Department of Agriculture  
107 Corporate Dr.  
Frankfort, KY 40601

Subject: Registration Action Under FIFRA Section 24(c)  
Use of Gemstar LC To Manage Corn Earworm (*Helioverpa zea*)  
From attacking Hemp in Kentucky  
EPA Special Local Need (SLN) No. KY190001  
Your Submission Dated November 21, 2019

This will acknowledge receipt of your notification to the Agency of a registration, pursuant to section 24 (c) of the Federal Insecticide, Fungicide, and Rodenticide Act, as follows:

Product Name: Gemstar LC  
EPA Registration No.: 70051-45  
24(c) Registrant: Certis USA LLC  
9145 Guilford Road Suite 175  
Columbia MD, 21046

The Agency has reviewed the submitted materials and determined that the subject SLN registration for use of Gemstar LC on Hemp to manage corn earworm (*Helioverpa zea*) from attacking Hemp is acceptable.

If you have any questions concerning this letter, please contact Bibiana Oe of my team by telephone at (703) 347-8162 or via email at [oe.bibiana@epa.gov](mailto:oe.bibiana@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Cody Kendrick", is located below the "Sincerely," text.

Cody Kendrick, Acting Product Manager  
Microbial Pesticides Branch

Biopesticides and Pollution Prevention  
Division (7511P)  
Office of Pesticide Programs

Special Local Need FIFRA Section 24(c) Label

**Gemstar<sup>®</sup>LC**

HEMP

STATE OF KENTUCKY

FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF KENTUCKY

**Gemstar<sup>®</sup>LC**

INSECTICIDAL VIRUS

For Use on Hemp

For Control of Corn Earworm (Cotton Bollworm, Tomato Fruitworm),  
Old World Bollworm, and Tobacco Budworm

THIS LABEL IS VALID UNTIL [INSERT DATE HERE]  
OR UNTIL OTHERWISE AMENDED, WITHDRAWN, CANCELLED, OR SUSPENDED



For Use in Organic Production



**Active Ingredient:**

Polyhedral occlusion bodies (OBs) of the nuclear polyhedrosis virus of *Helicoverpa*  
*zea* (corn earworm) ..... 0.64%

**OTHER INGREDIENTS:** ..... 99.36%

**TOTAL** ..... 100.00%

\*Contains at least 2 billion OBs/mL of product

**ENVIRONMENTAL HAZARDS**

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 washwater or rinsate.

**MANUFACTURED BY:**

Certis USA LLC  
9145 Guilford Road, Suite 175  
Columbia, MD 21046

EPA Reg. No. 70051-45

EPA SLN No. KY-190001

Expires: 11/22/2024

**CERTIS**



Special Local Need FIFRA Section 24(c) Label

**Gemstar<sup>®</sup>LC**

HEMP  
STATE OF KENTUCKY

## **DIRECTIONS FOR USE**

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

This is a Special Local Need (SLN) label and the EPA registered Gemstar<sup>®</sup> LC product label must be in possession of the user at the time of pesticide application.

Follow all applicable directions, restrictions, Worker Protection Standard requirements and precautions on the EPA registered Gemstar<sup>®</sup> LC label.

This use is only for Hemp.

## **GENERAL INFORMATION**

Gemstar<sup>®</sup> LC is a highly-selective insecticide containing an insect virus that infects and kills only larvae (caterpillars) of the corn earworm (*Helicoverpa zea*, also known as the tomato fruitworm or cotton bollworm), and the closely related pests, old world bollworm (*Helicoverpa armigera*), and tobacco budworm (*Helicoverpa virescens*). Larvae ingesting the virus stop feeding within several days, become pale and lethargic, and then die as the virus replicates throughout their bodies. Virus released from dead larvae may infect other larvae feeding nearby.

Gemstar<sup>®</sup> LC can be applied up to and including the day of harvest and storage.

## **SHAKE WELL BEFORE USING.**

## **MIXING AND HANDLING INSTRUCTIONS**

Fill the mix tank with desired quantity of clean water. Ideal pH is between 6 and 8; adjust highly alkaline (pH>8) or acidic (pH<6) water to pH 7 with a buffering agent before adding Gemstar<sup>®</sup> LC. Shake the Gemstar<sup>®</sup> LC container well, or invert it several times before pouring to ensure uniform suspension. Keep the tank agitated during mixing. If a spreader/sticker or ultraviolet screen is used, add prior to the addition of Gemstar<sup>®</sup> LC. Mixing time can be reduced by premixing Gemstar<sup>®</sup> LC with a small amount of clean water and agitating vigorously before adding to the tank. Spray as soon as possible after mixing; do not allow the spray mix to stand overnight.

## **APPLICATION INSTRUCTIONS**

Apply 4-10 fl. oz. of product/acre.

Larvae ingesting the virus stop feeding within several days, become pale and lethargic, and then die as the virus replicates throughout their bodies. Virus released from dead larvae may infect other larvae feeding nearby.

Because the virus must be ingested by larvae in order to initiate infection, thorough spray coverage is essential for good insect control. Several days may elapse between treatment

Special Local Need FIFRA Section 24(c) Label

**Gemstar<sup>®</sup>LC**

HEMP

STATE OF KENTUCKY

and cessation of larval feeding due to the virus infection. Large larvae may cause considerable damage as they continue to feed, even if they eventually succumb to virus infection. Therefore, treat when larvae are young (early instars) and are actively feeding, before extensive damage has occurred. When insect infestations are heavy, use the higher label rates and/or spray more frequently. Increasing the frequency of applications is usually more effective than raising the application rates at improving the level of insect control.

Frequent application at low rates is usually more effective than infrequent application at high rates.

Lower rates can be used during vegetative stages of crop growth.

When insect infestations are heavy, use the higher label rates and/or spray more frequently. Increasing the frequency of label applications is usually more effective than raising application rates at improving the level of insect control.

When flowers, fruit, or other harvested structures are present, use higher rates and/or increased frequency of sprays.

Gemstar<sup>®</sup> LC can be applied by ground or aerial sprayers (both conventional and ultra-low volume) or with overhead sprinkler irrigation equipment (chemigation), as long as the equipment provides thorough coverage of plants with minimal runoff. The amount of water or other carrier needed per acre will depend on weather, spray equipment, and local experience. Typical spray volumes are 20-100 gallons of water per acre for ground application and 5-20 gallons of water per acre for conventional aerial application. For aerial ULV application, apply in a minimum of 2 quarts of an approved oil-based carrier.

For chemigation instructions, please refer to the EPA registered Gemstar<sup>®</sup> LC product label.

Use of a non-ionic or oil-based spreader/sticker and ultraviolet screening agent may enhance the performance of this product. Do not use silicone-based spreaders as they may interfere with adhesion of virus particles to the plant surface.

## **RESTRICTIONS**

None

## **IMPORTANT**

Before using Gemstar<sup>®</sup> LC, read and follow all applicable directions, restrictions, and precautions on the EPA-registered Gemstar<sup>®</sup> LC label.



Special Local Need FIFRA Section 24(c) Label

**Gemstar<sup>®</sup>LC**

HEMP

STATE OF KENTUCKY

**WARRANTY**

Certis USA LLC 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 disease 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. To the extent consistent with applicable law, buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herein. To the extent consistent with applicable law, NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY IS MADE.

**FOR PRODUCT INFORMATION, CALL CERTIS USA AT 800-250-5024**