



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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

February 26, 2020

Sarah K. Caffery
Pesticide Product Registration Specialist
Office of Indiana State Chemist
175 South University St.
West Lafayette, IN 47907

Subject: Corrections to Registration Action Under FIFRA Section 24(c)
Use of Gemstar LC on Hemp to Manage Corn Earworm, Cotton Bollworm, Tomato Fruitworm
(*Heliocoverpa zea*), and Old World Bollworm (*Helicoverpa armigera*), Tobacco Budworm
(*Helicoverpa virescens*) in Indiana
EPA Special Local Need (SLN) No. IN200005
Your Submission Dated January 31, 2020

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 various caterpillars, specifically corn earworm, cotton bollworm, tomato fruitworm, Old World bollworm, and tobacco budworm is acceptable.

If you have any questions concerning this letter, please contact Joseph Mabon of my team by telephone at (703) 347-0177 or via email at mabon.joseph@epa.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "Susanne Cerrelli".

Susanne Cerrelli, Acting Product Manager 92
Microbial Pesticides Branch
Biopesticides and Pollution Prevention
Division (7511P)
Office of Pesticide Programs

Special Local Need FIFRA Section 24(c) Label

Gemstar[®]LC

HEMP

STATE OF INDIANA

FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF INDIANA

Gemstar[®]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 12/31/2025
OR UNTIL OTHERWISE AMENDED, WITHDRAWN, CANCELLED, OR SUSPENDED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. IN-200005

Expires: 12/31/2025

Gemstar[®]LC

HEMP
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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[®] 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[®] LC label.

This use is only for Hemp. Not for indoor use.

GENERAL INFORMATION

Gemstar[®] 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[®] 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[®] LC. Shake the Gemstar[®] 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[®] LC. Mixing time can be reduced by premixing Gemstar[®] 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

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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[®] 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[®] 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[®] LC, read and follow all applicable directions, restrictions, and precautions on the EPA-registered Gemstar[®] LC label.

Special Local Need FIFRA Section 24(c) Label

Gemstar[®]LC
HEMP
STATE OF INDIANA

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