



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

January 15, 2026

Leanna Bosarge
leanna.bosarge@controlsolutionsinc.com
CONTROL SOLUTIONS, INC.

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment - Label amendment adding bed bugs as a listed pest for control in and around poultry houses.
Product Name: CSI 16-147 Lambda + PBO CS
Admin Number: 53883-518
EPA Receipt Date: 02/29/2024
Action Case Number: 00502108

Dear Leanna Bosarge:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have questions, please contact Eric Ingram via email at ingram.eric@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Elizabeth Fertich". The signature is fluid and cursive, with "Elizabeth" on the top line and "Fertich" on the bottom line.

Elizabeth Fertich, Product Manager 4
IVB1, RD
Office of Pesticide Programs

LAMBDA-CYHALOTHRIN GROUP 3A INSECTICIDE

CSI 16-147 Lambda + PBO

[ABN: [Cyzmic Advanced], [Cyzmic Synergized], [Cyzmic Plus], [Cyzmic Extra], [Cyzmic Ultra]]

[CONTROLLED RELEASE INSECTICIDE + SYNERGIST]
[With CapVantage™ Technology]

For use in, on and around commercial livestock and poultry housing for the control of listed pests

ACTIVE INGREDIENTS:

Piperonyl butoxide 19.4%
Lambda-cyhalothrin*: [1 α (S*), 3 α (Z)]-(\pm)-cyano-(3-phenoxyphenyl) methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate 9.7%
OTHER INGREDIENTS: 70.9%
TOTAL: 100.0%

* Pyrethroid



Manufactured for:
Control Solutions, Inc.
5903 Genoa Red Bluff
Pasadena, TX 77507

EPA Reg. No: 53883-518
EPA Est. No: _____
Net Contents: [Pt][Qt][[Gal]][2 ½ gal]

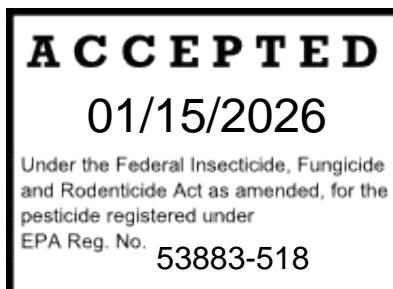
KEEP OUT OF REACH OF CHILDREN

WARNING

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

[Alternate text – all or in part: See side panel(s) for First Aid, Precautionary Statements, Directions for Use and Storage and Disposal.]

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none">Call a poison control center or doctor immediately for treatment advice.Have person sip a glass of water if able to swallow.Do not induce vomiting unless told to do so by a poison control center or doctor.Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall® International for emergency medical treatment at (866) 897-8050.	



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING: May be fatal if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators, and other handlers must wear the following:

- long-sleeve shirt,
- long pants,
- shoes and socks, and
- chemical resistant gloves (barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or viton ≥14 mils)

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

USER SAFETY RECOMMENDATIONS

- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Users should 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.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to fish. 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 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. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Apply this product only as specified on this label.

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or to residues in/on blooming crops or weeds. Protect pollinating insects by following label directions intended to minimize drift and reduce pesticide risk to these organisms.

PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur. Do not use this product in or on electrical equipment due to the possibility of shock hazard.

GENERAL INFORMATION

This product is a formulation utilizing CapVantage™ Technology which is a proprietary blend of ingredients for use with the active ingredient lambda-cyhalothrin.

DIRECTIONS FOR USE

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

IMPORTANT: This product is classified as RESTRICTED USE in New York State.

USE RESTRICTIONS

- **DO NOT** use in residential barns or residential livestock or poultry housing.
- **DO NOT** water the treated area to the point of runoff.
- **DO NOT** make applications during rain.
- **DO NOT** apply directly to sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur, except as directed by this label.
- **DO NOT** make interior applications of this product in areas where animals are present in the facility, except cattle and calves. Allow treated surfaces to completely dry before restocking the facility.
- **DO NOT** make applications to any animal feedstuffs, water, or watering equipment.
- **DO NOT** contaminate any animal food, feed, or water in and around livestock, poultry, or whenmaking applications.
- **DO NOT** apply directly to animals.
- **DO NOT** use this product with oil.
- **DO NOT** apply this product to edible growing crops or stored raw agricultural commodities used for food or feed.
- Spot treatments must not exceed two square feet in size (for example, 2 ft. by 1 ft. or 4 ft. by 0.5 ft.).
- For soil or foliar applications, do not apply by ground within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.
- **DO NOT** apply the product into fish pools, ponds, streams, or lakes. Do not apply directly to sewers or storm drains, or to any area like a drain or gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur.
- **DO NOT** allow to enter indoor or outdoor drains.
No permita la entrada a desagües internos o externos.
- Follow proper disposal procedures on this label
Siga las indicaciones del etiquetado para el desecho apropiado del producto.



- **DO NOT** apply directly to impervious horizontal surfaces such as sidewalks, driveways, and patios except as a spot or crack-and-crevice treatment.
- **DO NOT** apply or irrigate to the point of runoff.
- Do not make applications during rain. Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).
- Rainfall within 24 hours after application may cause unintended runoff of pesticide application.

Application Restrictions for Outdoor Surface Sprays:

All outdoor applications must be limited to spot or crack -and-crevice treatments only, except for the following permitted uses:

1. Applications to pervious surfaces such as soil, lawn and other vegetation;
2. Perimeter band treatments of 7 feet wide or less from the base of a man-made structure to pervious surfaces (e.g., soil, mulch, or lawn);
3. Applications to underside of eaves, soffits, doors, or windows permanently protected from rainfall by a covering, overhang, awning, or other structure;
4. Applications around potential exterior pest entry points into man-made structures such as doorways and windows, when limited to a band not to exceed one inch;
5. Applications to vertical surfaces (such as the side of a man-made structure) directly above impervious surfaces (e.g., driveways, sidewalks, etc.), up to 2 feet above ground level;
6. Applications to vertical surfaces directly above pervious surfaces, such as soil, lawn, turf, mulch or other vegetation) only if the pervious surface does not drain into ditches, storm drains, gutters, or surface

waters.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as, plants, soil, or water is:

- Long-sleeve shirt, long pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride or viton
- Shoes plus socks

USE IN AND AROUND COMMERCIAL LIVESTOCK AND POULTRY HOUSING

Use this product as a general surface, spot, or crack and crevice treatment in and around unoccupied areas of livestock facilities, such as: Barns, Cow and Calf Pens & Hutches, Dairy Barns, Hog Barns, Horse Barns, Sheep Barns, Poultry Houses, and Rabbit Hutches. Do not contaminate milk, food, or drinking water. Remove animals from area being treated. Cover feeders and waterers. Do not apply or allow insecticide to drift onto animals. Do not allow animals to enter treated areas until spray solution has dried. Do not apply to milk rooms or feed rooms.

Darkling Beetle and Bed Bug Control in Poultry Premises:

This product controls darkling beetles (also known as litter beetles and lesser mealworms) [Hide beetles] [Carrion beetles] and bed bugs in poultry housing [structures, facilities, buildings, barns]. This product can be applied to infested areas, such as walls, floors, stalls, around feeders, and support [posts] [beams] of poultry [broiler, turkey, caged egg layer, cage free egg layer, breeder, grow out houses] [structures, facilities, buildings, barns].

MIXING AND APPLICATION: Dilute this product with water for application as a coarse spray, using hand-held or power-operated application equipment. Removable chemical extraction probes (also known as "stingers") used in suction/extraction systems must be rinsed within the pesticide container prior to removal. Determine the [(area) (number of square feet (ft²))] to be treated. Refer to Mixing Table below for amount of this product] to be used. Mix the required amount of this product with the appropriate amount of water and apply as a coarse spray. Fill the sprayer tank with $\frac{1}{2}$ of the water required for the treatment. Begin agitating the water and add the required amount of product to the tank. Continue mixing and add the remaining water. Maintain sufficient agitation during product application to ensure a uniform spray. Prepare a fresh spray mixture before each treatment.

Tank Mixing: This product may be tank mixed with Insect Growth Regulators (IGRs) [like Tekko® 10 or Pivot® 10]. Observe all restrictions and precautions which appear on the labels of these products.

MIXING TABLE FOR THIS PRODUCT

Pests	Application Rate of This Product per 1,000 sq. ft.	Gallons of water per 1,000 sq. ft.
Darkling beetles (litter beetles; lesser mealworms)		
Hide beetles	1.6 fl. oz. (48 mL)	1 - 2 gallons
Carrion beetles		
Bed Bugs		

WHEN TO APPLY: Do not apply when birds are present. Apply [between flocks,] after de-caking, clean out and sanitation procedures are complete, but before new flock placement. Exposed water [lines] and feed [troughs] [lines] must be covered or raised before treatment. Allow treated surfaces to dry completely before restocking. Do not apply as a space-spray [fog] [mist].

Application Methods for Darkling Beetle Control

Band Applications: In some situations, it may not be necessary to treat the entire [floor area] [litter surface] of a [poultry] [broiler] house. In these situations, [certain portions] [of the house] [or "bands"] may be treated. For example, [apply] [spray] diluted this product [on] [to]: a 3-foot wide band of litter [surface] under all of the feed lines in the house; a 3-foot wide band of litter [surface] adjacent to the side and end walls; and the lower sections of the walls, including 1 foot up onto wood surfaces above the [concrete] foundation. Be sure to measure the [area] [square feet] to be treated in order to determine the [amount] [quantity] of this product [needed] [required] [necessary] for the [application] [treatment].

Whole House Application: Apply diluted product as a broadcast spray to the litter covering the entire floor area, [especially to litter around feed and water lines], as well as to the lower sections of walls, including 1 foot up onto wood surfaces above the concrete foundation

For Best Results: In houses with support beams, treat around the base of each support post and 1 to 3 feet up each post. Apply diluted spray to cracks and crevices around insulation where beetles have been seen or can find harborage. To prevent beetle movement to nearby residences, treat litter before it is removed from the poultry house.

Perimeter Treatments

To reduce insect movement into these structures, make an outdoor perimeter treatment. Apply in a uniform band 1 to 3 feet (0.3 to 0.9 m) up the exterior foundation wall and 3 to 6 feet (0.3 to 1.8 m) out from the foundation.

Application Methods for Bed Bug Control

Dilute product at the rate of 1.6 fl. oz. (48 mL) per gallon of water (0.12% AI). Apply 1 gallon of diluted spray per 1,000 square feet of surface area to be treated.

After any necessary cleaning and disinfection of the barn, thoroughly treat known bed bug resting areas including nest boxes (in, around and underneath), cages, roosts, slats, curtains, support posts, screens, ceilings, walls, floors, egg collection rooms, cool cell doghouses, and any other surfaces in the barn, making every effort to treat all cracks and crevices. On exterior surfaces, apply in a uniform band 1 to 3' feet (0.3 - 0.9 m) up the exterior foundation wall and 3 to 6' feet (0.9 - 1.8 m) out from the foundation, and 18" inches (0.45 m) around any openings into the barn such as windows, doors, light fixtures, vents, fans, PVC conduit, electrical equipment, underneath dropped curtains, and the eves of the barn.

Initiate treatments at the first sign of bed bugs and repeat treatments as necessary to empty barns. Treatments can be made both indoors and outdoors, but animals cannot be present at the time of application for indoor applications.

Tank mixing Cyzmic Synergized with insect growth regulators, such as Tekko 10 or Pivot 10, is recommended to break the insect life cycle by preventing bed bug nymphs from becoming reproductive adults.

Perimeter Application for Control of Other Listed Pests

For control of ants, bees, centipedes, cockroaches, crickets, flies, millipedes, mosquitoes, scorpions, sowbugs, stink bugs, pillbugs, spiders, ticks, wasps, and other similar perimeter arthropod pests.

Dilute product at a rate of 0.2 fl. oz. (6 mL) to 0.8 fl. oz. (24 mL) per gallon of water (0.015-0.06% AI).

- For cockroaches, the rate for maintenance treatments is 0.015% and for clean-out treatments is 0.03%; for control of severe infestations, use 0.06% rate.
- For flea control (outdoor use only) use 0.03% rate.
- For control of LIGHT beetle infestations, use 0.03% rate.
- For residual mosquito control, use 0.06% rate.
- In all states except California, rates for flies may be increased to 0.06% when environmental conditions are severe and/or populations are high.
- For Crickets, spiders, stink bugs and ticks, for clean-out/severe infestations, use 0.06% rate.

Apply with either hand or power application equipment as a residual treatment to surfaces of buildings, porches, screens, window frames, eaves, patios, garages, refuse dumps, and other similar areas where these insect pests are active. Amount of concentrate is dependent upon pest species (see pest table and comments), infestation levels, and service interval desired.

Rate Table for Perimeter Barrier Applications

Application Rate: fl. oz. (mL) of this product	Gals. of Water ¹	Area of Coverage (sq. ft.)
0.2 fl. oz. (6mL)	1-5 gals.	800 - 1600 sq. ft
0.4 fl. oz. (12 mL)	1-5 gals.	800 - 1600 sq. ft
0.8 fl. oz. (24 mL)	1-5 gals.	800 - 1600 sq. ft

¹Application volume may be greater than 5 gals./800-1600 sq. ft. if required under heavy vegetative or landscaping materials in order to obtain desired coverage.

Examples of Dilutions for Perimeter Barrier Applications

Application Volume Gals. of Solution per 1,000 sq. ft.	Application Rate fl. oz. of this product per 1,000 sq. ft.	Fl. oz. (mL) of this product to Dilute in Water According to Spray Tank Volumes		
		5 gallons	10 gallons	50 gallons
1 gal. per 1,000 sq. ft.	0.2 fl. oz. (6mL) 0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL)	1 fl. oz. (30 mL) 2 fl. oz. (60 mL) 3 fl. oz. (120 mL)	2 fl. oz. (60 mL) 4 fl. oz. (120 mL) 8 fl. oz. (240 mL)	10 fl. oz. (300 mL) 20 fl. oz. (600 mL) 40 fl. oz. (1200 mL)
2 gal. per 1,000 sq. ft.	0.2 fl. oz. (6mL) 0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL)	0.5 fl. oz. (15 mL) 1 fl. oz. (30 mL) 2 fl. oz. (60 mL)	1 fl. oz. (30 mL) 2 fl. oz. (60 mL) 4 fl. oz. (120 mL)	5 fl. oz. (150 mL) 10 fl. oz. (300 mL) 20 fl. oz. (600 mL)
5 gal. per 1,000 sq. ft.	0.2 fl. oz. (6mL) 0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL)	0.2 fl. oz. (6 mL) 0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL)	0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL) 1.6 fl. oz. (48 mL)	2 fl. oz. (60 mL) 4 fl. oz. (120 mL) 8 fl. oz. (240 mL)

Example calculation: to apply the mid-rate of this product at a volume of 5 gal./1,000 sq. ft., mix 4oz of concentrate in 50 gallons of water.

Do not use water-based sprays of this product in conduits, motor housings, junction boxes, switch boxes, or other

electrical equipment because of possible shock hazard.

Thoroughly wash out sprayer and screen with water and detergent before using this product. This product has not stained or caused damage to painted or varnished surfaces, plastics, fabrics, or other surfaces where water applied alone causes no damage. However, treat a small area and allow to dry, to determine whether staining will occur.

LET TREATED SURFACES DRY BEFORE ALLOWING HUMANS AND PETS TO CONTACT SURFACES.

RESISTANCE MANAGEMENT RECOMMENDATIONS

Use this product as part of an integrated pest management program to extend the efficacy of insect control products and to help minimize the build-up and carry-over of resistant insect populations. Darkling beetles have the ability to develop resistance to insecticides. When one class of chemistry is used [flock after flock, year after year, time after time], the likelihood that insects will develop resistance [and become more difficult to control] increases [greatly]. This product contains a pyrethroid, which should be used in a/an [rotational] [insecticide rotation] program with other [classes of] insecticides including neonicotinoids [e.g., Dominion® 4L], Insect Growth Regulators, [e.g., Tekko 10, Pivot 10] or spinosyns [e.g., Pro-Spin™] to minimize or prevent [the development of] resistance and to maintain its effectiveness in controlling darkling beetles and other listed insects.

STORAGE AND DISPOSAL

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

STORAGE AND SPILL PROCEDURES: Store upright at room temperature. **Store in areas inaccessible to children.**

Keep container closed when not in use. Do not store near food or feed. Avoid exposure to extreme temperatures.

In case of spillage or leakages, soak up with an absorbent material such as sand, sawdust, earth, Fuller's earth, etc. Dispose of with chemical waste.

PESTICIDE DISPOSAL: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility.

CONTAINER DISPOSAL: **[For Containers equal to or less than 5 Gallons:]** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 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. Offer for recycling if available. If recycling is not available: then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire direction for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES, and LIMITATIONS OF LIABILITY.**

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Control Solutions, Inc. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Control Solutions, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Control Solutions, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent

with applicable law, Control Solutions, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Control Solutions, Inc. election, the replacement of product.