



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 13, 2019

Lisa Adamson  
Control Solutions, Inc.  
5903 Genoa Red Bluff Rd  
Pasadena, TX 77507

Subject: Label Amendment – Revision of application directions; addition of optional marketing icon and text  
Product Name: CSI 16-145 LAMBDA CYHALOTHRIN  
EPA Registration Number: 53883-389  
Application Date: 3-July-2019  
Decision Number: 553233

Dear Ms. Adamson:

The amended label 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 conditions that were previously imposed on this registration. You continue to be subject to existing 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 copy of the final printed labeling before you release the 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.

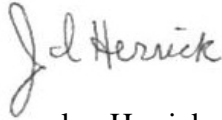
Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements 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 Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

Page 2 of 2  
EPA Reg. No. 53883-389  
Decision No. 553233

with FIFRA section 6. If you have any questions, you may contact Dr. Breeden-Alemi at 703-347-0511 or via email at [Breeden-Alemi.Julie@epa.gov](mailto:Breeden-Alemi.Julie@epa.gov).

Sincerely,

A handwritten signature in black ink that reads "J. Herrick". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke at the end.

Jacquelyn Herrick, Product Manager 03  
Invertebrate & Vertebrate Branch 1  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

**ACCEPTED**

12/13/2019

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 53883-389

[Text in brackets and italics are notes to the label editor.]  
[Text in brackets alone are optional statements or alternative statements.]

**GROUP 3 INSECTICIDE**

# CSI 16-145 Lambda-Cyhalothrin

CONTROLLED RELEASE INSECTICIDE

[**ABN:** CYZMIC CS]

[With CapVantage™ Technology]  
[Encapsulated Solutions]

{For use in, on and around buildings and structures for the control of listed pests, including on lawns, ornamental trees and shrubs around residential, institutional, public, commercial, agricultural and industrial buildings; and parks, recreational areas and athletic fields.} *(Note to reviewer – this text will either appear on the front panel of the label or in the body of label)*

**ACTIVE INGREDIENTS:**

Lambda-cyhalothrin\*:[1 α(S\*),3 α(Z)]-(±)-cyano-(3-phenoxyphenyl) methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate ..... 9.7%

**OTHER INGREDIENTS:** ..... 90.3%

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

\*Synthetic pyrethroid



ADAMA

Consumer & Professional Solutions

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

EPA Reg. No: 53883-389  
EPA Est. No: \_\_\_\_\_  
Net Contents: [1 Pint][16 fl.oz.]

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

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.)

**See additional precautionary statements and directions for use in booklet.**

| FIRST AID  |  |
|--|--|
| <b>IF SWALLOWED:</b>   | <ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul> |
| 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**

**CAUTION:** Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

**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 exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging the treatment area.

**PHYSICAL AND CHEMICAL HAZARDS**

Do not use this product in or on electrical equipment due to the possibility of shock hazard.

**PRODUCT INFORMATION**

**CSI 16-145 Lambda-cyhalothrin** is a unique 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:** Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in interior landscapes, ornamental gardens or parks, or on lawns or grounds.

This product is RESTRICTED for use in New York State.

Do not allow children or pets to contact treated surfaces until spray has dried.

**Application Restrictions for Residential Outdoor Surface and Space Sprays:**

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

1. Applications to soil or vegetation around structure;
2. Applications to lawns, turf, and other vegetation;
3. Applications to building foundations, up to a maximum height of 3 feet above grade;
4. Applications to underside of eaves, soffits, doors, or windows permanently protected from rainfall by a covering, overhang, awning or other structure;
5. Applications around potential pest entry points into buildings, when limited to a surface band not to exceed one inch in width;
6. Applications made through the use of a coarse, low pressure spray to only those portions of surfaces that are directly above bare soil, lawn, turf, mulch or other vegetation, as listed on this label, and not over an

impervious surface, drainage or other condition that could result in runoff into storm drains, drainage ditches, gutters, or surface waters, in order to control occasional invaders or aggregating pests.

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.

#### PERIMETER PEST CONTROL

**CSI 16-145 Lambda-cyhalothrin** is for use as a general surface (nonfood/nonfeed areas), crack and crevice, or spot treatment in, on, and around buildings and structures and their immediate surroundings, and on modes of transport. Areas of use: industrial buildings, houses, patios, porches, closets, furniture, apartment buildings, mobile homes, laboratories, buses, greenhouses (non-commercial), stores, factories, warehouses, wineries, vessels, railcars, trucks, trailers, aircraft (cargo and other non-cabin areas only), schools, nursing homes, hospitals, mausoleums, restaurants, hotels, correctional facilities, livestock/poultry housing, pet kennels, food granaries, food grain mills and food manufacturing, processing, and servicing establishments.

Nonfood/nonfeed areas of food/feed handling establishments include garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets, and storage (after canning or bottling).

For indoor applications, retreat at 21-day intervals to maintain control. More frequent treatments are limited to spot treatments.

#### Mixing Instructions

Dilute **CSI 16-145 Lambda-cyhalothrin** with water for application using hand-held or power-operated application equipment as a coarse spray for crack and crevice or spot and general surface (nonfood/ nonfeed areas only) treatments. Application equipment that delivers low volume treatments, such as the Micro-Injector® or Actisol® applicator, may also be used to make crack and crevice or spot and general surface treatments. Fill applicator tank with the desired volume of water and add **CSI 16-145 Lambda-cyhalothrin**. Close and shake before use in order to ensure proper mixing. Shake or re-agitate applicator tank before use if application is interrupted. Mix only amount of treatment volume as required. **CSI 16-145 Lambda-cyhalothrin** may be applied by using a paintbrush or other porous applicator attached to a handle as a general surface treatment.

#### Tank Mixing

**CSI 16-145 Lambda-cyhalothrin** may be tank mixed with other currently registered pesticides unless expressly prohibited by the product label. A small volume mixing test with the other products is recommended to ensure compatibility. If other chemicals are added to the applicator tank, add **CSI 16-145 Lambda-cyhalothrin** last. If mixed with EC formulations, use within 24 hours. Fill tank to desired volume and continue to agitate while making applications.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**CSI 16-145 Lambda-cyhalothrin** may be tank mixed with an Insect Growth Regulator (IGR). Follow all restrictions and precautions which appear on the labels of these products.

#### Foam Applications

**CSI 16-145 Lambda-cyhalothrin** may be converted to a foam and the foam used to treat structural voids to control

or prevent pests including ants, bees, termites (above ground only), wasps, or other listed arthropods harboring in walls, under slabs, or in other void areas.

#### RATES FOR PESTS (HAND APPLICATION EQUIPMENT)

| Pests   | Dilution Rate<br>(Concentration of AI)  | SPECIFIC USE DIRECTIONS  |
|---|---|--|
| Ants<br>Bedbugs(adult)<br>Bees<br>Boxelder Bugs<br>Carpenter Bees<br>Carpet Beetles<br>Centipedes<br>Cigarette Beetles<br>Clover Mites<br>Cockroaches <sup>1</sup><br>Confused Flour Beetles<br>Crickets<br>Earwigs<br>Firebrats<br>Fleas <sup>2</sup><br>Flies<br>Lesser Grain Borers<br>Millipedes<br>Mosquitoes<br>Red Flour Beetles<br>Rice Weevils<br>Saw-toothed Grain Beetles<br>Silverfish<br>Sow bugs<br>Spiders<br>Stink Bugs<br>Ticks<br>Wasps | 0.2 f l. oz.<br>(6 mL)<br>to<br>0.4 f l. oz. (12 mL) per<br>gallon of water<br><br>(0.015-0.03% AI) | <p><b>Ants:</b> Apply to any trails around doors and windows and other places where ants may be found. Locate and treat nests. Where ants are trailing inside, apply as a residual surface treatment to active areas such as baseboards, corners, around pipes, in and behind cabinets, behind and under refrigerators, sinks, furnaces and stoves, cracks and crevices. When combining baits and residual surface insecticides, apply surface insecticides in cracks and crevices, along baseboards, and infested surfaces and outside barrier treatments. Use baits in other areas that are untreated by residual insecticides; also see <b>Outdoor Surfaces Use</b>.</p> <p><b>Bedbugs:</b> Clean floors and surfaces by vacuuming. Apply as a coarse, low-pressure spray to harborage areas including crevices, baseboards, loose plaster, behind bed frames and headboards, beneath beds and furniture, and to bedsprings and bed frames.</p> <p>Do not apply to furniture surfaces or mattresses where people will be laying or sitting. Infested bedding should not be treated, but should be removed, placed in sealed plastic bags, and taken for laundering and drying at high temperatures.</p> <p><b>Cockroaches, Crickets, Earwigs, Firebrats, Silverfish, Spiders and Stink Bugs:</b> Apply as a coarse, low pressure spray to areas where these pests hide, such as baseboards, corners, storage areas, closets, around water pipes, doors and windows, attics and eaves, cabinets, behind and under refrigerators, sinks, furnaces and stoves, the underside of shelves, drawers and similar areas. Pay particular attention to cracks and crevices;</p> |

|   |  |  |
|---|--|--|
| <p>Cockroaches<sup>1</sup><br/> Crickets<sup>6</sup><br/> Flies<sup>5</sup><br/> Litter Beetles<sup>3</sup> (adults/<br/> immature stages such<br/> as Darkling, Hide, and<br/> Carrion)<br/> Mosquitoes<sup>4</sup><br/> Pillbugs<br/> Scorpions<br/> Spiders<sup>6</sup><br/> Spider Mites (Two-<br/> spotted, Spruce)<br/> Stink Bugs<sup>6</sup><br/> Ticks<sup>6</sup></p> | <p>0.8 f l. oz.<br/> (24 mL) per gallon of<br/> water<br/><br/> (0.06% AI)</p> | <p>also see <b>Outdoor Surfaces Use.</b></p> <p><b>Bees, Flies, Mosquitoes, and Wasps:</b> Apply directly to walls, ceilings, window screens, and other resting areas as a residual surface treatment. May be used inside residential buildings as well as in and around carports, garages, and storage sheds; also see Outdoor Surfaces Use. Use caution when treating nests of stinging insects as <b>CSI 16-145 Lambda-cyhalothrin</b> does not provide instant knockdown. Protective equipment for the applicator against stinging pests may be required. Treat bee, wasp and hornet nests late in the day when most insects will be present. Allow 2-3 days for the colony to die and repeat after 21 days, if necessary.</p> <p>Yards or other frequented areas enclosed by landscaping can benefit from the creation of a mosquito barrier to reduce invading mosquitoes by the treatment of perimeter vegetation. Apply <b>CSI 16-145 Lambda-cyhalothrin</b> at specified rates in 2-5 gals. of water per 1,000 sq. ft. <b>Carpenter Bees:</b> Apply coarse spray to thoroughly wet wood surfaces where bees have been previously active or to provide protection against further damage. Apply early in the spring to prevent bees from invading wood. When bees have infested wood, surface applications can help control embedded larvae and bees that emerge from the wood.</p> <p><b>Pantry Pests (i.e., Carpet beetle, Cigarette beetle, Confused flour beetle, Lesser grain borer, Red flour beetle, Rice weevil, and Saw-toothed grain beetle):</b> Apply to cupboards, shelving, and storage areas. Remove all utensils, uncovered foodstuffs (or any having original package opened), and shelf paper before making application. Allow treated surfaces to dry and cover shelves with clean paper before replacing any utensils, foodstuff, or other items. Destroy any foodstuff accidentally contaminated with treatment solution.</p> <p><b>Boxelder Bugs, Centipedes, Millipedes, Pillbugs, and Sow bugs:</b> Apply around doors and windows and other places where these pests may be found or where they may enter premises. Treat baseboards, storage areas, and other locations. Apply treatments to prevent infestation as described below; also see <b>Outdoor Surfaces Use.</b></p> <p><b>Fleas and Ticks:</b> To control nuisance fleas and ticks (e.g. dog ticks) apply to kennels, yards, runs, and other areas where pets may frequent. To control ticks, apply using a coarse fan spray to vegetation brush, branches, rock walls, and other areas near habitation where ticks may harbor or frequent. Treat entire area rather than making spot treatments, and retreat as necessary to maintain control.</p> |
|---|--|--|

|  |   |  |
|--|---|--|
|  |   | <p>Do not apply to pasture or cropland, and do not allow animals and people access to treated areas until the deposit has dried. Applications can begin in the spring and can continue until frost to control both larvae and adult ticks; also see <b>Outdoor Surfaces Use. Do not apply directly to animals.</b></p> <p><b>Cluster Flies:</b> Apply in late summer or early fall before flies are observed alighting on surfaces. Apply thoroughly on siding, under eaves, and around windows and doors, paying particular attention to south-facing surfaces, but do not allow runoff to occur. Heavy precipitation prior to frost may require retreatments to maintain protection. In winter and spring when flies become active and are emerging, interior crack and crevice and void treatments can help reduce the infestation, along with ULV or general surface application in infested attics or unoccupied lofts.</p> <p><b>Litter Beetles (Darkling, Hide, and Carrion Beetles) and Flies In Animal Housing (Such As Poultry Houses):</b> To control adult litter beetles, apply <b>CSI 16-145 Lambda-cyhalothrin</b> to walls and floors at cleanout, before reintroduction of animals. This will suppress beetles that escaped earlier treatment and will help delay onset of future infestations. Pay attention to areas where beetles frequently occur, such as walls, supports, cages, stalls, and around feeders. To help control flies, apply a directed application to horizontal surfaces and overhead areas and allow to dry before reintroduction of animals; also see <b>Livestock/Poultry Housing Structures and Pet Kennels.</b></p> |
| <p>Termites (above ground only)</p>  | <p>0.2 f l. oz. (6mL)<br/>to<br/>0.4 f l. oz. (12 mL)<br/>per gallon of water<br/><br/>(0.015-0.03% AI)</p> | <p><b>CSI 16-145 Lambda-cyhalothrin</b> may be used on termites to kill workers or winged reproductive forms which may be present in treated channels at the time of treatment. These applications are not a substitute for mechanical alteration to control subterranean termites, soil treatment labeled termiticides, or fumigation for extensive infestation of drywood termites or other wood-infesting insects, but are considered supplemental. This product is not recommended as sole protection against termites. For active termite infestations, get a professional inspection.</p>  |
| <p><sup>1</sup>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.<br/> <sup>2</sup>For outdoor use only and use 0.03% rate.<br/> <sup>3</sup>For control of LIGHT beetle infestations, use 0.03% rate.<br/> <sup>4</sup>For residual control, use 0.06% rate.<br/> <sup>5</sup>In all states except California, rates for flies may be increased to 0.06% when environmental conditions are severe and/or populations are high.<br/> <sup>6</sup>For clean-out/severe infestations, use 0.06% rate.</p> |   |  |



### **Application within Food Handling Establishments**

For places other than private residences in which exposed food is held, processed, prepared, or served: areas for receiving, storage, packing (canning, bottling, wrapping, boxing), preparing foods, edible waste storage and enclosed processing systems (mills, dairies, edible oils, syrups), and serving areas.

Use as a crack and crevice or spot treatment in and around both food and nonfood areas. Apply in small amounts directly into cracks and crevices, using equipment capable of delivering a pin stream of insecticide, in points between different elements of construction, between equipment and floor, openings leading to voids and hollow spaces in walls, equipment and bases. Clean food contact surfaces and equipment with an effective cleaning compound and rinse with potable water before using.

Limit individual spot treatments to an area no larger than 20% of the treated surface. Individual spot treatments may not exceed two sq. ft. Take extreme care that the product is not introduced into the air. Do not contaminate food and food processing surfaces.

### **Application within Food Serving Areas**

For facilities where foods are served, such as dining rooms. Apply as a crack and crevice or spot treatment to selective surfaces such as baseboards, under elements of construction, and into cracks and crevices. Do not treat surfaces likely to be contacted by food. (Do not apply when facility is in operation or foods are exposed.) Food must be covered or removed in area being treated. Do not apply directly to food or allow applications to contaminate food.

**NOTE:** Application of this product in the Food Areas and/or Food Serving Areas of Food Handling Establishments other than as a spot and/or crack and crevice treatment is not permitted. Limit the use of application equipment such as the Micro-Injector® or Actisol® applicator in food areas to crack and crevice treatment only.

### **Livestock/Poultry Housing Structures and Pet Kennels**

Apply as a general surface (including directed sprays) and/or crack and crevice treatment. Make interior and exterior perimeter applications in and around the livestock, poultry, and pet housing structures. Normal cleaning of the structure must also be done along with applications of **CSI 16-145 Lambda-cyhalothrin** to effectively control the crawling and flying insect pests listed in the table.

With the exception of cattle and calves that may be present, only apply **CSI 16-145 Lambda-cyhalothrin** to livestock barns or housing structures when unoccupied by animals. Apply to floors, vertical, and overhead surfaces where crawling or listed flying insect pests are or may be present. Cover feeders, waterers, and feed carts before application to prevent contamination. Do not apply to milk rooms or feed rooms. Pay attention to animal areas including stanchions, pipes, windows and doors, and areas where insect pests hide or congregate. Exterior applications to south facing walls and foundation perimeters can help prevent interior infestations of listed flying and crawling insect pests.

For poultry houses, apply to floor area (birds grown on litter) or to walls, posts, and cage framing (birds grown in cages). Application may also be made into cracks and crevices around insulation. Reapply after each growout or sanitization procedure. Indoor control can be enhanced by making perimeter treatments around the outside of building foundations to prevent immigrating adult beetles. Apply in a uniform band 1 - 3 ft. up and 2 - 6 ft. out from foundation. Maintaining a year-round treatment program will prevent background populations from reaching problem levels.

**RESTRICTIONS:**

- DO NOT make interior applications of **CSI 16-145 Lambda-cyhalothrin** in areas where animals, except cattle and calves, are present in the facility. 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 pet housing when making applications.
- DO NOT apply directly to animals.

**Outdoor Surfaces Use**

For control of ants, bees, centipedes, cockroaches, crickets, fleas, flies, millipedes, mosquitoes, scorpions, sowbugs, stink bugs, pillbugs, spiders, termites (above ground only), ticks, wasps, and other listed perimeter arthropod pests.

Apply with either hand or power application equipment as a residual treatment to ornamental plants next to foundations of buildings and to surfaces of buildings, porches, screens, window frames, eaves, patios, garages, refuse dumps, and other similar areas where these insect pests are active.

For termites, this type of application is not intended as a substitute for soil treatment labeled termiticides or mechanical alteration to control subterranean termites, or fumigation for extensive infestation of drywood termites or other wood-infesting insects. The purpose of such applications of **CSI 16-145 Lambda-cyhalothrin** for termites is to kill workers or winged reproductive forms which may be present in treated channels at the time of treatment. Such applications are not a substitute for mechanical alteration, soil treatment or foundation treatment, but are merely a supplement. This product is not recommended as sole protection against termites. For active termite infestations, get a professional inspection.

**Perimeter Treatments**

Apply a continual band of insecticide around building foundations and around windows, doors, service line entrances, eaves, vents, and other areas to reduce the potential for entry by crawling pests. Before application, remove debris and leaf litter from next to the foundation, cut back vegetation and branches that touch the foundation, and move or rake back rocks, deep mulch, or other potential pest harborage next to the foundation. Apply the band up to 10 ft. wide around the structure (or according to state regulations governing commercial pest control) and upwards along the foundation to 3 ft. and around windows, doors, and roof overhangs. Apply as a coarse spray to thoroughly and uniformly wet the foundation and/or band area so that the insecticide will reach the soil or thatch level where pests may be 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**

| Fl. oz. (mL) of CSI 16-145 Lambda-cyhalothrin | Gals. of Water <sup>1</sup> | 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          |

<sup>1</sup>Application 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<br>Volume Gals. of<br>Solution per<br>1,000 sq. ft. | Application Rate fl.oz.<br>of CSI 16-145 Lambda-<br>cyhalothrin per 1,000<br>sq. ft. | Fl. oz. (mL) of CSI 16-145 Lambda-cyhalothrin to<br>Dilute in Water According to Spray Tank Volumes |                     |                      |
|---|--|---|---------------------|----------------------|
|   |  | 5 gallons   | 10 gallons          | 50 gallons           |
| 1 gal. per<br>1,000 sq. ft.                                     | 0.2 fl. oz. (6mL)  | 1 fl. oz. (30 mL)   | 2 fl. oz. (60 mL)   | 10 fl. oz. (300 mL)  |
|   | 0.4 fl. oz. (12 mL)  | 2 fl. oz. (60 mL)   | 4 fl. oz. (120 mL)  | 20 fl. oz. (600 mL)  |
|   | 0.8 fl. oz. (24 mL)  | 4 fl. oz. (120 mL)  | 8 fl. oz. (240 mL)  | 40 fl. oz. (1200 mL) |
| 2 gal. per<br>1,000 sq. ft.                                     | 0.2 fl. oz. (6mL)  | 0.5 fl. oz. (15 mL)   | 1 fl. oz. (30 mL)   | 5 fl. oz. (150 mL)   |
|   | 0.4 fl. oz. (12 mL)  | 1 fl. oz. (30 mL)   | 2 fl. oz. (60 mL)   | 10 fl. oz. (300 mL)  |
|   | 0.8 fl. oz. (24 mL)  | 2 fl. oz. (60 mL)   | 4 fl. oz. (120 mL)  | 20 fl. oz. (600 mL)  |
| 5 gal. per<br>1,000 sq. ft.                                     | 0.2 fl. oz. (6mL)  | 0.2 fl. oz. (6 mL)  | 0.4 fl. oz. (12 mL) | 2 fl. oz. (60 mL)    |
|   | 0.4 fl. oz. (12 mL)  | 0.4 fl. oz. (12 mL)   | 0.8 fl. oz. (24 mL) | 4 fl. oz. (120 mL)   |
|   | 0.8 fl. oz. (24 mL)  | 0.8 fl. oz. (24 mL)   | 1.6 fl. oz. (48 mL) | 8 fl. oz. (240 mL)   |

**Example calculation:** to apply the mid-rate of **CSI 16-145 Lambda-cyhalothrin** at a volume of 5 gal./1,000 sq. ft., mix 4 oz of concentrate in 50 gallons of water. The percent active ingredient in the finished **CSI 16-145 Lambda-cyhalothrin** dilution can be calculated with the following formula:

mL needed to add times 9.7% active in concentrate, divided by gal. finished dilution times 3,785 mL/gal. = % active in dilution. (Example: 4 oz. in 50 gal. is 120 mL times 9.7 equals 1,164, and 50 gal. times 3,785 is 189,250. Dividing 1,164 by 189,250 equals 0.006% active in the tank dilution.)

**NOTE:** Do not use water based sprays of **CSI 16-145 Lambda-cyhalothrin** 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 **CSI 16-145 Lambda-cyhalothrin**. **CSI 16-145 Lambda-cyhalothrin** 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 ANIMALS TO CONTACT SURFACES.**

**RESTRICTIONS:**

- DO NOT use this product with oil.
- DO NOT apply this product in any room being used as living, eating, sleeping, or recovery area by patients, the elderly, or infirm when they are in the room.
- DO NOT apply to institutions (including libraries, sports facilities, etc.,) in the immediate area when occupants are present.
- DO NOT apply to classrooms when in use.
- DO NOT apply this product to edible growing crops or stored raw agricultural commodities used for food or feed.
- DO NOT allow applications to contact water inhabited by fish, such as in aquariums and ornamental fish ponds that are located in/around structures being treated.

## LAWNS/TURFGRASS AND ORNAMENTALS

**CSI 16-145 Lambda-cyhalothrin** may be used for applications to maintain indoor or outdoor areas where turf and ornamentals are grown: residential landscaped areas and non-residential landscapes around institutional, public, commercial and industrial buildings, parks, recreational areas, and athletic fields (Including trees, shrubs, flowers, evergreens, foliage plants and groundcovers). Application rates for turf and ornamentals are lower than structural pest control rates, reflecting that treatment intervals are more frequent.

Applicators must ensure that they are certified in the necessary pesticide certification categories to allow application of **CSI 16-145 Lambda-cyhalothrin** away from structures, such as to turf and ornamental plantings. Structural pest control certification categories may limit the distance away from structures for pesticide application. Consult your state extension office or pesticide regulatory officials for further information.

**IMPORTANT:** Time application to flowering plants during periods when pollinating insects are not present, such as early morning or late evening.

### RESTRICTIONS:

- DO NOT apply this product through any type of irrigation system.
- DO NOT apply this product to edible crops.
- DO NOT apply this product by aerial application.
- Use of this pesticide adjacent to water may affect aquatic organisms. To protect these organisms, **DO NOT** apply this pesticide within 25 ft. of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries, and commercial fish farm ponds.
- DO NOT make outdoor broadcast applications to turf and ornamentals when wind speed is 15 mph or greater.
- In the state of New York, **DO NOT** apply within 100 ft. of coastal marshes or streams that drain into coastal marshes.

### Mixing Instructions

**CSI 16-145 Lambda-cyhalothrin** is to be mixed with water and may be used in all types of standard application equipment. Fill applicator tank with the desired volume of water and add **CSI 16-145 Lambda-cyhalothrin**. It is suggested that the water be 5 - 7 pH. Adjust water pH with a buffering agent if necessary. Slowly add **CSI 16-145 Lambda-cyhalothrin** to applicator tank water with maximum agitation. Close and shake or re-agitate applicator tank before use if application is interrupted. Make up only amount of treatment volume as required.

### Tank Mixing

**CSI 16-145 Lambda-cyhalothrin** may be tank mixed with other currently registered pesticides unless expressly prohibited by the product label. A small volume mixing test with the other products is recommended to ensure compatibility. If other chemicals are added to the applicator tank, add **CSI 16-145 Lambda-cyhalothrin** last. Fill tank to desired volume and continue to agitate while making applications. If mixed with EC formulations, use within 24 hours.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Follow all restrictions and precautions which appear on the labels of these products.

## INSECT CONTROL on ORNAMENTAL PLANTS

**CSI 16-145 Lambda-cyhalothrin** is for use to control the pests listed in the table below in such areas as residential landscaped areas and landscaped areas around institutional, public, commercial and industrial buildings, parks, recreational areas, and athletic fields (including trees, shrubs, flowers, evergreens, foliage plants and groundcovers).

**NOTE:** While phytotoxicity testing has been carried out on a wide range of ornamental plants under various environmental conditions, and no phytotoxicity has been observed, certain cultivars may be sensitive to the final spray solution.

It is advised to pre-spray a selection of ornamental plants and observe them for 7-10 days prior to treating large areas if local use experience is unavailable.

**RESTRICTIONS:**

- DO NOT apply more than 0.36 lbs. of the a.i. (52.4 fl. ozs. of concentrate) per acre per year.

**TANK DILUTION RATES FOR ORNAMENTAL PESTS**

| PEST  | AMOUNT OF CSI 16-145 Lambda-cyhalothrin  | APPLICATION INSTRUCTIONS   |
|---|--|--|
| Ants (Including Imported fire Ants)<br>Armyworms<br>Azalea caterpillars<br>Aphids<br>Bagworms<br>Black vine weevils (adult)<br>Boxelder bugs<br>Budworms<br>California oakworms<br>Cankerworms<br>Cockroaches<br>Crickets<br>Cutworms<br>Eastern tent caterpillars<br>Elm leaf beetles<br>European sawflies<br>Fall webworms<br>Flea beetles<br>Forest tent caterpillars<br>Gypsy moth larvae<br>Japanese beetles (adults)<br>June beetles (adults)<br>Lace bugs<br>Leaf-feeding caterpillars<br>Leafhoppers<br>Leafminers (adults)<br>Leaf rollers<br>Leaf skeletonizers<br>Midges<br>Mosquitoes<br>Oleander moth larvae | 1.5 - 5 fl. oz. per<br>100 gals.<br><br>or<br><br>44 - 148 mL per<br>100 gals. | Application to ornamentals should be started prior to the establishment of high insect pest populations.<br><br>Apply at 7-day intervals if retreatment is necessary. Limit more frequent treatment to spot treatments.<br><br>Good spray coverage is necessary to provide the most effective level of control. Addition of a spreader-sticker at labeled rates may enhance the control of insects on certain species of ornamentals having waxy, hard to wet foliage.<br><br>For spot treatments use 0.5 fl. oz. <b>CSI 16-145 Lambda-cyhalothrin</b> per 1 - 2.5 gals. of water.<br><br>Consult your state university or local Cooperative Extension Service office for specific pest control application timing in your area.<br><br><b>Scale:</b> Thoroughly cover the plant with <b>CSI 16-145 Lambda-cyhalothrin</b> spray, including trunks, stems, twigs, and foliage for control of scale insects (crawler stage).<br><br><b>Bagworm:</b> Apply <b>CSI 16-145 Lambda-cyhalothrin</b> when bagworm larvae begin to hatch. Spray directly on the larvae. Application is the most effective when the larvae are young. |

|  |  |  |
|--|--|--|
| Pillbugs<br>Pine sawflies<br>Pine shoot beetles<br>Pinetip moths<br>Plant bugs<br>Root weevils<br>Sawflies<br>Scale insects (crawlers)<br>Spiders<br>Spittlebugs<br>Stink bugs<br>Striped beetles<br>Striped oakworms<br>Thrips<br>Tip moths<br>Tussock moth larvae<br>Wasps |  |  |
| Broadmites<br>Brown softscales<br>California redscales (crawlers)<br>Clover mites<br>Mealybugs<br>Pineneedlescales (crawlers)<br>Spider mites<br>Whiteflies  | 3 - 5 fl. oz. per<br>100 gals<br><br>or<br><br>88 -148 mL per<br>100 gals. |  |

**CSI 16-145 Lambda-cyhalothrin Mixing Chart for Ornamental Insect Pest Control**

**(CSI 16-145 Lambda-cyhalothrin to add per spray tank)**

| Rate of<br>CSI 16-145 Lambda-<br>cyhalothrin | 25 Gallons | 50 Gallons | 100 Gallons | 200 Gallons | 300 Gallons |
|--|------------|------------|-------------|-------------|-------------|
| 1.5 oz. <sup>1</sup>                         | 0.4 oz.    | 0.8 oz.    | 1.5 oz.     | 3.0 oz.     | 4.5 oz.     |
| 3 oz. <sup>2</sup>                           | 0.8 oz.    | 1.5 oz.    | 3.0 oz.     | 6.0 oz.     | 9.0 oz.     |
| 5 oz. <sup>3</sup>                           | 1.3 oz.    | 2.5 oz.    | 5.0 oz.     | 10.0 oz.    | 15.0 oz.    |

<sup>1</sup> Equivalent to 3.5 mL per 1,000 sq. ft. (5 oz. per acre) when applied at 8 gal. per 1,000 sq. ft.

<sup>2</sup> Equivalent to 7 mL per 1,000 sq. ft. (10 oz. per acre) when applied at 8 gal. per 1,000 sq. ft.

<sup>3</sup> Equivalent to 9.5 mL per 1,000 sq. ft. (14 oz. per acre) when applied at 8 gal. per 1,000 sq. ft.

**LAWN/TURFGRASS INSECT PEST CONTROL**

**CSI 16-145 Lambda-cyhalothrin** is for use to control the pests listed in the table below around such areas as residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

**RESTRICTIONS:**

- KEEP CHILDREN AND PETS OFF TREATED AREAS UNTIL SPRAY HAS DRIED FOLLOWING APPLICATION.
- DO NOT apply when turfgrass is waterlogged or when soils are saturated with water (i.e. will not accept

irrigation).

- DO NOT apply more than 0.36 lbs. of a.i. (52.4 fl. oz. of concentrate) per acre per year.

#### RATES FOR LAWN AND TURFGRASS PESTS

| PEST   | AMOUNT OF CSI 16-145 Lambda-cyhalothrin*                           | APPLICATION INSTRUCTIONS   |
|--|--|--|
| Ants (Including Imported Fire Ants)<br>Armyworms<br>Centipedes<br>Chinch Bugs <sup>1</sup><br>Crickets<br>Cutworms Earwigs Fleas (adult)<br>Grasshoppers<br>Japanese beetles (adult)<br>Millipedes<br>Mites<br>Mosquitoes (adult)<br>Pillbugs<br>Sod webworms<br>Sow bugs<br>Stink Bugs<br>Ticks (including species which transmit Lyme disease) | 3.4 - 7 mL<br>per 1,000 sq. ft.<br>or<br>5 -10 fl. oz.<br>per acre | <p>Application to turf should be started prior to the establishment of high insect pest populations and significant turf damage. Make reapplications as necessary to keep pest populations under control, using higher rates as pest pressure increases.</p> <p>Apply at 7-day intervals if retreatment is necessary. More frequent treatments should be limited to spot treatments.</p> <p>For spot treatments, use 0.5 fl. oz. of <b>CSI 16-145 Lambda-cyhalothrin</b> per 1 - 2.5 gals. of water.</p> <p><b>Surface Insect Control (armyworm, cutworms, fleas, etc.):</b> Apply <b>CSI 16-145 Lambda-cyhalothrin</b> at labeled rates in 2 - 5 gals. of water per 1,000 sq. ft. The use of a spreader-sticker may be useful if high rainfall amounts are forecast, otherwise the addition of adjuvants is not necessary under normal conditions for surface insect control in turf. Delay watering or mowing for 12 - 24 hours to control surface-feeding insect pests.</p> |
| Bluegrass billbugs (adult)<br>Black turfgrass ataenius (adult)<br>Chiggers<br>Fleas (adult)<br>Grubs (suppression)<br>Hyperodes weevils (adult)<br>Mole crickets (nymphs and young adults)   | 7 ml per 1,000<br>sq. ft<br>or<br>10 fl. oz. per acre              | <p><b>Thatch Inhabiting Insect Control (chinch bugs, billbugs, etc.):</b> Apply <b>CSI 16-145 Lambda-cyhalothrin</b> at labeled rates in 2 - 10 gals. of water per 1,000 sq. ft. The use of a nonionic wetting agent, penetrant or similar adjuvant is recommended at label rates. Lightly irrigate after application with up to 1/2 inch of water to move the <b>CSI 16-145 Lambda-cyhalothrin</b> into the thatch layer. If irrigation is not available, then use high water application rates.</p> <p><b>Subsurface Insect Control (mole crickets, grubs, etc.):</b> Apply <b>CSI 16-145 Lambda-cyhalothrin</b> at labeled rates in 4 - 10 gals. of water per 1,000 sq. ft. The use of a nonionic wetting agent, penetrant or similar adjuvant is strongly recommended following label rates. Use the highest water application rates possible with</p>   |

|  |  |   |
|--|--|---|
|  |  | <p>your sprayer. Apply <b>CSI 16-145 Lambda-cyhalothrin</b> to turf wet with dew, rain or irrigation. Water-in immediately after application with ¼ - ½ inch of water.</p> <p><b>Fire Ant Control:</b> Treat individual mounds with a drench application using a watering can. Use 0.5 fl. oz. of <b>CSI 16-145 Lambda-cyhalothrin</b> per 2.5 gals. of water. Thoroughly soak each mound and a 3 ft. diameter circle around each mound. Gently apply the mixture to avoid disturbing the mound. Disturbing the mound may cause the ants to migrate and reduce the effectiveness of the treatment. Apply in early morning or late evening hours. You may make applications on a monthly basis to maintain protection of treated areas.</p> <p><b>Mosquito Control:</b> Apply as a general spray around landscape plantings, turf, and building foundations to control mosquitoes. Apply <b>CSI 16-145 Lambda-cyhalothrin</b> at labeled rates in 2 - 5 gals. of water per 1,000 sq. ft.</p> |
|--|--|---|

<sup>1</sup> Not for use on chinch bugs in New York state.

\* Example: To treat the listed turf pests at the 7 mL per 1,000 sq. ft. rate, determine the gallons of dilution per 1,000 sq. ft. needed to adequately cover the turf. At a 5 gallon per 1,000 sq. ft. dilution, take the 7 mL and divide it by the 5 (gallon) to get 1.4 mL to be added per gallon. For a 50 gallon tank, therefore, this would be 1.4 mL X 50 = 70 mL (or 2.5 oz.) in 50 gallons of water.

**CSI 16-145 Lambda-cyhalothrin Mixing Chart for Turf Insect Pest Control**

(CSI 16-145 Lambda-cyhalothrin to add per 100 gal. spray tank)

| Rate of<br>CSI 16-145 Lambda-<br>cyhalothrin | Application Rate Per 1,000 Square Feet of Turf |           |           |           |            |
|--|--|-----------|-----------|-----------|------------|
|  | 2 Gallons                                      | 4 Gallons | 6 Gallons | 8 Gallons | 10 Gallons |
| 5 oz. per acre                               | 5.7 oz.  | 2.9 oz.   | 1.9 oz.   | 1.4 oz.   | 1.2 oz.    |
| 10 oz. per acre                              | 11.5 oz.                                       | 5.7 oz.   | 3.8 oz.   | 2.9 oz.   | 2.3 oz.    |

Conversion Rate: 1 fluid ounce (fl. oz.) equals 29 milliliters (mL).



### STORAGE AND DISPOSAL

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

**STORAGE AND SPILL PROCEDURES:** Store upright at room temperature. 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.

For Containers greater 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. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. 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.

For Bulk containers: (Refillable Container) Refill this container with pesticides only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the re-filler. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or re-circulate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

### 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 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.

Actisol® is a registered trademark of Roussel-Uclaf.

Micro-Injector® is a registered trademark of Whitmire Micro-gen Research Laboratories, Inc.

Optional Marketing:

