

CYZMIC™ CS

CONTROLLED RELEASE INSECTICIDE



A NEW Wave In Pest Control™

- Slow release microencapsulated formula featuring CapVantage™ Technology
- Reduced applicator exposure
- CYZMIC™ CS may be used in food handling areas as well as animal housing, general surface (non-food/non-feed areas), crack & crevice and spot applications
- Low odor and quick knockdown with long lasting residual
- Can be reapplied at 21-day intervals for indoor applications
- Low application rates minimizes the amount of active released into the environment

CYZMIC™ CS is a capsulated suspension containing Lambda-Cyhalothrin and the innovative encapsulation technology, CapVantage™. The broad label includes applications for structural and perimeter pest control (including food handling), animal housing, turf grass and ornamentals. Phytotoxicity has not been observed on the wide range of ornamental plants tested.

The structure of the capsules is what makes CapVantage™ Technology unique. Capsule wall thickness is varied among the capsules so that the active ingredient is released at controlled intervals, providing a long lasting residual.

CYZMIC™ CS combines fast knockdown with extended residual. In tests by the University of Florida on Big Headed Ants, 100% mortality was achieved in 14 minutes, and after 4 weeks 100% mortality was still achieved in 96 minutes.

CYZMIC™ CS provides applicators with many benefits including reduced exposure to active ingredient, easy measuring, little to no odor, easy mixing with herbicides, insecticides, fungicides and liquid fertilizers, and reduced clogging of spray equipment. Can be used on porous and non-porous surfaces with little or no staining.

800-242-5562 (Phone)
281-892-2501 (Fax)
www.controlsolutionsinc.com

CSI
CONTROL
SOLUTIONS
incorporated
A Makhteshim-Agan Company

CYZMIC™ CS

Controlled Release Insecticide

With CapVantage™ Technology

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.

GROUP 3 INSECTICIDE

Active Ingredient:

Lambda-cyhalothrin¹:

[1 (S*),3 (Z)]-(±)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate 9.7%

Other Ingredients: 90.3%
Total: 100.0%

¹Synthetic pyrethroid

KEEP OUT OF REACH OF CHILDREN
CAUTION

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

First Aid	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
If on skin or clothing:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If in eyes:	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continuing rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed:	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
If inhaled:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.	

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Environmental Hazards

This product is extremely toxic to fish and other aquatic organisms. Do not contaminate water when cleaning equipment or disposing of equipment wash water. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Apply this product only as specified on this label. When making applications, care should be used to avoid household pets, particularly fish and reptile pets.

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 visiting the treatment area.

Physical And Chemical Hazards

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

General Information

CYZMIC CS is a unique formulation utilizing CapVantage™ 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.

PERIMETER PEST CONTROL

CYZMIC CS 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 include, 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 **CYZMIC CS** can be reapplied at 21-day intervals if necessary.

Mixing Instructions

Dilute **CYZMIC CS** 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 (non-food/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 **CYZMIC CS**. Close and shake before use in order to ensure proper mixing. Shake or reagate applicator tank before use if application is interrupted. Mix only amount of treatment volume as required. **CYZMIC CS** may be applied by using a paintbrush or other porous applicator attached to a handle as a general surface treatment

Tank Mixing

CYZMIC CS 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, **CYZMIC CS** should be added last. If mixed with EC formulations, use within 24 hours. Fill tank to desired volume and continue to agitate while making applications.

CYZMIC CS may be tank mixed with an Insect Growth Regulator (IGR). Observe all restrictions and precautions which appear on the labels of these products.

Foam Applications

CYZMIC CS 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 arthropods harboring in walls, under slabs, or in other void areas.

RATES FOR PESTS (HAND APPLICATION EQUIPMENT)

Pests	Dilution Rate (Concentration of AI)	SPECIFIC USE DIRECTIONS
Ants Bedbugs (adult) Bees Boxelder Bugs Carpenter Bees Carpet Beetles Centipedes Cigarette Beetles Clover Mites Cockroaches ¹ Confused Flour Beetles Crickets Earwigs Firebrats Fleas ² Flies Lesser Grain Borers Millipedes Mosquitoes Red Flour Beetles Rice Weevils Saw-toothed Grain Beetles Silverfish Sowbugs Spiders Ticks Wasps	0.2 fl. oz. (6 mL) to 0.4 fl. oz. (12 mL) per gallon of water (0.015-0.03% AI)	Ants: 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 Outdoor Surfaces Use. Bedbugs: 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. 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. Cockroaches, Crickets, Earwigs, Firebrats, Silverfish, and Spiders: 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; also see Outdoor Surfaces Use. Bees, Flies, Mosquitoes, and Wasps: 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 CYZMIC CS does not provide instant knockdown.
Cockroaches ¹ Crickets ⁶ Flies ⁵ Litter Beetles ³ (adults/ immature stages such as Darkling, Hide, and Carrion) Mosquitoes ⁴ Pillbugs Scorpions Spiders ⁶ Spider Mites (Two-spotted, Spruce) Ticks ⁶	0.8 fl. oz. (24 mL) per gallon of water (0.06% AI)	

(continued)

RATES FOR PESTS (HAND APPLICATION EQUIPMENT (continued))

Pests	Dilution Rate (Concentration of AI)	SPECIFIC USE DIRECTIONS
		<p>Protective equipment for the applicator 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>Carpenter Bees: 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>Pantry Pests (i.e., Carpet beetle, Cigarette beetle, Confused flour beetle, Lesser grain borer, Red flour beetle, Rice weevil, and Saw-toothed grain beetle): 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. Any foodstuff accidentally contaminated with treatment solution should be destroyed.</p> <p>Boxelder Bugs, Centipedes, Millipedes, Pillbugs, and Sowbugs: 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 Outdoor Surfaces Use.</p> <p>Fleas and Ticks: 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. 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 Outdoor Surfaces Use.</p> <p>Cluster Flies: 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>Litter Beetles (Darkling, Hide, and Carrion Beetles) and Flies In Animal Housing (Such As Poultry Houses): To control adult litter beetles, apply CYZMIC CS 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 Livestock/Poultry Housing Structures and Pet Kennels.</p>
Termites (above ground only)	0.2 fl. oz. (6mL) to 0.4 fl. Oz. (12 mL) per gallon of water (0.015-0.03% AI)	CYZMIC CS 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.

Application Within Food Handling Establishments
For places other than private residences in which exposed food is held, processed, prepared, or served including, but not limited to, 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. Food contact surfaces and equipment should be cleaned with an effective cleaning compound and rinsed 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. Avoid contamination of 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. Avoid treating 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. Use of application equipment such as the Micro-Injector or Actisol applicator in food areas should be limited 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 **CYZMIC CS** 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 **CYZMIC CS** to livestock barns or housing structures when unoccupied by animals. Apply to floors, vertical, and overhead surfaces where crawling or flying insect pests are or may be present. Feeders, waterers, and feed carts should be covered 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 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 should 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 applications of **CYZMIC CS** 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.

Outdoor Surfaces Use

For control of ants, bees, centipedes, cockroaches, crickets, fleas, flies, millipedes, mosquitoes, scorpions, sowbugs, pillbugs, spiders, termites* (above ground only), ticks, wasps, and other similar 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. Remove all exposed food and cooking utensils. Cover all food handling surfaces or wash thoroughly after treatment and before use. Do not use on edible crops.

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

Application Rate: Fl. oz. (mL) of CYZMIC CS	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.

¹ 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 Volume Gals. of Solution per 1,000 sq. ft.	Application Rate Fl. oz. (mL) of CYZMIC CS per 1,000 sq. ft.	Fl. oz. (mL) of CYZMIC CS to Dilute in Water According to Spray Tank Volumes		
		5 gals.	10 gals.	50 gals.
1 gal. per 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 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 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 **CYZMIC CS** at a volume of 5 gal./1000 sq. ft., mix 4 oz of concentrate in 50 gallons of water. The percent active ingredient in the finished **CYZMIC CS** dilution can be calculated with the following formula:

mL needed to add times 9.7% active in concentrate, divided by gal. finished dilution times 3785 mL/gal. = % active in dilution. (Example: 4 oz. in 50 gal. is 120 mL times 9.7 equals 1164, and 50 gal. times 3785 is 189250. Dividing 1164 by 189250 equals 0.006% active in the tank dilution.)

NOTE: Do not use water based sprays of **CYZMIC CS** 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 **CYZMIC CS**.

CYZMIC CS 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.

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

CYZMIC CS may be used for applications to maintain indoor or outdoor areas where turf and ornamentals are grown such as 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 **CYZMIC CS** 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

CYZMIC CS 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 **CYZMIC CS**. It is suggested that the water be 5 - 7 pH. Adjust water pH with a buffering agent if necessary. Slowly add **CYZMIC CS** to applicator tank water with maximum agitation. Close and shake or reagitator applicator tank before use if application is interrupted. Make up only amount of treatment volume as required.

Tank Mixing

CYZMIC CS 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, **CYZMIC CS** should be added last. Fill tank to desired volume and continue to agitate while making applications. If mixed with EC formulations, use within 24 hours.

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

INSECT CONTROL on ORNAMENTAL PLANTS

CYZMIC CS 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 prespray 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 CYZMIC CS	Application Instructions
Ants (Including Imported fire Ants) Armyworms Azalea caterpillars Aphids Bagworms Black vine weevils (adult) Boxelder bugs Budworms California oakworms Cankerworms Cockroaches Crickets Cutworms	1.5 - 5 fl. oz. per 100 gals. or 44 - 148 mL per 100 gals.	Application to ornamentals should be started prior to the establishment of high insect pest populations. Apply at 7-day intervals if retreatment is necessary. Limit more frequent treatment to spot treatments. Good spray coverage is necessary to provide the most effective level of control. Addition of a spreader-sticker at recommended rates may enhance the control of insects on certain species of ornamentals having waxy, hard to wet foliage. For spot treatments use 0.5 fl. oz. CYZMIC CS per 1 - 2.5 gals. of water.

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TANK DILUTION RATES FOR ORNAMENTAL PESTS (continued)

Pest	Amount Of CYZMIC CS	Application Instructions
Eastern tent caterpillars Elm leaf beetles European sawflies Fall webworms Flea beetles Forest tent caterpillars Gypsy moth larvae Japanese beetles (adults) June beetles (adults) Lace bugs Leaf-feeding caterpillars Leafhoppers Leafminers (adults) Leaf rollers/Leaf skeletonizers Midges Mosquitoes Oleander moth larvae Pillbugs Pine sawflies Pine shoot beetles Pinetip moths Plant bugs Root weevils Sawflies Scale insects (crawlers) Spiders Spittlebugs Striped beetles Striped oakworms Thrips Tip moths Tussock moth larvae, Wasps		Consult your state university or local Cooperative Extension Service office for specific pest control application timing in your area. Scale: Thoroughly cover the plant with CYZMIC CS spray, including trunks, stems, twigs, and foliage for control of scale insects (crawler stage). Bagworm: Apply CYZMIC CS when bagworm larvae begin to hatch. Spray directly on the larvae. Application is the most effective when the larvae are young.
Broadmites Brown softscales California redscales (crawlers) Clover mites Mealybugs Pineneedlescales (crawlers) Spider mites Whiteflies	3 - 5 fl. oz. per 100 gals. or 88 - 148 mL per 100 gals.	

CYZMIC CS Mixing Chart for Ornamental Insect Pest Control

(CYZMIC CS to add per spray tank)

Rate of CYZMIC CS	25 Gals.	50 Gals.	100 Gals.	200 Gals.	300 Gals.
1.5 oz. ¹	0.4 oz.	0.8 oz.	1.5 oz.	3.0 oz.	4.5 oz.
3 oz. ²	0.8 oz.	1.5 oz.	3.0 oz.	6.0 oz.	9.0 oz.
5 oz. ³	1.3 oz.	2.5 oz.	5.0 oz.	10.0 oz.	15.0 oz.

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

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

³ 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

CYZMIC CS 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 CYZMIC CS*	Application Instructions
Ants (Including Imported Fire Ants) Armyworms Centipedes Chinch Bugs ¹ Crickets Cutworms Earwigs Fleas (adult) Grasshoppers Japanese beetles (adult) Millipedes Mites Mosquitoes (adult) Pillbugs Sod webworms Sow bugs Ticks (including species which transmit Lyme disease)	3.4 - 7 mL per 1,000 sq. ft. or 5 - 10 fl. oz. per acre	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. Apply at 7-day intervals if retreatment is necessary. More frequent treatments should be limited to spot treatments. For spot treatments , use 0.5 fl. oz. of CYZMIC CS per 1 - 2.5 gals. of water. Surface Insect Control (armyworm, cutworms, fleas, etc.): Apply CYZMIC CS at recommended 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. Thatch Inhabiting Insect Control (chinch bugs, billbugs, etc.): Apply CYZMIC CS at recommended rates in 2 - 10 gals. of water per 1,000 sq. ft. The use of a nonionic wetting agent, penetrant or similar

(continued)

TANK DILUTION RATES FOR ORNAMENTAL PESTS (continued)

Pest	Amount Of CYZMIC CS*	Application Instructions
Bluegrass billbugs (adult) Black turfgrass ateniensis (adult) Chiggers Fleas (adult) Grubs (suppression) Hyperodes weevils (adult) Mole crickets (nymphs and young adults)	7 ML per 1,000 sq. ft or 10 fl. oz. per acre	adjuvant is recommended at label rates. Lightly irrigate after application with up to 1/2 inch of water to move the CYZMIC CS into the thatch layer. If irrigation is not available, then use high water application rates. Subsurface Insect Control (mole crickets, grubs, etc.): Apply CYZMIC CS at recommended 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 your sprayer. Apply CYZMIC CS to turf wet with dew, rain or irrigation. Water-in immediately after application with ¼ - ½ inch of water. Fire Ant Control: Treat individual mounds with a drench application using a watering can. Use 0.5 fl. oz. of CYZMIC CS 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. Mosquito Control: Apply as a general spray around landscape plantings, turf, and building foundations to control mosquitoes. Apply CYZMIC CS at recommended rates in 2 - 5 gals. of water per 1,000 sq. ft.

¹ 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.

CYZMIC CS Mixing Chart for Turf Insect Pest Control

(Cyzmic CS to add per 100 gal. spray tank)

Rate of CYZMIC CS	Application Rate Per 1,000 Square Feet of Turf				
	2 gal.	4 gal.	6 gal.	8 gal.	10 gal.
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.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of CONTROL SOLUTIONS, INC. or Seller. To the extent permitted by applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold CONTROL SOLUTIONS, INC. and Seller harmless for any claims relating to such factors.

CONTROL SOLUTIONS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or CONTROL SOLUTIONS, INC., and Buyer and User assume the risk of any such use. CONTROL SOLUTIONS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE. To the fullest extent permitted by law, Control Solutions, Inc. or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT PERMITTED BY APPLICABLE

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CONTROL SOLUTIONS, INC. and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and of Liability, which may not be modified except by written agreement signed by a duly authorized representative of CONTROL SOLUTIONS, INC.

Control Solutions, Inc.
 5903 Genoa-Red Bluff Road
 Pasadena, TX 77507-1041
 EPA Reg. No. 53883-261
 EPA Est. No. 84575-AUT-1

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

MATERIAL SAFETY DATA SHEET

Section 1 – Product Identification

Product Name: Cyzmic™ CS
Manufacturer: Control Solutions Inc.
5903 Genoa- Red Bluff
Pasadena, TX 77507
281-892-2500

EPA Registration #: 53883-261
EPA Establishment #: 53883-TX-002

Section 2 – Chemical Composition

Material	CAS #	% by Weight	OSHA PEL/ACGIH TLV
Lambda Cyhalothrin	91465-08-6	9.7	None Established
Inert Ingredients	N/A	90.3	None Established

Section 3 – Hazard Identification

Symptoms of Toxicity: Lambda cyhalothrin may induce neurotoxic effects including staggering gait, muscle tremors and convulsions.

Flammability: This product is not flammable.

Reactivity: Stable under normal conditions.

Section 4 – First Aid

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call SafetyCall Int'l (866) 897-8050 for emergency medical information.

- Dermal Contact:**
- Take off contaminated clothing.
 - Rinse skin immediately with plenty of water for 15-20 minutes.
 - Call a poison control center or doctor for treatment advice.
- Eye Contact:**
- Hold eye open and rinse slowly and gently with water 15-20 minutes.
 - Remove contact lenses, if present, after the first 5 minutes, then continuing rinsing eye.
 - Call a poison control center or doctor for treatment advice.
- Ingestion:**
- Call a poison control center or doctor immediately for treatment advice.
 - Do not give any liquid to the person.
 - Do not induce vomiting unless told to do so by the poison control center or doctor.
 - Do not give anything by mouth to an unconscious person.
- Inhalation:**
- Move person to fresh air.
 - If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
 - Call a poison control center or doctor for further treatment advice.

Section 5 – Fire and Explosion Hazards

- Flash Point:** Not applicable
- Extinguishing Media:** Water fog, foam, carbon dioxide, dry chemical, halogenated agents.
- Special Firefighting Procedures:** Self-contained breathing apparatus with full-face piece and protective clothing.
- Unusual Fire Hazards:** Possible toxic smoke, vapors, fallout and runoff water can result from fires depending on extent of combustion and presence of other combustible materials. Contaminated buildings, areas, and equipment must be properly decontaminated before reuse.
- Reactivity/Stability:** Stable under normal conditions. Combustion products include carbon dioxide, carbon monoxide, nitrogen oxides, ammonia, cyanuric acid, biuret, halogen, halogen acids, and trace amounts of carbonyl halide. Hazardous polymerization will not occur.

Section 6 – Spill/Release Procedures

- Absorbent:** Clay granules, sawdust, or vermiculite. Apply directly to spill and sweep into suitable container. Rinse with water and absorb in similar manner.
- Containment:** Do not discharge into municipal wastewater or public storm drains. Eliminate runoff as much as possible.
- Waste Disposal:** Dispose of waste and contaminated material through proper channels. An authorized hazardous waste disposal facility (TSDF) is recommended. Discarded product is not a hazardous waste under RCRA, 40 CFR 261.
- Reporting:** Report all major spills and uncontrolled releases to proper local, state, and federal agencies.
- Emergency Contact #:** Chemtrec: 1-800-424-9300

Section 7 – Storage and Handling Instructions

- Storage and Spill Procedures:** Do not contaminate water, food or feed by storage or disposal. 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.
- 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.
- 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.

Section 8 – Protective Equipment/Engineering Controls

Eye Protection:	Eye contact with the material should be avoided through the use of chemical safety glasses, goggles or a face-shield, selected in regard to exposure potential.
Respiratory Protection:	Not normally needed for this product when diluted in water for end-use application. When needed, use MSHA/NIOSH approved respirator for pesticides.
Dermal Protection:	Chemical resistant gloves, long pants, long-sleeved shirt. Remove and wash contaminated clothing before reuse. Wash separately from other laundry.
Engineering Controls:	Manufacturing: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. End use: Generally not required when treatment dilution is used but local exhaust or ventilation may be used if necessary.
Other Precautions:	An adequate supply of clean, potable water should be available to allow thorough flushing of skin and eyes in event of contact with this compound.

Section 9 – Physical Data

Odor:	Mild odor	Melting Point:	Not Available
Physical State:	Viscous liquid	Flash Point:	Will not flash
Color:	White	Specific Gravity:	1.05 (g/ml)
Bulk Density:	See specific gravity	pH:	6.3
Vapor Pressure:	Not Available	Water Solubility:	Disperses
Viscosity:	At τ 10 (10) [Pa·s] (20 °C): 0.25 η	Refractive Index:	Not Available

Section 10 – Toxicity

EPA Toxicity Category:	III, Caution	Oral LD50:	>550 mg/kg
Skin Contact:	Moderately irritating	Dermal LD50:	>5000 mg/kg
Eye Contact:	Minimally irritation	Inhalation LC50:	>2.04 mg/1
NFPA Classification:	Fire – 0 Reactivity – 0	Health – 2 Special – none	
Other Comments:	Avoid cross contamination. Always wash hands thoroughly after handling pesticides and before eating, drinking, or smoking.		

Section 11 – Ecological Data

Aquatic:	Lambda cyhalothrin: LC ₅₀ = 0.36 ug/L (rainbow trout)
Avian:	Lambda cyhalothrin: LD ₅₀ = 3950 mg/kg (mallard duck)
Bioaccumulation:	Has potential to bioaccumulate.
Summary:	This material is toxic to fish. Do not contaminate waterways by cleaning of equipment or by disposal of wastes. Untreated effluent should not be discharged where it will drain into lakes, streams, or ponds.

Section 12 – Transportation

DOT:	Not regulated
IATA:	Not regulated
IMDG:	Environmentally hazardous substance, liquid, n.o.s. (9.7% lambda cyhalothrin), UN3082, Class 9, PG III, marine pollutant
Federal Motor Carrier Classification:	Insecticides, liquid/dry, NOIBN

Section 13 – Regulatory

Section 302/TPQ: (emergency planning)	Contains no components listed under section 302.
Section 304/EHS RQ: (release notification)	Contains no components listed under section 304.
CERCLA RQ: (release notification)	Not regulated under CERCLA.
Section 311/Tier II: (MSDS submission)	Health hazard: Acute
Section 313/TRI Chemicals:	None
RCRA Haz-Waste Code(s):	None
CAA TQ: (air emissions)	None

Section 14 – Other

NFPA and HMIS ratings assigned to this product are based on the hazards of its ingredient (s). Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product MSDS.

The information provided on this Material Safety Data Sheet is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Control Solutions, Inc. The data on this sheet relates only to the specific material designated herein. Control Solutions, Inc. assumes no legal responsibility for the accuracy or completeness of this data, nor for use or reliance upon this data.

SPECIMEN



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Pasadena, TX 77507