



**Controlled Release Insecticide**

For use in, on and around buildings and structures for the control of listed pest, including on lawns, ornamental trees and shrubs around residential, institutional, public, commercial, agricultural and industrial buildings; and parks, recreational areas and athletic fields.

**Active Ingredient:**

Lambda-cyhalothrin <sup>1</sup> [1 α(S*),3 α(Z)]-(±)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)- 2,2-dimethylcyclopropanecarboxylate. ....	9.7%
<b>Other Ingredients:</b> .....	90.3%
Total	100.0%
<sup>1</sup> Synthetic pyrethroid	

EPA Reg. No. 74530-53-5481

EPA Est. No. xxxx-xx-xxx

**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.)

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

Net Contents: -----

<b>FIRST AID</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>If on Skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Do not give any liquid to the person.</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>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:**

For Medical Emergencies phone:.....1-888-681-4261  
For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC® .....1-800-424-9300  
For Product Use Information phone: AMVAC® .....1-888-462-6822

Manufactured for:



AMVAC Chemical Corporation  
4695 MacArthur Court, Suite 1200  
Newport Beach, CA 92660

**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. 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**

AVESTA CS is a unique formulation 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 plantscapes, ornamental gardens or parks, or on lawns or grounds.

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

1. Treatment to soil or vegetation around structures;
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 apply directly to impervious horizontal surfaces such as sidewalks, driveways, and patios except as a spot or crack-and-crevice treatment. During application, do not allow pesticide to enter or runoff into storm drains, drainage ditches, gutters or surface waters.
  - Do not water treated area to the point of run-off.
  - 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.

This product is RESTRICTED for use in New York State.

#### RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, **AVESTA CS** contains a Group 3 insecticide/acaricide. Any insect/mite population may contain individuals naturally resistant to **AVESTA CS** and other Group 3 insecticides/acaricides. The resistant individuals may dominate the insect/mite population if this group of insecticides /acaricides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of **AVESTA CS** or other Group 3 insecticides/acaricides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides/acaricides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.

- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

For further information or to report suspected resistance contact (company representatives) at (toll free number) or at (Internet site).

## PERIMETER PEST CONTROL

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

### Mixing Instructions

Dilute **AVESTA 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/non-feed areas only) treatments. Application equipment that delivers low volume treatments, such as the Micro-Injector<sup>®</sup> or Actisol<sup>®</sup> 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 **AVESTA CS**. Close and shake before use in order to ensure proper mixing. Shake or reagitator applicator tank before use if application is interrupted. Mix only amount of treatment volume as required. **AVESTA CS** may be applied by using a paintbrush or other porous applicator attached to a handle as a general surface treatment.

### Tank Mixing

**AVESTA 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, **AVESTA 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.

**AVESTA 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

**AVESTA 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 <sup>1</sup> Confused Flour Beetles Crickets Earwigs Firebrats Fleas <sup>2</sup> 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)	<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 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. 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, and Spiders:</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; also see <b>Outdoor Surfaces Use</b></p>
Cockroaches <sup>1</sup> Crickets <sup>6</sup> Flies <sup>5</sup> Litter Beetles <sup>3</sup> (Adults/ Immature stages such as Darkling, Hide, and Carrion) Mosquitoes <sup>4</sup> Pillbugs Scorpions Spiders <sup>6</sup> Spider Mites (Two- spotted, Spruce) Ticks <sup>6</sup>	0.8 fl. oz. (24 mL) per gallon of water (0.06% AI)	<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 <b>Outdoor Surfaces Use</b>. Use caution when treating nests of stinging insects as AVESTA CS does not provide instant knockdown. 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><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</p>

		<p>larvae and bees that emerge from the wood.</p> <p><b>Pantry Pests</b> (i.e. Carpet beetle, Cigarette beetle, Confused flour beetle, Lesser grain borer, Red flour beetle, Rice weevil, and Sawtoothed 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><b>Boxelder Bugs, Centipedes, Millipedes, Pillbugs, and Sowbugs:</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. 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.</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 AVESTA 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 <b>Livestock/Poultry Housing Structures and pet Kennels.</b></p>
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Termites (above ground only)	0.2 fl. oz. (6 mL) - 0.4 fl. oz. (12 mL) per gallon of water  (0.015 - 0.03% AI)	<b>AVESTA CS</b> may be used on termites to kill workers or winged reproduction 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 termiticide, 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><sup>1</sup>For cockroaches, the recommended rate for maintenance treatments is 0.015% and for clean-out treatments is 0.03%. For control of severe infestations, use 0.06% rate.</p> <p><sup>2</sup>For outdoor use only and use 0.03% rate.</p> <p><sup>3</sup>For control of LIGHT beetle infestations, use 0.03% rate.</p> <p><sup>4</sup>For residual control, use 0.06% rate.</p> <p><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.</p> <p><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 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 **AVESTA 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 **AVESTA 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 **AVESTA 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**

<b>Application Rate: Fl. oz. (mL) of AVESTA CS</b>	<b>Gals. of Water<sup>1</sup></b>	<b>Area of Coverage (sq. ft.)</b>
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 Volume Gals. of Solution per 1,000 sq. ft.	Application Rate Fl. oz (mL) of AVESTA CS per 1,000 sq. ft.	Fl. oz (mL) of AVESTA 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. (6 mL) 0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL)	1 fl. oz. (30 mL) 2 fl. oz. (60 mL) 4 fl. oz. (120 mL)	2 fl. oz. (60 mL) 4 fl. oz. (120 mL) 8 fl. oz. (240 mL)	10 fl. oz. (300 mL) 20 fl. oz. (600 mL) 40 fl. oz. (1200 mL)
2 gals. per 1,000 sq. ft.	0.2 fl. oz. (6 mL) 0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL)	0.5 fl. oz. (15 mL) 1 fl. oz. (30 mL) 2 fl. oz. (60 mL)	1 fl. oz. (30 mL) 2 fl. oz. (60 mL) 4 fl. oz. (120 mL)	5 fl. oz. (150 mL) 10 fl. oz. (300 mL) 20 fl. oz. (600 mL)
5 gals. per 1,000 sq. ft.	0.2 fl. oz. (6 mL) 0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL)	0.2 fl. oz. (6 mL) 0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL)	0.4 fl. oz. (12 mL) 0.8 fl. oz. (24 mL) 1.6 fl. oz. (48 mL)	2 fl. oz. (60 mL) 4 fl. oz. (120 mL) 8 fl. oz. (240 mL)

**Example calculation:** To apply the mid-rate of AVESTA CS at a volume of 5 gals./1,000 sq. ft., mix 4 oz. of concentrate in 50 gallons of water. The percent active ingredient in the finished AVESTA 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 gals. is 120 mL times 9.7 equals 1164, and 50 gals. times 3785 is 189250. Dividing 1164 by 189250 equals 0.006% active in the tank dilution).

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

**AVESTA 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 **AVESTA 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**

**AVESTA 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 **AVESTA CS**. It is suggested that the water be 5 - 7 pH. Adjust water pH with a buffering agent if necessary. Slowly add **AVESTA 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**

**AVESTA 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, **AVESTA 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**

**AVESTA 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. oz. of concentrate) per acre per year.

**TANK DILUTION RATES FOR ORNAMENTAL PESTS**

Pest	Amount of <b>AVESTA CS</b>	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 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 Pintip moths Plant bugs Root weevils Sawflies Scale insects (crawlers) Spiders Spittlebugs Striped beetles Striped oakworms Thrips Tip moths Tussock moth larvae Wasps	1.5 - 5 fl. oz. per 100 gals.  or  44 - 148 mL per 100 gals.	<p>Application to ornamentals should be started prior to the establishment of high insect pest populations.</p> <p>Apply at 7-day intervals if retreatment is necessary. Limit more frequent treatment to spot treatments.</p> <p>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.</p> <p>For spot treatments use 0.5 fl. oz. <b>AVESTA CS</b> per 1 - 2.5 gals. of water.</p> <p>Consult your state university or local Cooperative Extension Service office for specific pest control application timing in your area.</p> <p><b>Scale:</b> Thoroughly cover the plant with <b>AVESTA CS</b> spray, including trunks, stems, twigs, and foliage for control of scale insects (crawler stage).</p> <p><b>Bagworm:</b> Apply <b>AVESTA CS</b> when bagworm larvae begin to hatch. Spray directly on the larvae. Application is the most effective when the larvae are young.</p>

Broadmites Brown softscales California redscales (crawlers) Clover mites Mealybugs Pine needle scales (crawlers) Spider mites Whiteflies	3 - 5 fl. oz per 100 gals. or 88 - 148 mL per 100 gals.	
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**AVESTA CS Mixing Chart for Ornamental Insect Pest Control**  
(AVESTA CS to add per spray tank)

Rate of AVESTA CS	25 Gals.	50 Gals.	100 Gals.	200 Gals.	300 Gals.
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 gals. 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 gals. 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 gals. per 1,000 sq. ft.

**LAWN/TURFGRASS INSECT PEST CONTROL**

AVESTA 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 AVESTA CS*	Application Instructions
Ants (including Imported Fire Ants) Armyworms Centipedes Chinch Bugs Crickets Cutworms Earwigs Fleas (adult) Grasshoppers Japanese beetles (adults) Millipedes Mites 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 <b>spot treatments</b> , use 0.5 fl. oz. of AVESTA CS per 1 - 2.5 gals. of water.  <b>Surface Insect Control (armyworm, cutworms, fleas, etc.):</b> Apply AVESTA CS at recommended rates in 2 - 5 gals. of water per 1,000 sq. ft. The use of a spreader-

<p>Bluegrass billbugs (adult)  Black turfgrass ataenius (adult)  Chiggers  Fleas (adult)  Grubs (suppression)  Hyperodes weevils (adult)  Mole crickets (nymphs and young adults)</p>	<p>7 mL per 1,000 sq. ft.  or  10 fl. oz. per acre</p>	<p>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> <p><b>Thatch Inhabiting Insect Control (chinch bugs, billbugs, etc.):</b> Apply <b>AVESTA CS</b> at recommended 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>AVESTA CS</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>AVESTA CS</b> 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 <b>AVESTA CS</b> to turf wet with dew, rain or irrigation. Water-in immediately after application with 1/4 - 1/2 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>AVESTA CS</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>AVESTA CS</b> at recommended rates in 2 - 5 gals. of water per 1,000 sq. ft.</p>
<p>*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 water.</p>		

**AVESTA CS Mixing Chart for Turf Insect Pest Control**  
**(AVESTA CS to add per 100 gals. spray tank)**

	Application Rate Per 1,000 Square Feet of Turf				
	2 gals.	4 gals.	6 gals.	8 gals.	10 gals.
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:**

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.

**LIMITATION OF WARRANTY AND LIABILITY**

The manufacturer warrants (a) that this product conforms to the chemical description on the label and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. This warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable.

**THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.**

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty, which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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SPECIMEN

# Tirade<sup>TM</sup>

## 1% DUST

### SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)

#### 1. IDENTIFICATION

**PRODUCT NAME:** Tirade 1% Dust  
**DESCRIPTION:** A Solid Insecticide  
**EPA Reg. No.:** 91234-293  
**COMPANY IDENTIFICATION:** Atticus, LLC  
940 NW Cary Parkway, Suite 200  
Cary, NC 27513

#### 2. HAZARD IDENTIFICATION

##### WARNING

Harmful if swallowed or inhaled (H302+H332)  
Causes eye irritation (H320)  
May cause damage to organs (H371)  
May cause damage to organs through prolonged or repeated exposure (H373)  
Suspected of damaging fertility or the unborn child (H361)  
Very toxic to aquatic life with long lasting effects. (H400+H410)



##### HAZARD CLASSIFICATION

###### Health Hazards

Acute toxicity, oral 4  
Acute toxicity, inhalation 4  
Serious eye damage/irritation 2B  
Specific target organ toxicity, single exposure 2  
Specific target organ toxicity, repeated exposure 2  
Reproductive toxicity 2

###### Physical Hazards

None -

###### Environmental Hazards

Hazardous to the aquatic environment, acute 1  
Hazardous to the aquatic environment, chronic 1

#### HAZARDS NOT REQUIRING CLASSIFICATION

No specific antidote is available. Treat the patient symptomatically.

#### PRECAUTIONARY STATEMENTS

Wear protective clothing as described in Section 8 of this document. (P260)  
Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust. Use only outdoors or in a well-ventilated area. (P264+P270+P260+P271)  
**IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Get medical help. (P304+P340+P317)  
**IF SWALLOWED:** Get emergency medical help immediately. Specific treatment (See Section 4 for additional medical information). Rinse mouth. (P301+P316+P321+P330)

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help. (P305+P351+P338+P337+P317)

**IF exposed or concerned:** Get emergency medical help immediately. (P308+P316)

Avoid release to the environment not in accordance with the product label. Collect spillage. (P273+P391)

Store locked up. (P405)

Dispose of contents / container using instructions in the product label and in accordance with local / Federal regulations. (P501)

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
Cyfluthrin	Cyclopropanecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-, cyano(4-fluoro-3-phenoxyphenyl)methyl ester	68359-37-5	1.0%

**NOTE:** Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.



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## 4. FIRST AID MEASURES

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 at 1-844-685-9173 for emergency medical treatment information. For Chemical Emergency: Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless told to do so by a poison control center or doctor. DO NOT give anything by mouth to an unconscious person.

**IF INHALED:** 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.

**Note to Physician:** No specific antidote is available. Treat the patient symptomatically.

**SYMPTOMS OF POISONING:** In case of poisoning, call physician or poison Control Center immediately. Have the patient lay down and keep quiet.

## 5. FIREFIGHTING MEASURES

**Flash Point:** Not available

**Flammability Limits:** Not determined

**Fire and Explosion Hazards:** Dangerous gases are evolved in the event of a fire.

**Extinguishing Medium:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Fire Fighting Equipment:** Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

**Fire Fighting Instructions:** Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

**Hazardous Combustion Products:** Dangerous gases are evolved in the event of a fire.

**NFPA Ratings:** Health – 2 / Flammability – 1 / Reactivity – 0

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined area. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

**Environmental Precautions:** Contain spillage and minimize spread. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Keep out of drains, sewers, ditches and water ways. Do NOT contaminate water when disposing of rinse waters.

**Spill Cleanup:** Avoid creating dust during cleanup. Sweep, scoop or shovel spilled material and place into suitable closed containers for reuse or disposal. After decontamination, spill area can be washed with water. Collect washwater for approved disposal. Place leaking containers in oversize leakproof drums for transport.

## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing dust. Keep out of reach of children, DO NOT contaminate feed or food.

**Storage:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Components	CAS No.	Control parameters	Update	Basis
Cyfluthrin	68359-37-5	0.01 mg/m <sup>3</sup> (TWA)		OES BCS*
Cyfluthrin (Particulate.)	68359-37-5	5 µg/m <sup>3</sup> (AN ESL)	02 2013	TX ESL
Cyfluthrin (Particulate.)	68359-37-5	50 µg/m <sup>3</sup> (ST ESL)	02 2013	TX ESL

\*OES: "Occupational Exposure Standard"

**Engineering Controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

**Protective Clothing:** Applicators and other handlers must wear long-sleeved shirt, pants, and shoes plus socks.

**General:** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	white powder
<b>Odor:</b>	strong bitter
<b>Melting/freezing point:</b>	not available
<b>Boiling point/Boiling range:</b>	not available
<b>Flammability:</b>	not available
<b>Flammability limits (upper/lower):</b>	not available
<b>Flash point (cc):</b>	not available
<b>Auto-ignition temperature:</b>	not available
<b>Decomposition temperature:</b>	ca. 500°C
<b>pH:</b>	6.83
<b>Viscosity:</b>	not available
<b>Solubility:</b>	not available
<b>Partition coefficient:</b>	not available
<b>Vapor pressure:</b>	not available
<b>Bulk density:</b>	34.9 lbs/cu. ft.
<b>Tap Density:</b>	0.559 g/cm <sup>3</sup> (34.9 lbs. ft <sup>3</sup> )
<b>Relative vapor density:</b>	not available
<b>Particle characteristics:</b>	not available



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## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Heat, flames and sparks. Exposure to moisture.

**CHEMICAL STABILITY:** Stable under recommended storage conditions.

**INCOMPATIBILITY WITH OTHER MATERIALS:** No data available.

**HAZARDOUS DECOMPOSITION PRODUCTS:** No decomposition products expected under normal conditions of use.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

Information presented below is from testing done on a substantially similar product:

**ORAL TOXICITY (rat LD<sub>50</sub>):** 1,733-3,084 mg/kg

**DERMAL TOXICITY (rat LD<sub>50</sub>):** > 2,000 mg/kg

**INHALATION TOXICITY (rat LC<sub>50</sub>):** > 1.18 mg/L (4-hour) (highest achievable conc.; no deaths)

**EYE IRRITATION:** Mild eye irritation (Rabbit)

**SKIN IRRITATION:** Slight irritation (Rabbit)

**SKIN SENSITIZATION:** Non-sensitizing (Guinea pig)

### CARCINOGENICITY:

**EPA:** Not likely to be carcinogenic to humans (cyfluthrin)

**ACGIH:** Not Listed                      **NTP:** Not Listed

**IARC:** Not Listed                      **OSHA:** Not Listed

### SPECIFIC TARGET ORGAN TOXICITY-SINGLE OR REPEATED

**EXPOSURE:** Neurotoxic effects were seen in both general animal toxicology studies and studies specially designed to measure neurotoxicity. Neurotoxic effects were generally the most sensitive effects for cyfluthrin, as seen in all species, routes, and exposure durations tested.

**MUTAGENIC TOXICITY:** No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

**DEVELOPMENTAL / REPRODUCTIVE TOXICITY:** Developmental effects have been observed in some animal studies.

## 12. ECOLOGICAL INFORMATION

This pesticide is highly toxic to fish and aquatic invertebrates. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds.

The following information is for the active ingredient, Cyfluthrin:

### AQUATIC TOXICITY

Rainbow trout (LC<sub>50</sub> 96-hour): 0.000068 mg/L; (NOAEC): 0.000010 mg/L

Eastern oyster (96-hour EC<sub>50</sub>): 0.00269 mg/L

Daphnia (48-hour LC<sub>50</sub>): 0.000025 mg/L; (NOAEC): 0.0000074 mg/L

Green algae (96-hour EC<sub>50</sub>): > 0.181 mg/L

### AVIAN TOXICITY

Bobwhite quail (Acute Oral LD<sub>50</sub>): >5,000 mg/kg-bw

### TERRESTRIAL INVERTEBRATES

Honey bee (LD<sub>50</sub>): 0.037µg/bee

### MOBILITY IN SOIL / BIODEGRADABILITY

Cyfluthrin is classified as an immobile compound in soils. Not rapidly biodegradable.

## 13. DISPOSAL CONSIDERATIONS

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Non-refillable containers. See container labeling for complete disposal instructions.

## 14. TRANSPORT INFORMATION

### US-DOT:

Not regulated

### IMDG:

**Containers ≤ 1.3 gal. (5 L) in strong out packaging:**

Not regulated

**Containers > 1.3 gal. (5 L) or containers not in strong outer packaging:**

Shipped internationally by vessel: UN3077, Environmentally hazardous substance, solid, N.O.S. (contains cyfluthrin), 9, PG III, Marine Pollutant

### IATA:

**Containers > 1.3 gal. (5 L) or containers not in strong outer packaging:**

Shipments by air: UN3077, Environmentally hazardous substance, solid, N.O.S. (contains cyfluthrin), 9, PG III, Marine Pollutant

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.



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## 15. REGULATORY INFORMATION

### FIFRA –

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Causes moderate eye irritation. Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing dust. Keep out of reach of children. DO NOT contaminate feed or food.

##### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and other aquatic organisms.

##### PHYSICAL OR CHEMICAL HAZARD

Do not mix or allow to come in contact with any oxidizing agent. Hazardous chemical reaction may occur.

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

### SARA Title III – Section 302 Extremely Hazardous Substances

Not listed

### SARA Title III – Section 311/312 Hazard Categories

Immediate (Acute), Delayed (Chronic)

### SARA Title III – Section 312 Threshold Planning Quantity

The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

### SARA Title III – Section 313 Reportable Ingredients

Cyfluthrin (CAS No. 68359-37-5): 1.0%

### CERCLA Reportable Quantity (RQ) –

Not listed

### CALIFORNIA PROP 65 STATUS –

This product does not contain any chemical known to the State of California to cause cancer or other reproductive harm.

### CANADA –

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## 16. OTHER INFORMATION

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

To the extent consistent with applicable law, neither Atticus, LLC nor Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ATTICUS, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ATTICUS, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

SDS Version: 1.1

Effective Date: 09/21/2023



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