



VECTOR RESOURCE GUIDE

MOSQUITO MANAGEMENT COVERED

At Central Life Sciences, insect growth regulators (IGRs) have always played a key role in our highly successful and proven line of mosquito management products. Our founders developed the molecule (S)-methoprene, the original IGR, and our commitment to innovation and environmental compatibility has never wavered. Mosquito Abatement Districts (MADs) and Public Health Officials (PHOs) can turn to Altosid® larvicides, Duplex™ products and FourStar® microbials each season to control mosquito larvae populations before they become breeding, biting adults.

As an industry leader in mosquito control, Central Life Sciences believes mosquito management is bolstered by the use of insect growth regulators and adulticides. We offer several formulations of Zenivex® mosquito adulticide as well as multiple formulations of Perm-X™ and Pyronyl™ adulticides to work alongside our IGRs for effective integrated mosquito management that meets the varied needs of MADs and PHOs across the country.

To prevent future generations of midge and filter flies from developing at water treatment facilities, we offer three formulations of Strike® products. With an environmentally friendly mode of action, Strike® products prevent interruptions of the treatment process when added into the water, keeping midge and filter fly infestations under control without harmful ingredients.

Use this quick reference guide to help you find the products that will best serve your program.

 **Altosid** **Duplex** **Zenivex** **FOURSTAR** **Perm-X™** **Pyronyl™** **STRIKE**
Midge Control



TABLE OF CONTENTS



STARTING AN INTEGRATED MOSQUITO MANAGEMENT PROGRAM	3
MOSQUITO LIFE CYCLE	4

ALTOSID® LARVICIDE

MOSQUITO BREEDING GROUNDS	6
ALTOSID® FORMULATIONS	6-9
THE BENEFITS OF ALTOSID® LARVICIDE	9
EXTENDED CONTROL COMPARISON	10
COMPARATIVE ACUTE ORAL TOXICITIES	10
ALTOSID® P35 TESTING PROTOCOL	11-12

SPECIMEN LABELS

ALTOSID® BRIQUETS	13-14
ALTOSID® XR EXTENDED RESIDUAL BRIQUETS	15-16
ALTOSID XR-G® (GRANULES)	17-18
ALTOSID XR-G® ULTRA	19-20
ALTOSID SBG® II SINGLE BROOD GRANULE	21-22
ALTOSID® PELLETS MOSQUITO GROWTH REGULATOR (WITH DR-TECH)	23-24
ALTOSID® PELLETS WSP MOSQUITO GROWTH REGULATOR	25-26
ALTOSID® LIQUID LARVICIDE MOSQUITO GROWTH REGULATOR (SR-5)	27-28
ALTOSID® LIQUID LARVICIDE CONCENTRATE (SR-20)	29-30
ALTOSID® P35	31-32

DUPLEX™

ONE PRODUCT. TWO CONTROLS	34
ACTIVE INGREDIENTS	34
DUPLEX™ FORMULATION	35
IMPROVES RESISTANCE MANAGEMENT	35
DESIGNED FOR OPTIMAL ENVIRONMENTAL COMPATIBILITY	36
DUPLEX™-G EFFICACY DATA	36-37
NOTES	38
DUPLEX™-G TESTING PROTOCOL	39-40

SPECIMEN LABEL

DUPLEX™-G	41-42
-----------	-------

STRIKE®

STRIKE® FORMULATIONS	43
NOTES	44

SPECIMEN LABELS

STRIKE® MIDGE CONTROL	45-46
STRIKE® ULTRA PROFESSIONAL MIDGE CONTROL	47-48
STRIKE® PELLETS	49-50



FOURSTAR® LARVICIDE

DESIGNED TO LAST	52
FOURSTAR® FORMULATIONS	52-53

SPECIMEN LABELS

FOURSTAR® 45 DAY MICROBIAL BRIQUETS	54
FOURSTAR® 90 DAY MICROBIAL BRIQUETS	55
FOURSTAR® 180 DAY MICROBIAL BRIQUETS	56
FOURSTAR® CRG MULTI-BROOD CONTROLLED RELEASE GRANULE	57-58
FOURSTAR® Bti CRG MULTI-BROOD CONTROLLED RELEASE GRANULE	59-60

ZENIVEX® ADULTICIDE

ADULT MOSQUITO CONTROL	62
THE ZENIVEX® ADULTICIDE DIFFERENCE	62
COMPARATIVE ACUTE ORAL TOXICITIES	63-64
NOTES	65

SPECIMEN LABELS

AQUA ZENIVEX™ E20	66-69
ZENIVEX® E20	70-72
ZENIVEX® E4 RTU	73-76

PERM-X™ AND PYRONYL™ ADULTICIDES

PERM-X™ AND PYRONYL™ FORMULATIONS	78
-----------------------------------	----

SPECIMEN LABELS

AQUA PERM-X™ UL 30-30	79-82
PERM-X™ UL 31-66	83-86
PERM-X™ UL 4-4	87-90
PERM-X™ UL 30-30	91-94
PYRONYL™ 525 OIL CONCENTRATE	95-99

NOTES	100-102
PRODUCT DISTRIBUTORS	BACK COVER



STARTING AN INTEGRATED MOSQUITO MANAGEMENT (IMM) PROGRAM

PLANNING

Begin your mosquito control program by devising a plan that considers the extent of your problems and the products available to solve them. Develop a multifaceted approach for controlling mosquitoes in your area. Exploit the mosquitoes' own biology and behavior, while using cost-effective, carefully timed larvicidal and high impact, low volume adulticidal applications. An integrated program not only relies on specific control products, but also on the approach that makes your program successful.

MONITORING

Remember that every good mosquito control program is an ongoing one. Monitoring larval and adult mosquito populations is essential to accurately estimate the need and effectiveness of control measures. Monitoring also helps identify problem areas where you should concentrate your control efforts.

There are a variety of methods for this type of tracking:

- Landing counts, which record the number of adults that land on an unprotected arm over a certain period of time.
- Light traps that catch adult mosquitoes.
- Dip counts, which record the average number of larvae and pupae located on the surface of a body of water.
- Pupae collection for monitoring the effectiveness of product applications.

HABITAT REDUCTION

Because water is the critical element in the development of mosquitoes, managing standing water is essential. Reducing mosquito breeding sites can be as simple as clearing a street gutter or removing trash and old tires, or as major as reworking landscaping and approved ditching in marshland. While it is impossible to rectify every standing water problem, it is assuring to know that Altosid® larvicides, Duplex™ products, FourStar® microbial larvicides, Zenivex® adulticides, Perm-X™ adulticides and Pyronyl™ adulticides offer effective solutions to many mosquito control issues.

MOSQUITO LIFE CYCLE

EGGS

Mosquitoes lay their eggs on the surface of standing water or soil that periodically floods. In water, mosquito eggs hatch in just a few days or, in some cases, just a few hours, but can lie dormant for long periods in dry conditions.

LARVAE (WRIGGLERS OR WIGGLERS)

This is the aquatic stage of the mosquito's life cycle where FourStar® microbial larvicide formulations take effect. Larvae actively feed as they mature into the pupal stage. Mosquito larvae undergo four molts, or instars, during their development into pupae. It is in the first three instars that ingestion of FourStar® microbial larvicide is fatal. Depending on temperature and conditions, a mosquito larva can develop into a pupa in as little as four days.

PUPAE (TUMBLERS)

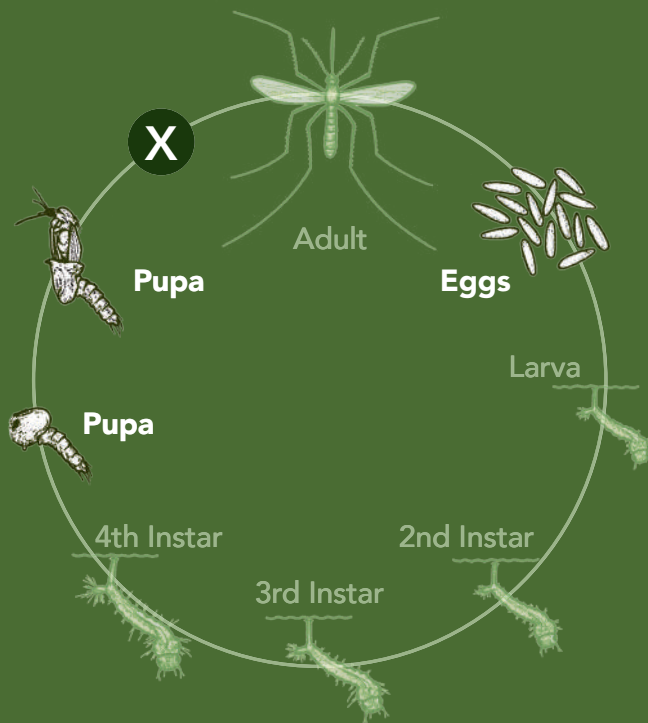
This is a resting, non-feeding aquatic stage, after which newly formed adults emerge. Signs of Altosid® larvicide effects are evident at this stage. The larva's development is virtually stopped at this point, preventing it from emerging as an adult but keeping it in the food chain.

ADULTS

This is the only stage where the mosquito is terrestrial and able to fly. It emerges from the pupal stage as an active flier, looking for a mate. Males live only a short time after mating, usually six days. Females survive from two weeks to four months. Only adult female mosquitoes are able to bite. To control mosquito populations at this stage, an adulticide such as Zenivex®, Perm-X™ or Pyronyl™ is necessary.

ALTOSID® LARVICIDE

Altosid® larvicide targets and kills mosquitoes in the later stages of their development in water. All Altosid® formulations contain the insect growth regulator (S)-methoprene, which disrupts the normal growth pattern of immature mosquitoes and prevents them from becoming breeding, biting adults that can spread disease.



Mosquitoes lay their eggs in standing water, like ponds, ditches and catch basins. Altosid® larvicides can be applied in these areas.

The effectiveness of Altosid® larvicides can first be seen during the pupal stage. In fact, Altosid® larvicide treated mosquitoes die at this stage.

X Altosid® larvicides stop mosquito development beyond the pupal stage.



MOSQUITO BREEDING GROUNDS

Floodwater mosquitoes lay their eggs on moist soil. These eggs hatch after the soil is flooded but can remain dormant in dry soil for weeks or months.

Permanent water mosquitoes lay their eggs on water surfaces in marshes, ponds, catch basins, open containers and tree holes. These eggs usually hatch in one to three days.

Early Prevention: Altosid® larvicides help you proactively reduce future mosquito populations through proactive prevention. They work in water and affect mosquito larvae on contact or through ingestion, reducing the threat of future adult mosquito populations. Altosid® larvicides exploit biological, physiological and ecological characteristics unique to the mosquito. They are target specific, easy on the environment, effective and economical – ideal for early prevention of mosquitoes.

ALTOSID® FORMULATIONS

No two mosquito habitats are alike. That's why Altosid® larvicides are available in multiple formulations to control mosquitoes in their ideal breeding ground: standing water.

ALTOSID® FORMULATION	RESIDUALS	USES
BRIQUETS	Up to 30 days	Catch basins, storm drains, woodland ponds, fountains, retention pools and roadside ditches
	Up to 150 days	Can be hand-applied on foot or from moving vehicles
ALTOSID XR-G® (GRANULES)	Up to 21 days	Perfect for aerial applications to standing water over large tracts of land, ponds and lakes needing canopy penetration
ALTOSID SBG® II SINGLE BROOD (GRANULES)	5-7 days	
ALTOSID XR-G® ULTRA (GRANULES)	28 days	Use for clean application on crop and non-crop sites
ALTOSID® P35 (GRANULES)	35 days	Pre-treatment of floodwater habitats
PELLETS	Up to 30 days	Hard-to-treat sites in submerged conditions such as marshes, tires, ditches and artificial water-holding containers
LIQUID	Up to 7 days	Temporary or floodwater mosquito breeding areas

Altosid® products are environmentally sound and have an excellent toxicity profile. Altosid® larvicides naturally degrade in the environment and will not adversely affect humans, fish, waterfowl, mammals or beneficial insects. So, you can feel comfortable using them in sensitive areas.

ALTOSID® FORMULATIONS

ALTOSID XR-G® ULTRA

This carbon-free, clean (S)-methoprene granule larvicide formulation controls the emergence of adult mosquitoes, including those which may transmit vector-borne diseases. Effective for up to 28 days, Altosid XR-G® Ultra is easy on equipment and provides effective, flexible larval control for all public health professionals. Public health officials can rely on this advanced formulation, from the founders of (S)-methoprene IGR larvicides, for clean and consistent extended residual larval control.



Altosid XR-G® Ultra Features:

- Consistent carbon-free, clean granule matrix that is ideal for specific rate and clean application
- Up to 28 days of residual control in standing water
- Labeled for up to 14 days pre-treat floodwater habitats
- Designed for a clean application to crop and non-crop sites
- Application rates of 2.5 to 20 lbs per acre
- (S)-Methoprene quick release technology

ALTOSID® BRIQUETS

Catch basins, ponds, roadside ditches and surface water receptacles are all locations where ongoing maintenance is necessary but often impractical. Altosid® Briquets require no expensive application equipment and can be used for pre-treatment before the wet season. That means you're better able to treat hard-to-access or outlying areas and can eliminate the additional costs associated with travel and multiple re-treatments. Additionally, Altosid® Briquets are available in multiple shapes, including "slim ingot." This shape allows for applications in virtually any storm drain or sewer without needing to lift the grate.



Altosid® Briquets Features:

- Slow release control for up to 30 days
- Active ingredient (S)-methoprene
- Hand application by operators on foot or in moving vehicles

Altosid® XR Extended Residual Briquets Features:

- Slow release control for up to 150 days
- "Slim ingot" shape for applications in narrow spaces (3" L x 0.75" H x 1.125" W)
- Extended shelf life
- Easy to use

ALTOSID® GRANULES

Get cost-effective larvicide coverage over a large area with Altosid® granules. The small size of Altosid® granules provides more dispersion over target areas. Ideal for large aerial applications, these granules weigh more in order to reduce drift and penetrate vegetative canopy. Altosid® granules come in two formulations.



Altosid XR-G® Features:

- Active ingredient (S)-methoprene
- Extended residual control to prevent the emergence of adult mosquitoes, including those that may carry vector-borne diseases, such as West Nile virus, Zika virus, Chikungunya and Dengue
- Effective on multiple broods
- Application rates of 5 to 20 lbs per acre

Altosid SBG® II Single Brood Granule Features:

- 50% more (S)-methoprene than the original SBG
- Silica based granule for enhanced point source coverage
- Consistent granule for improved application flexibility
- DR-tech for virtually dust-free applications
- Application rates of 3 to 20 lbs per acre

ALTOSID® PELLETS

Altosid® Pellets offer an application option for nearly all use patterns. They are ideal for tough-to-treat sites like rice fields, cattail marshes, stacks of abandoned tires and other man-made habitats. Altosid® Pellets can also be used in pre-flood or in intermittently flooded areas. They can be applied up to 15 days before flooding or at any stage of larval development.



Altosid® Pellets Mosquito Growth Regulator (with DR-tech) Features:

- Active ingredient (S)-methoprene
- Includes DR-tech
- Up to 30 days of submerged residual activity
- Apply up to 15 days pre-flood
- Application rates of 2.5 to 10 lbs per acre

Altosid® Pellets WSP Mosquito Growth Regulator Features:

- Ready-to-use water soluble pouches
- Release effective levels of (S)-methoprene for up to 30 days
- Treatment for hard-to-reach stormwater sites
- Single pouch coverage of 135 ft² of water surface area

ALTOSID® LIQUID

Altosid® Liquid Larvicide Mosquito Growth Regulator (SR-5)

Altosid® Liquid Larvicide Concentrate (SR-20)

A liquid larvicide is an effective and flexible formulation fitting for any mosquito control program. Altosid® Liquid Larvicide Mosquito Growth Regulator (SR-5) and Altosid® Liquid Larvicide Concentrate (SR-20) meet that description – and provide exceptional performance. Both formulations offer superior control in a wide range of habitats and application areas, including temporary or floodwater breeding areas and irrigated cropland. Approved for aerial and ground ULV treatments, Altosid® liquids prevent the emergence of adult mosquitoes, including those which may transmit vector-borne diseases, such as West Nile virus, Zika virus, Chikungunya and Dengue.



These formulations can be used on-site to make Altosid® granular formulations. By mixing dry sand and Altosid® liquids, you can achieve excellent foliage penetration in floodwater mosquito breeding areas with dense vegetation or canopy.

ALTOSID® P35



Utilizing the active ingredient (S)-methoprene, Altosid® P35 is our latest innovation that combines the original IGR with a unique, granule design to provide continuous residual control for 35 days. This allows for pre-flooding application and lasts in wet environments. And its smooth, uniform spherical design allows for easy, accurate application and equipment calibration.

Altosid® P35 Features:

- Smooth granule matrix form
- Uniform spherical design
- Matrix formula containing dual-encapsulation to provide short- and long-term release of the IGR
- Extended release technology
- (S)-Methoprene quick release technology

THE BENEFITS OF ALTOSID® LARVICIDES

	ALTOSID® LARVICIDES
✓	Kills most mosquito pest species
✓	Consistent results in all population densities
✓	No impact on food web
✓	Multiple formulations to meet application and economic requirements
✓	Labeled residual claim
✓	Labor savings with extended residual
✓	Pre-treatment capabilities
✓	Consistent results in wet-/dry-down and flood/reflood conditions
✓	Excellent canopy penetration
✓	Microencapsulated liquid (provides residual control)

Based on current product specimen labels; see pages 13-32.

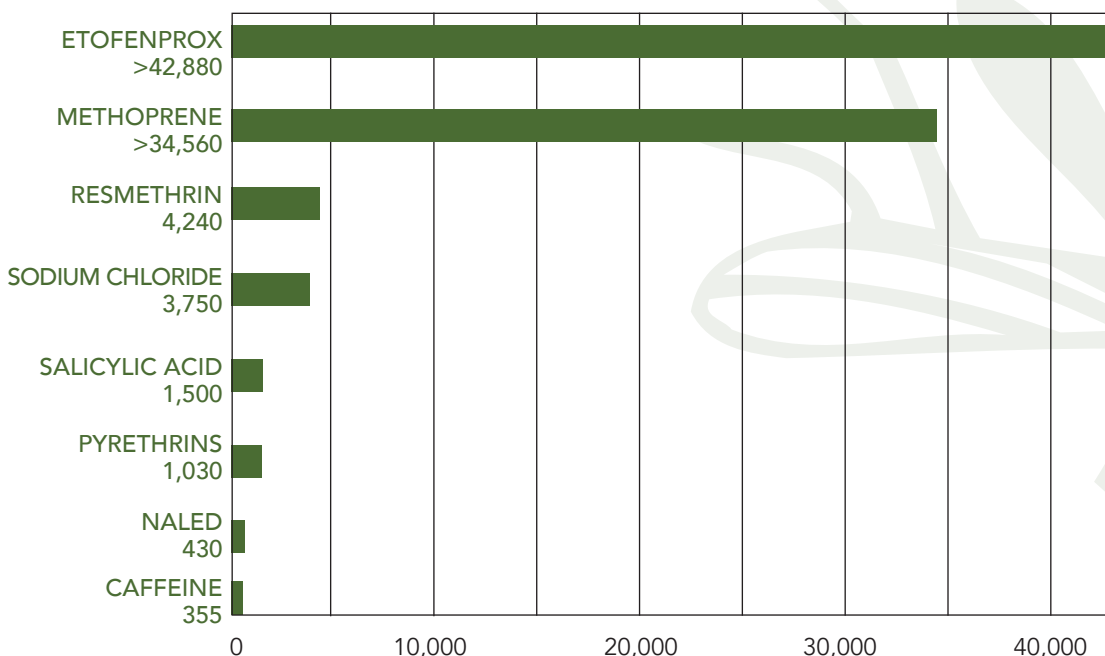
EXTENDED CONTROL COMPARISON

One application of Altosid® XR Briquets containing (S)-methoprene can control mosquito larvae for an entire season.

PRODUCT	TYPE OF PRODUCT	APPLICATION INTERVALS/RESIDUAL	
		Continually flooded sites	Intermittently flooded sites
ALTOSID® BRIQUETS	IGR (S)-methoprene	Up to 30 days	Up to 30 days
ALTOSID® XR EXTENDED RESIDUAL BRIQUETS	IGR (S)-methoprene	Up to 150 days	Up to 150 days
ALTOSID XR-G® (GRANULES)	IGR (S)-methoprene	21 days	21 days
ALTOSID XR-G® ULTRA	IGR (S)-methoprene	28 days	14 days
ALTOSID® P35	IGR (S)-methoprene	35 days	15 days
ALTOSID SBG® II SINGLE BROOD GRANULE	IGR (S)-methoprene	5-7 days	5-7 days
ALTOSID® PELLETS MOSQUITO GROWTH REGULATOR	IGR (S)-methoprene	30 days	30 days

COMPARATIVE ACUTE ORAL TOXICITIES

An LD50 is a measure of toxicity. The longer the LD50 bar, the lower the toxicity. Compared to other leading mosquito control products, (S)-methoprene, the active ingredient in Altosid® products, and Etofenprox, the active ingredient in Zenivex® products, are two of the least toxic.



ALTOSID® P35 TESTING PROTOCOL

Altosid® P35 larvicide is a unique granule formulation that is uniform and of sufficient density to be easily applied to larval habitats using aerial and ground application methods. Altosid® P35 larvicide will control mosquito emergence for 35 days of continuously wet conditions at labeled use rates. (S)-Methoprene will begin releasing and controlling adult emergence immediately after application.

To evaluate the effectiveness of an application, there are a few simple steps to take that are outlined in the following protocol. After an application, observe after the first 48-72 hours to determine inhibition of adult emergence. Dip counts taken at various locations at the treated site are a good way to collect pupae. The IGR effect from (S)-methoprene will prevent adult emergence for up to 35 days post-treatment. Pupae must be collected from the field and held in the lab to determine inhibition of adult emergence. Collecting larvae is not an effective method for determining inhibition of adult emergence. Mosquito larvae must be in a treated environment upon molting to pupae. Water brought back from the treatment site will lose (S)-methoprene and there may not be enough left in the water to cause an effect.

HELPFUL EVALUATION TIPS:

- Choose a site that is readily accessible containing abundant larval populations
- Ensure proper calibration of equipment and uniform application
- Existing pupae present at the site of treatment will not be affected by the IGR; wait 48 hours following the application to evaluate pupae for IGR effect
- Untreated sites may be used as a comparison to treatment sites
- Try to collect 25 pupae per dip for evaluation
- Record data and observations in a lab book or in prepared data sheets
- Take dip counts at random locations within the treatment site; dip count numbers will vary based on site size and is up to the investigator to determine the appropriate sampling size and location
- Altosid® P35 larvicide has a range of application rates; it is suggested that on first evaluation 5 pounds per acre be used

ALTOSID® P35 FIELD TESTING GUIDELINES:

Record pre-treatment larval abundance (first and second instar larvae, third and fourth instar larvae, and pupae) in both experimental and control sites. The sampling method should be appropriate to the type of breeding habitat, and the appropriate number of samples should be taken from each habitat based on the type and size of the habitat. Larval instars and pupae from each sample are counted and recorded.

Monitor post-treatment larval abundance (all stages) 48 hours post-application and then weekly using pupae collected from treated and untreated control areas. After the first 48 hours, begin collecting pupae and rearing them out for inhibition of emergence calculations. Inhibition of emergence begins at application, but waiting 48 hours after the initial treatment ensures that all pupae collected have developed in the presence of (S)-methoprene.

Collection of pupae starts at 48 hours, 1 week, 2 weeks, 3 weeks, 4 weeks and 5 weeks post-treatment, if possible.

Characterization of the habitats in terms of abiotic and biotic factors aids the interpretation of results. Record rainfall and any change in water level or other parameters, such as algal bloom, water quality, outflow, temperature or predators in the habitats.

DATA CALCULATIONS:

Use data sheets to record dip counts and pupae collected as follows:

1. Record conditions at treatment site and any factors that may affect application.
2. Record pre-treatment larval populations on the data sheet with 10 random dip counts for the treatment and control areas.
3. Begin collecting pupae after the first 48 hours and rearing them for emergence calculations.
4. Make pupal collection weekly or when present and check for emergence inhibition until control percentages drop below 70%.



CALCULATION METHODS:

The efficacy and residual activity of the larvicide is determined from the post-treatment counts of pupae in treated and control sites.

The assessment of an IGR's efficacy is based on the inhibition level of adults' emergence and the percentage reduction of pupal densities. Pupae are sampled as described on the previous page.

Adult emergence can be monitored directly in the field by floating sentinel emergence traps in treated and untreated habitats, by pupal isolation, or by sampling and counting pupal skins. Adult emergence may also be assessed by collecting pupae (20–40 per replicate) and bringing them to the laboratory in containers with the water from the respective habitats then transferring them to small cups inside the holding cages. Dead pupae found in the cups should be removed and any morphological abnormalities recorded.

When adult emergence is monitored in the laboratory using pupae collected from treated and untreated habitats, IE% is calculated using the following formula, on the basis of determining adult emergence from the number of pupae isolated:

$$IE(\%) = \left(\frac{C-T}{C} \right) \times 100$$

Where C = percentage emerging or living in control habitats and T = percentage emerging or living in treated habitats.



Altosid[®] BRIQUETS

A SUSTAINED RELEASE MOSQUITO GROWTH REGULATOR TO PREVENT ADULT MOSQUITO EMERGENCE (INCLUDING THOSE WHICH MAY TRANSMIT WEST NILE VIRUS)

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (Dry Weight Basis)
(CAS #65733-16-6) 8.62%

OTHER INGREDIENTS: 91.38%
Total 100.00%

This product contains water, therefore the weight of the briquet and percent by weight of active ingredient will vary with hydration. The Ingredient Statement is expressed on a dry weight basis.

EPA Reg. No. 2724-375 EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN
CAUTION

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS **CAUTION**

Causes moderate eye irritation. 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.

FIRST AID

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 for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. |
|-------------------|--|

FIRST AID (CONTINUED)

- | | |
|-------------------------------|--|
| 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. |
|-------------------------------|--|

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of unused product.

DIRECTIONS FOR USE

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

Note to User: Do not remove **ALTOSID[®] Briquets** from container except for immediate use.

Because of the unique mode of action of **ALTOSID[®] Briquets**, users must be familiar with special techniques for accurate evaluation of treatments. See Application Rates and Intervals section of this label or consult local Mosquito Abatement Agency. Effective use of **ALTOSID[®] Briquets** in sites subjected to periodic heavy flow of water requires careful attention to briquet placement and to the possible need for retreatment. Use of the product in storm drains, waste treatment and settling ponds, and similar systems should therefore be limited to experienced pesticide applicators, such as personnel of Mosquito Abatement Districts and Public Health Agencies.

Introduction: The **ALTOSID[®] Briquet** is a formulation designed to release effective levels of **ALTOSID[®] Insect Growth Regulator** up to 30 days under typical environmental conditions. Release of **ALTOSID[®] Insect Growth Regulator** is effected by dissolution of the **ALTOSID[®] Briquet**. If briquets become covered by obstructions such as debris, vegetation, and loose

sediment as a result of high rainfall or flow, normal dispersion of the active ingredient can be inhibited. Water flow may increase the dissolution of the briquet thus reducing the residual life of the briquet. Inspect areas of water flow to determine appropriate retreatment intervals. To assure positive results, place **ALTOSID® Briquets** where they will not be swept away by flushing action. **ALTOSID® Briquets** prevent the emergence of adult mosquitoes including *Anopheles*, *Culex*, *Culiseta*, *Coquillettidia*, and *Mansonia* spp., as well as those of the floodwater mosquito complex (*Aedes*, *Ochlerotatus*, and *Psorophora* spp.) from treated water. Treated larvae continue to develop normally to the pupal stage where they die.

APPLICATION TIMING

Apply **ALTOSID® Briquets** at the beginning of the mosquito season. **ALTOSID® Briquets** provide up to 30 days residual control. Continue treatment through the last brood of the season. Apply at any stage of larval development. **ALTOSID® Briquets** may be applied as a pre-flood treatment prior to wetting events. **ALTOSID® Briquets** will be unaffected in dry down situations and will begin working again during subsequent wetting events until the briquet is exhausted.

NOTE: This insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

APPLICATION SITES

ALTOSID® Briquets are designed to control mosquitoes in small bodies of water. Examples of application sites are: storm drains, catch basins, roadside ditches, fish ponds, ornamental ponds and fountains, other artificial water-holding containers, animal watering troughs, cesspools and septic tanks, waste treatment and settling ponds, flooded crypts, transformer vaults, abandoned swimming pools, tires, construction and other manmade depressions, cattail marshes, water-hyacinth beds, vegetation-choked phosphate pits, pastures, meadows, rice fields, freshwater swamps and marshes, salt and tidal marshes, treeholes, woodland pools, floodplains, and dredging spoil sites. For application sites connected by a water system, i.e., storm drains or catch basins, treat all of the water holding sites in the system to maximize the efficiency of the treatment program.

APPLICATION RATES AND INTERVALS

For mosquito control in non-(or low-) flow, shallow depressions (up to two ft in depth), treat on the basis of surface area placing one **ALTOSID® Briquet** per 100 sq ft. For applications in storm water drainage areas, sewers, and catch basins: Place one **ALTOSID® Briquet** into each catch basin. Follow the chart below to determine the number of **ALTOSID® Briquets** to use in large catch basins. Place one **ALTOSID® Briquet** per 100 sq ft of surface area up to two feet deep for storm water drainage areas. Use one additional **ALTOSID® Briquet** per two feet of water depth in areas deeper than two feet.

ALTOSID® BRIQUET APPLICATION CHART

Number of Briquets	Catch Basin Size	Water Depth (Feet)
1	0–1,500	0–2
2	1,500–3,000	2–4
3	3,000–4,500	4–6
4	4,500–6,000	6–8

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Storage:** Store in cool, dry place. **Pesticide Disposal:** Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility. **Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty bag and box in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

To the fullest extent permitted by law, Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and handling of this material when such use and handling are contrary to label instructions.

Always read the label before using this product.

For more information call **1-800-248-7763**.

www.altosid.com

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Schaumburg, Illinois 60173



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March, 2010
Schaumburg, IL



Altosid[®] XR

EXTENDED RESIDUAL BRIQUETS



**A SUSTAINED RELEASE PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE
(INCLUDING THOSE WHICH MAY TRANSMIT WEST NILE VIRUS)**

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6))

(Dry Weight Basis): 2.1%

OTHER INGREDIENTS: 97.9%

Total. 100.0%

EPA Reg. No. 2724-421

EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS

INTRODUCTION

ALTOSID[®] XR BRIQUETS are designed to release effective levels of (S)-Methoprene insect growth regulator over a period up to 150 days in mosquito breeding sites. Release of (S)-Methoprene insect growth regulator occurs by dissolution of the briquet. Soft mud and loose sediment can cover the briquets and inhibit normal dispersion of the active ingredient. The product may not be effective in those situations where the briquet can be removed from the site by flushing action.

ALTOSID[®] XR BRIQUETS prevent the emergence of adult mosquitoes including: *Anopheles*, *Culex*, *Culiseta*, *Coquillettidia*, and *Mansonia* spp., as well as those of the floodwater mosquito complex (*Aedes*, *Ochlerotatus*, and *Psorophora* spp.) from treated water. Treated larvae continue to develop normally to the pupal stage where they die.

NOTE: (S)-Methoprene insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS - CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

Call a poison control center or doctor for treatment advice.

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.

If on skin or clothing

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of unused product.

DIRECTIONS FOR USE

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

APPLICATION TIME

Place **ALTOSID® XR BRIQUETS** at or before the beginning of the mosquito season. Apply **ALTOSID® XR BRIQUETS** prior to flooding when sites are dry, or on snow and ice in breeding sites prior to spring thaw. Under normal conditions, one application will last the entire mosquito season, or up to 150 days, whichever is shorter. Alternate wetting and drying will not reduce their effectiveness.

APPLICATION RATES

Aedes, Ochlerotatus, and Psorophora spp.: For control in non-(or low-) flow shallow depressions (≤ 2 feet in depth), treat on the basis of surface area, placing one **ALTOSID® XR BRIQUET** per 200 ft². Place briquets in the lowest areas of mosquito breeding sites to maintain continuous control as the site alternately floods and dries up.

Culex, Culiseta and Anopheles spp.: Place one **ALTOSID® XR BRIQUET** per 100 ft².

Coquillettidia and Mansonia spp.: For application to cattail marshes and water hyacinth beds. For control of these mosquitoes, place one **ALTOSID® XR BRIQUET** per 100 ft².

Culex sp. in storm water drainage areas, sewers, and catch basins: For catch basins, place one **ALTOSID® XR BRIQUET** into each basin. In cases of large catch basins, follow the chart below to determine the number of briquets to use. For storm water drainage areas, place one briquet per 100 ft² of surface area up to two ft deep. In areas that are deeper than two feet, use one additional briquet per two feet of water depth.

Water flow pressure increases the potential dissolution of the briquet. Conduct regular inspections (visual or biological) in areas of water flow to determine if the briquet is still present. Adjust the retreatment interval based on the results of an inspection.

ALTOSID® XR BRIQUETS Application Chart

Number of Briquets	Catch Basin Size (Gallons)	Surface Area/ Water Depth (ft)
1	0 – 1500	0 – 2
2	1500 – 3000	2 – 4
3	3000 – 4500	4 – 6
4	4500 – 6000	6 – 8

APPLICATION SITES

ALTOSID® XR BRIQUETS are designed to control mosquitoes in treated areas. Examples of application sites are: storm drains, catch basins, roadside ditches, fish ponds, ornamental ponds and fountains, other artificial water-holding containers, animal watering troughs, cesspools and septic tanks, waste treatment and settling ponds, flooded crypts, transformer vaults, abandoned swimming pools, tires, construction and other manmade depressions, cattail marshes, water hyacinth beds, vegetation-choked phosphate pits, pastures, meadows, rice fields, freshwater swamps and marshes, salt and tidal marshes, treeholes, woodland pools, floodplains, and dredging spoil sites. For application sites connected by a water system, i.e., storm drains or catch basins, treat all of the water-holding sites in the system to maximize the efficiency of the treatment program.

STORAGE AND DISPOSAL

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

STORAGE: Store in a cool place. Do not reuse empty container.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty container in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, expressed or implied, concerning the use and handling of this product other than indicated on the label. To the extent permitted by law, Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information, or in case of an emergency, call 1-800-248-7763.

www.altosid.com

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



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May, 2010
Schaumburg, IL



Altosid XR-G[®]



LARVICIDE PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE (Including *Aedes* sp. and those which may transmit West Nile virus, Zika, dengue, chikungunya and other mosquito-borne diseases)

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6) 1.5%

OTHER INGREDIENTS: 98.5%

Total 100.0%

EPA Reg. No. 2724-451

EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS - CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes or skin. Due to the size and abrasiveness of the granule, use protective eyewear and clothing to minimize exposure during loading and handling. Wash thoroughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

FIRST AID

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.

If on skin or clothing • 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. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

DIRECTIONS FOR USE

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

GENERAL DIRECTIONS

ALTOSID XR-G[®] releases effective levels of **ALTOSID[®]** insect growth regulator for up to 21 days after application. Applications should be continued throughout the entire season to maintain adequate control. Treated larvae continue to develop normally to the pupal stage where they die. Rotary and fixed-wing aircraft equipped with granular spreaders capable of applying rates listed below may be used to apply **ALTOSID XR-G[®]**. Ground equipment which will achieve even coverage at these rates may also be used. Apply **ALTOSID XR-G[®]** uniformly and repeat application as necessary.

NOTE: **ALTOSID[®]** insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

APPLICATION TIME

Apply **ALTOSID XR-G[®]** at any stage of larval mosquito development. Granules may be applied prior to flooding (i.e., "pre-hatch" or "pre-flood") in areas which flood intermittently. In such areas, 1 application of **ALTOSID XR-G[®]** can prevent adult mosquito emergence from several subsequent floodings. The actual length of control depends on the duration and frequency of flooding events.

APPLICATION RATES

Aedes, *Anopheles*, and *Psorophora* spp.: Apply **ALTOSID XR-G[®]** at 5 - 10 lb/acre (5.6-11.2 kg/ha). *Culex*, *Culiseta*, *Coquillettidia*, and *Mansonia* spp.: Apply **ALTOSID XR-G[®]** at 10-20 lb/acre (11.2-22.4 kg/ha). Within these ranges, use lower rates when water is shallow [< 2 feet (60 cm)] and vegetation and/or pollution are minimal. Use higher rates when water is deep [≥ 2 feet (60 cm)] and vegetation and/or pollution are heavy.

APPLICATION SITES

Non-Crop Areas: **ALTOSID XR-G®** may be applied as directed above to temporary and permanent sites which support mosquito larval development. Examples of such sites include: snow pools, salt and tidal marshes, freshwater swamps and marshes (cattail, red cedar, white maple marshes), woodland pools and meadows, dredging spoil sites, drainage areas, ditches, wastewater treatment facilities, livestock runoff lagoons, retention ponds, harvested timber stacks, swales, storm water drainage areas, sewers, catch basins, tree holes, animal watering troughs, water-holding receptacles (e.g., tires, urns, flower pots, cans, and other containers), and other natural and manmade water-holding depressions.

Crop Areas: **ALTOSID XR-G®** may be applied as directed above to temporary and permanent sites which support mosquito larval development. Examples of such sites include: irrigated croplands, pastures, rangeland, vineyards, rice fields (domestic and wild), date palm, citrus, fruit, nut orchards, berry fields and bogs.

NOTE: Application of **ALTOSID XR-G®** to sites subject to water flow or exchange will diminish the product's effectiveness and may require higher application rates and/or more frequent applications.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store closed containers of **ALTOSID XR-G®** in a cool, dry place.

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

PESTICIDE CONTAINER DISPOSAL

Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent). Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

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For information call **1-800-248-7763**.

www.centralmosquitocontrol.com

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



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January, 2017
Schaumburg, IL



Altosid XR-G® ULTRA

An extended residual INSECT GROWTH REGULATOR GRANULAR PRODUCT TO KILL MOSQUITO LARVAE AND PREVENT ADULT MOSQUITO EMERGENCE (including those mosquitoes that may transmit diseases including West Nile virus, Dengue, Chikungunya, and Zika virus)

Controls *Aedes*, *Culex*, *Anopheles*, *Culiseta*, *Ochlerotatus*, and other mosquitoes

Controls mosquitoes for up to 28 days of continuous wet conditions when applied at rates of 5-20 pounds per acre

Dust free formula

Consistent size granule

May be applied to both crop and non-crop sites* (See Application Sites section)

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6)..... 1.6%

OTHER INGREDIENTS: 98.4%

TOTAL: 100.0%

EPA REG. NO. 89459-104 EPA EST. NO. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS

FIRST AID

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.

HOTLINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS – HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Due to the size and abrasiveness of the granule, use protective eyewear and clothing (e.g., waterproof gloves) to minimize exposure during loading and handling.

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.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

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

Do not apply directly to treated, finished drinking water reservoirs or animal water troughs.

Altosid XR-G® Ultra larvicide is highly effective against mosquito larvae in a variety of habitats. **Altosid XR-G® Ultra** provides consistent release of the IGR to provide residual control for multiple broods up to 28 days of continuous wet conditions. **Altosid XR-G® Ultra**, when applied to the water column, releases effective levels of IGR to begin affecting larval development thereby preventing adult mosquito emergence for up to 28 days when applied at rates of 5 – 20 pounds per acre. **Altosid XR-G® Ultra** controls the major species of mosquitoes including: *Aedes*, *Anopheles*, *Culex*, *Culiseta*, *Ochlerotatus*.

Altosid XR-G® Ultra begins releasing effective levels of IGR soon after application to inhibit and prevent the emergence of adult mosquitoes for up to 28 days after application. Continue applications throughout the entire season to

maintain control. IGR treated larvae continue to develop normally to the pupal stage where they die.

Rotary and fixed-wing aircraft equipped with granular spreaders capable of applying rates listed below may be used to apply **Altosid XR-G® Ultra**. Ground equipment that will achieve even coverage at these rates may also be used. Apply **Altosid XR-G® Ultra** uniformly and repeat at intervals of 14 to 28 days.

NOTE: **Altosid XR-G® Ultra** has no effect on mosquitoes that have reached the pupal or adult stage prior to treatment.

APPLICATION TIMING: Apply **Altosid XR-G® Ultra** at any stage of larval mosquito development. Granules may be applied 7 to 14 days prior to flooding (i.e., "pre-hatch" or "pre-flood") in areas which flood. In such areas, one application of **Altosid XR-G® Ultra** can prevent adult mosquito emergence from several subsequent wetting events. The actual length of control depends on the duration and frequency of flooding events.

APPLICATION RATES: **Altosid XR-G® Ultra** controls the major species of mosquitoes including: *Aedes*, *Anopheles*, *Culex*, *Culiseta*, *Ochlerotatus*. Apply **Altosid XR-G® Ultra** at 2.5 - 20 lb/acre (5.6 - 11.2 kg/ha). Within these ranges, use lower rates when water is shallow [$< 6''$ -12"] and vegetation and/or organic matter are minimal and use higher rates when water is deep [≥ 1 foot] and vegetation and/or organic matter are heavy. In water depths greater than 2 feet, double the highest application rate for each subsequent foot of water. Depending on water depth and degree of organic matter, lower use rates may provide less IGR residual. Application of **Altosid XR-G® Ultra** to sites subject to water flow or exchange will diminish the product's effectiveness and may require higher application rates and/or more frequent applications. Lower residual activity may be seen at rates used at 5 pounds per acre or less; for consistent 28-day control, use rates at 7.5 pounds per acre or higher.

APPLICATION SITES: **Altosid XR-G® Ultra** may be applied to both crop and non-crop areas as directed above to temporary and permanent sites that support mosquito larval development. Examples of such sites include: snow pools, salt and tidal marshes, freshwater swamps and marshes (cattail, red cedar, white maple marshes), woodland pools and meadows, dredging spoil sites, drainage areas, ditches, wastewater treatment facilities, livestock runoff lagoons, retention ponds, harvested timber stacks, swales, storm water drainage areas, sewers, catch basins, tree holes, water-holding receptacles (e.g., tires, urns, flower pots, cans, and other containers), irrigated and non-irrigated pastures, hoof prints and other natural and manmade water-holding sites, containers and depressions.

Examples of crop areas include: irrigated croplands, pastures, rangeland, vineyards, rice fields (domestic and wild), date palm, citrus, fruit and nut orchards, berry fields, bogs and row crops.

STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage or disposal. **Pesticide Storage:** Store closed containers in a cool, dry place. **Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. **Pesticide Container – Handling Plastic Container:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. **Plastic Bags:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The Directions for Use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Central Garden & Pet Company. All such risks shall be assumed by the users or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Central Garden & Pet Company makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Central Garden & Pet Company is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Central Garden & Pet Company disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

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

For information, call **1-800-248-7763** or visit our Web site: **www.centralmosquitocontrol.com**

Manufactured for:

Central Garden & Pet Company
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



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February, 2020
Schaumburg, IL



Altosid[®] SBG[®] II

SINGLE BROOD GRANULE



- PREVENTS ADULT MOSQUITO EMERGENCE WHEN APPLIED PRE OR POST-HATCH
(including those which may transmit West Nile virus)

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS# 65733-16-6)..... 0.3%

OTHER INGREDIENTS:..... 99.7%

TOTAL 100.0%

EPA Reg. No. 75318-8-89459

EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional Precautions

PRECAUTIONARY STATEMENTS – HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

FIRST AID

If in eyes	<ul style="list-style-type: none">• 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 on skin	<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 swallowed	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

INTRODUCTION

Altosid SBG[®] II Single Brood Granule (Altosid SBG[®] II) slowly releases effective levels of (S)-methoprene insect growth regulator to prevent the emergence of adult mosquitoes from treated sites. Apply **Altosid SBG[®] II** up to 7 days prior to flooding (i.e. "pre-hatch") in known mosquito breeding areas, or post-hatch to sites containing mosquito larvae.

Treated larvae continue to develop normally to the pupal stage where they die. **Altosid SBG[®] II** prevents the emergence of adult mosquitoes from treated sites.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling

APPLICATION DIRECTIONS

Altosid SBG[®] II is designed to control single broods of mosquito larvae in water depths up to 15 inches. Under typical environmental conditions, one application will control for up to 7 days. Applications can be made pre-hatch to known mosquito breeding areas, or post-hatch to sites containing mosquito larvae. Pre-hatch treatments should be applied in the low areas of breeding sites to maintain continuous control as the site floods and dries. Repeat application cycle throughout the mosquito season.

NOTE: The active ingredient (S)-methoprene has no effect on mosquitoes that have reached the pupal or adult stage prior to treatment.

APPLICATION RATES

Select the target mosquito species and corresponding application rate per acre.

Aedes, Ochlerotatus, Anopheles and Psorophora spp.:

- Apply **Altosid SBG® II** at 3 – 7 lbs per acre

Culex and Culiseta spp.:

- Apply **Altosid SBG® II** at 10 – 20 lbs per acre

For smaller application sites, apply **Altosid SBG® II** at 0.35 oz to 0.70 oz per 100 square feet of water surface.

APPLICATION SITES

Apply **Altosid SBG® II** treatments pre-hatch or post-hatch as directed above to temporary and permanent water sites which support mosquito larval development. Examples of typical sites are: freshwater and salt water marshes, cattail marshes, woodland pools and meadows, grassy swales, floodplains, irrigated croplands, pastures and rangeland (without removal of livestock), vineyards, rice fields (including wild rice), fruit and nut orchards, berry fields and bogs, dredge spoil sites, storm water retention basins, storm drains, retention and detention ponds, drainage areas, roadside ditches, tree holes, tires, water-holding receptacles, ornamental ponds and fountains, animal watering troughs and ponds, fish ponds, flooded crypts, transformer vaults, abandoned swimming pools, artificial water-holding containers, and other natural and manmade depressions where mosquitoes may breed.

NOTE: Application of **Altosid SBG® II** to sites subject to water flow or exchange will diminish the product's effectiveness.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place.

PESTICIDE DISPOSAL: Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Completely empty bag. Then offer for recycling if available or dispose of empty bag in trash or in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, express or implied, concerning the use and handling of this product other than indicated on the label. To the fullest extent permitted by law, buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

Always read the label before using this product.

For information or in case of an emergency, call 1-800-248-7763.

www.altosid.com

Manufactured for:

Central Garden & Pet Company

1501 East Woodfield Road 200W
Schaumburg, Illinois 60173

U.S. Patent #7,892,571
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February, 2014
Schaumburg, IL



Altosid[®] PELLETS

MOSQUITO GROWTH REGULATOR



A GRANULAR PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE (INCLUDING THOSE WHICH MAY TRANSMIT WEST NILE VIRUS)

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6) 4.25%

OTHER INGREDIENTS: 95.75%
Total 100.00%

EPA Reg No. 2724-448

EPA Est. No. 39578-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

Call a poison control center or doctor for treatment advice.

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.

If on skin or clothing

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

DIRECTIONS FOR USE

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

INTRODUCTION

ZOËCON[®] ALTOSID[®] Pellets (ALTOSID[®] Pellets) release **ALTOSID[®]** Insect Growth Regulator as they erode. **ALTOSID[®] Pellets** prevent the emergence of adult standing water mosquitoes, including *Anopheles*, *Culex*, *Culiseta*, *Coquillettidia*, and *Mansonia* spp., as well as adults of the floodwater mosquitoes such as *Aedes*, *Ochlerotatus*, and *Psorophora* spp. from treated sites.

GENERAL DIRECTIONS

ALTOSID[®] Pellets release effective levels of **ALTOSID[®]** Insect Growth Regulator for up to 30 days under typical environmental conditions. Continue treatment through the last brood of the season. Treated larvae continue to develop normally to the pupal stage where they die. **NOTE:** This insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

APPLICATION SITES AND RATES

Use lower application rates when water is shallow, vegetation and/or pollution are minimal, and insect populations are low. Use higher rates when water is deep (>2 ft), vegetation, pollution, and/or organic debris or water flow are high, and insect populations are high. In instances of high organic debris and water flow, residual activity may be diminished.

MOSQUITO HABITAT RATE (LB/ACRE)

Floodwater sites

Pastures, meadows, rice fields, freshwater swamps and marshes, salt and tidal marshes, cattail marshes, woodland pools, flood-plains, tires, other artificial water-holding containers 2.5–5

Dredging spoil sites, waste treatment and settling ponds, ditches and other manmade depressions 5–10

Permanent water sites

Ornamental ponds and fountains, fish ponds, cattail marshes, water hyacinth beds, flooded crypts, transformer vaults, abandoned swimming pools, construction and other manmade depressions, treeholes, other artificial water-holding containers 2.5–5

Storm drains, catch basins, roadside ditches, cesspools, septic tanks, waste settling ponds, vegetation-choked phosphate pits 5–10

APPLICATION METHODS

Mosquitoes: Apply **ALTOSID® Pellets** up to 15 days prior to flooding, or at any stage of larval development after flooding or in permanent water sites. Fixed wing aircraft or helicopters equipped with granular spreaders capable of applying rates from 2.5 to 10 lb/acre may be used to apply **ALTOSID® Pellets**. The pellets may also be applied using ground equipment which will achieve good, even coverage at the above rates. Apply **ALTOSID® Pellets** to artificial containers such as tires and catch basins, etc.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Store closed containers of **ALTOSID® Pellets** in a cool, dry place.

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent). Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, expressed or implied, concerning the use and handling of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information or in case of an emergency, call **1-800-248-7763**.

www.altosid.com

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173





Altosid[®] PELLETS WSP

MOSQUITO GROWTH REGULATOR



- A GRANULAR PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE (*including those which may transmit West Nile virus*)
- IDEAL WHEN TREATING HARD-TO-REACH STORMWATER SITES
- READY-TO-USE WATER SOLUBLE POUCHES (WSP)
- A SINGLE WSP COVERS UP TO 135 FT² OF WATER SURFACE AREA

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS# 65733-16-6)..... 4.25%

OTHER INGREDIENTS:..... 95.75%

TOTAL 100.00%

EPA Reg. No. 2724-448

EPA Est. No. 065387-AR-002

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional Precautions

PRECAUTIONARY STATEMENTS – HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

Call a poison control center or doctor for treatment advice.

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.

IF ON SKIN OR CLOTHING • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling

INTRODUCTION

ZOËCON[®] ALTOSID[®] Pellets WSP (ALTOSID[®] Pellets WSP) release ALTOSID[®], an Insect Growth Regulator as they erode. ALTOSID[®] Pellets WSP prevent the emergence of adult standing water mosquitoes, including *Anopheles*, *Culex*, *Culiseta*, *Coquillettidia*, and *Mansonia* spp., as well as adults of the floodwater mosquitoes, such as *Aedes*, *Ochlerotatus*, and *Psorophora* spp. from treated sites.

GENERAL DIRECTIONS

ALTOSID[®] Pellets WSP release effective levels of ALTOSID[®] Insect Growth Regulator for up to 30 days under typical environmental conditions. Continue treatment through the last brood of the season. Treated larvae continue to develop normally to the pupal stage where they die.

NOTE: This insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

ALTOSID[®] Pellets WSP are convenient ready-to-use pouches for treating mosquito breeding sites. The pouches are water-sensitive and when in contact with water, the pouches dissolve, releasing the pellets. Use care when handling unused pouches so that moisture does not collect on the pouches. Keep pouches sealed in the original package until ready for use. Once outer foil bag containing water soluble pouches is opened, use pouches within one day.

APPLICATION SITES

ALTOSID® Pellets WSP are effective against *Anopheles*, *Culex*, *Culiseta*, *Aedes*, *Ochlerotatus*, *Coquillettidia*, *Mansonia* and *Psorophora* mosquito species. Use pouches to treat small bodies of water such as: catch basins, storm drains, roadside ditches, tree holes, flooded crypts, transformer pits, fish ponds, woodland pools, fountains, septic tanks, ornamental ponds, manmade depressions, animal watering troughs, ditches, and other natural or artificial water-holding containers.

APPLICATION RATE

Place one pouch into each catch basin. For other mosquito breeding sites, one pouch will treat up to 135 ft² of surface area. **ALTOSID® Pellets WSP** will provide up to 30 days control of emerging adult mosquitoes.

STORAGE AND DISPOSAL

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

Storage: Store closed containers of ALTOSID® Pellets WSP in a cool, dry place.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of

on site or at an approved waste disposal facility.

Container Handling: Outer foil-lined pouch of water soluble packets: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or dispose of empty outer foil pouch in the trash as long as WSP is unbroken.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, expressed or implied, concerning the use and handling of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information or in case of an emergency,
call 1-800-248-7763.

www.centralmosquitocontrol.com

Produced for:

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173

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September, 2022
Schaumburg, IL



Altosid[®]

LIQUID LARVICIDE MOSQUITO GROWTH REGULATOR



PREVENTS ADULT MOSQUITO EMERGENCE (*Including those which may transmit West Nile virus, Zika, chikungunya and dengue*)

For control of mosquito larvae using ULV application

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6)..... 5%

OTHER INGREDIENTS: 95%

TOTAL: 100%

Formulation contains 0.43 lb/gal (51.3 g/liter) active ingredient

EPA REG. NO. 2724-392 EPA EST. NO. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS

BECAUSE OF THE UNIQUE MODE OF ACTION OF **A.L.L.**, SUCCESSFUL USE REQUIRES FAMILIARITY WITH SPECIAL TECHNIQUES FOR APPLICATION TIMING AND TREATMENT EVALUATION. SEE **GUIDE TO PRODUCT APPLICATION** OR CONSULT LOCAL MOSQUITO ABATEMENT AGENCY.

PRECAUTIONARY STATEMENTS – HAZARDS TO HUMANS – CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

FIRST AID

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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

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

CHEMIGATION

Refer to supplemental labeling entitled “**Guide to Product Application**” for use directions for chemigation. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed.

MIXING AND HANDLING INSTRUCTIONS

1. **SHAKE WELL BEFORE USING.** Zoëcon[®] Altosid[®] Liquid Larvicide Mosquito Growth Regulator (**A.L.L.**) may separate on standing and must be thoroughly agitated prior to dilution.
2. Do not mix with oil; use clean equipment.
3. Partially fill spray tank with water; then add the labeled amount of **A.L.L.**, agitate and complete filling. Mild agitation during application is desirable.
4. Use spray solution within 48 hours; always agitate before spraying.

APPLICATION INSTRUCTIONS

Introduction: **A.L.L.** must be applied to 2nd, 3rd, or 4th larval instars of target mosquitoes to prevent adult emergence. Treated larvae continue normal development to the pupal stage where they die. This insect growth regulator **has no effect when applied to pupae or adult mosquitoes.** **A.L.L.** has sufficient field life to be effective at appropriate rates when applied to larval stages under varying field conditions. For further information, see **Guide to Product Application**.

METHODS OF APPLICATION

Aerial: **A.L.L.** may be applied by aircraft to terrestrial locations where mosquito breeding occurs. Use the prescribed amount of **A.L.L.** listed below in sufficient water to give complete coverage. One-half to 5 gallons of spray solution per acre is usually satisfactory. Do not apply when

weather conditions favor drift from areas treated.

Ground: Determine the average spray volume used per acre by individual operators and/or specific equipment. Mix **A.L.L.** in the appropriate volume of water to give the rate per acre as indicated below.

For Control of Mosquito Larvae Using ULV Application: For ground and aerial application to terrestrial sites, apply at the rate of 3-4 fluid ounces of product per acre to water-holding containers and other small bodies of water that breed mosquitoes. Use equipment capable of applying a fine mist or ULV. Follow equipment manufacturer's recommendations when making applications. Direct spray applications to sites where mosquitoes breed. These sites include: tires and tire piles, potted plants, tree holes, garbage bins, cans, birdbaths, rain barrels, and other water-holding containers and small bodies of water.

For aerial application to terrestrial sites, apply by fixed wing or rotary aircraft. Apply at the rate of 3 – 4 fluid ounces of product to acre diluted with water at a minimum of a 1:1 mix ratio with water. Apply using ULV equipped and capable aircraft. Unlike ULV sprays targeting flying mosquitoes, it is important that spray droplets deposit in targeted areas. Target terrestrial areas where mosquitoes breed. These sites include tires, open containers, garbage bins, birdbaths, and gutters, which hold small amounts of water. Spray equipment must be adjusted so that the volume median diameter (VMD) produced ranges from 60 microns ($Dv_{0.5} < 60\mu$) to 100 microns ($Dv_{0.5} < 100\mu$), and that 90% of the spray is contained in droplets smaller than 200 microns ($Dv_{0.9} < 200\mu$). Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be calibrated annually to confirm that nozzle flow rate(s) are accurate. Do not apply at altitudes below 100 feet unless using unmanned aircraft designed for low application heights. Apply when wind speed on the ground is ≥ 1 mph and ≤ 10 mph. Apply when wind factors promoting drift are low. For best results, use Global Positioning System (GPS) equipped aircraft.

APPLICATION RATE

Apply 3 to 4 fl oz of **A.L.L.** per acre (219 to 293 ml/hectare) in water as directed.

For Control of Mosquito Larvae Using ULV Application: Apply at 3-4 ounces per acre. Reapply as breeding sites become reinfested or when monitoring indicates an increase in adult populations.

APPLICATION SITES

Pastures: **A.L.L.** may be applied after each flooding without removal of grazing livestock.

Rice: **A.L.L.** must be applied to 2nd, 3rd, and/or 4th instar larvae of mosquitoes found in rice, usually within 4 days

after flooding. **A.L.L.** treatment may be repeated with each flooding.

Intermittently Flooded Noncrop Areas: **A.L.L.** may be applied as directed above when flooding may result in floodwater mosquito hatch.

Typical sites include: freshwater swamps and marshes, salt marshes, woodland pools and meadows, dredging spoil sites, drainage areas, waste treatment and settling ponds, ditches and other natural and manmade depressions.

Crop Areas: **A.L.L.** may be applied to irrigated croplands after flooding to control mosquito emergence. Examples of such sites are: vineyards, rice fields (including wild rice), date palm orchards, fruit and nut orchards, and berry fields and bogs. Irrigated pastures may be treated after each flooding **without** the removal of grazing livestock.

In dense vegetation or canopy areas: Apply an **A.L.L.** sand or BIODAC® mixture using standard granular dispersal equipment. For detailed preparation instructions, refer to **Guide to Product Application**.

TANK MIXING INSTRUCTIONS

The user, at his discretion, can tank-mix **A.L.L.** with registered adulticides or other larvicides such as *Bacillus thuringiensis* variety *israeliensis* (B.t.i.) or *Bacillus sphaericus* (B.s.) unless the tank-mix product label prohibits such mixing. Use the resulting tank mixture in accordance with the more restrictive label limitations and precautions.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Pesticide Storage:** Store in cool place. Store product away from other pesticides, food, and feed. In case of leakage or spill, soak up with sand or another absorbent material. **Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container Handling:** 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 $\frac{1}{4}$ 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For information, call **1-800-248-7763** or visit our Web site: **www.centralmosquitocontrol.com**

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



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February 2017
Schaumburg, IL



Altosid®

LIQUID LARVICIDE CONCENTRATE



PREVENTS ADULT MOSQUITO EMERGENCE (*including those which may transmit West Nile virus, Zika, chikungunya and dengue*)

For control of mosquito larvae using ULV application

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6).....20%

OTHER INGREDIENTS:80%

TOTAL:100%

Formulation contains 1.72 lb/gal (205.2 g/liter) active ingredient

EPA REG. NO. 2724-446 EPA EST. NO. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS

BECAUSE OF THE UNIQUE MODE OF ACTION OF **A.L.L.**, SUCCESSFUL USE REQUIRES FAMILIARITY WITH SPECIAL TECHNIQUES FOR APPLICATION TIMING AND TREATMENT EVALUATION. SEE **GUIDE TO PRODUCT APPLICATION** OR CONSULT LOCAL MOSQUITO ABATEMENT AGENCY.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS

AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. 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, 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.

FIRST AID

Call a poison control center or doctor immediately for treatment advice.

(continued)

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.

If on skin or clothing • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15–20 minutes.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

DIRECTIONS FOR USE

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

MIXING AND HANDLING INSTRUCTIONS

1. **SHAKE WELL BEFORE USING.** Zoëcon® Altosid® Liquid Larvicide Concentrate (A.L.L.) may separate on standing and must be thoroughly agitated prior to dilution.
2. Do not mix with oil; use clean equipment.
3. Partially fill spray tank with water; then add the labeled amount of **A.L.L.**, agitate, and complete filling. Mild agitation during application is desirable.
4. Use spray solution within 48 hours; always agitate before spraying.

APPLICATIONS

Mosquito Control: **A.L.L.** must be applied to 2nd, 3rd, or 4th larval instars of target mosquitoes to prevent adult emergence. Treated larvae continue normal development to the pupal stage where they die. This insect growth regulator **has no effect when applied to pupae or adult mosquitoes.** **A.L.L.** has sufficient field life to be effective at label rates when applied to larval stages under varying field conditions. For further information, see **Guide to Product Application.**

For Control of Mosquito Larvae Using ULV Application: For

ground and aerial application to terrestrial sites, apply at the rate of $\frac{3}{4}$ - 1 fluid ounce of product per acre to water-holding containers and other small bodies of water that breed mosquitoes. Use equipment capable of applying a fine mist or ULV. Follow equipment manufacturer's recommendations when making applications. Direct spray applications to sites where mosquitoes breed. These sites include tires and tire piles, potted plants, tree holes, garbage bins, cans, birdbaths, rain barrels, and other water-holding containers and small bodies of water.

For aerial application to terrestrial sites, apply by fixed wing or rotary aircraft. Apply at the rate of $\frac{3}{4}$ - 1 fluid ounce of product to acre diluted with water at a minimum of a 1:1 mix ratio with water. Apply using ULV equipped and capable aircraft. Unlike ULV sprays targeting flying mosquitoes, it is important that spray droplets deposit in targeted areas. Target terrestrial areas where mosquitoes breed. These sites include tires, open containers, garbage bins, birdbaths, and gutters holding small amounts of water. Spray equipment must be adjusted so that the volume median diameter (VMD) produced ranges from 60 microns ($Dv_{0.5} < 60\mu$) to 100 microns ($Dv_{0.5} < 100\mu$), and that 90% of the spray is contained in droplets smaller than 200 microns ($Dv_{0.9} < 200\mu$). Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be calibrated annually to confirm that nozzle flow rate(s) are accurate. Do not apply at altitudes below 100 feet unless using unmanned aircraft designed for low application heights. Apply when wind speed on the ground is ≥ 1 mph and ≤ 10 mph. Apply when wind factors promoting drift are low. For best results, use Global Positioning System (GPS) equipped aircraft.

METHODS OF APPLICATION

Aerial: Apply **A.L.L.** by aircraft to terrestrial locations where mosquito breeding occurs. Use the amount of **A.L.L.** listed below in sufficient water to give complete coverage. One-half to 5 gallons of spray solution per acre is usually satisfactory. Do not apply when weather conditions favor drift from areas treated.

Ground: Determine the average spray volume used per acre by individual operators and/or specific equipment. Mix **A.L.L.** in the appropriate volume of water to give the rate per acre shown below.

APPLICATION RATE

Apply $\frac{3}{4}$ to 1 fl oz of **A.L.L.** per acre (55 to 73 ml/hectare) in water as directed.

For Control of Mosquito Larvae Using ULV Application: Apply at $\frac{3}{4}$ - 1 ounce per acre. Reapply as breeding sites become reinfested or when monitoring indicates an increase in adult populations.

APPLICATION SITES

Pastures: **A.L.L.** may be applied after each flooding without removal of grazing livestock.

Rice: **A.L.L.** must be applied to 2nd, 3rd, and/or 4th instar

larvae of mosquitoes found in rice, usually within 4 days after flooding. **A.L.L.** treatment may be repeated with each flooding.

Intermittently Flooded Noncrop Areas: Apply **A.L.L.** as directed above when flooding may result in floodwater mosquito hatch. Typical sites include: freshwater swamps and marshes, salt marshes, woodland pools and meadows, dredging spoil sites, drainage areas, waste treatment and settling ponds, ditches and other natural and manmade depressions.

Crop Areas: Apply **A.L.L.** to irrigated croplands after flooding to control mosquito emergence. Examples of such sites are: vineyards, rice fields (including wild rice), date palm orchards, fruit and nut orchards, and berry fields and bogs. Irrigated pastures may be treated after each flooding **without** removal of livestock.

Dense Vegetation or Canopy Areas: Apply an **A.L.L.** sand mixture using standard granular dispersal equipment. For detailed preparation instructions, refer to **Guide to Product Application**.

TANK MIXING INSTRUCTIONS

The user, at his discretion can mix **A.L.L.** with a registered adulticide or other larvicide, such as *Bacillus thuringiensis*, variety *israeliensis* (*B.t.i.*) or *Bacillus sphaericus* (*B.s.*) unless the tank mix product label prohibits such mixing. Use of the resulting tank mixture must be used in accordance with the more restrictive label limitations and precautions.

Chemigation: Refer to supplemental labeling entitled **Guide to Product Application** for use directions for chemigation. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Pesticide Storage:** Store in a cool place, away from other pesticides, food and feed. In case of leakage or spill, soak up with sand or another absorbent material.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container Handling:** 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 $\frac{1}{4}$ 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. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For information, call **1-800-248-7763** or visit our Web site: **www.centralmosquitocontrol.com**

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



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March, 2017
Schaumburg, IL



Altosid[®] P35



An extended residual INSECT GROWTH REGULATOR GRANULAR PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE (including those mosquitoes which may transmit diseases, including West Nile virus, Dengue, Chikungunya, and the Zika virus)

Controls mosquitoes for up to 35 days of continuous wet conditions

Dust free formula

Controls *Aedes*, *Culex*, *Psorophora*, *Anopheles*, *Coquillettidia*, *Mansonia*, *Ochlerotatus*, and other mosquitoes

Consistent size granule

May be applied to both crop and non-crop sites

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6)..... 4.25%

OTHER INGREDIENTS: 95.75%

TOTAL: 100.00%

EPA REG. NO. 89459-95 EPA EST. NO. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS

Causes moderate eye irritation. Avoid contact with eyes or clothing. Due to the size and abrasiveness of the granule, use protective eyewear and clothing to minimize exposure during loading and handling. 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.

FIRST AID

If in eyes	<ul style="list-style-type: none">• 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.
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Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

INTRODUCTION

Zoecon[®] Altosid[®] P35 (Altosid[®] P35) larvicide is used against mosquito larvae in a variety of habitats. Altosid[®] P35 provides consistent release of the Insect Growth Regulator (IGR), S-Methoprene to provide residual control for multiple broods for up to 35 days of continuous wet conditions. Altosid[®] P35, when applied to the water column releases effective levels of the IGR to begin affecting larval development thereby preventing adult mosquito emergence. Altosid[®] P35 controls the major species of mosquitoes including: *Aedes*, *Anopheles*, *Psorophora*, *Culex*, *Culiseta*, *Ochlerotatus*, *Coquillettidia* and *Mansonia* spp.

DIRECTIONS FOR USE: It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

GENERAL DIRECTIONS: Altosid[®] P35 begins releasing effective levels of IGR soon after application to inhibit and prevent the emergence of adult mosquitoes for up to 35 days after application. Continue applications throughout the entire season to maintain control. IGR treated larvae continue to develop normally to the pupal stage where they die.

Rotary and fixed-wing aircraft equipped with granular spreaders capable of applying rates listed below may be used to apply Altosid[®] P35. Ground equipment which will achieve even coverage at these rates may also be used. Apply Altosid[®] P35 uniformly and repeat application as necessary.

NOTE: Altosid[®] P35 has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

APPLICATION TIMING: Apply **Altosid® P35** at any stage of larval mosquito development. Granules may be applied 7 to 15 days prior to flooding (i.e., "pre-hatch" or "pre-flood") in areas which flood. In such areas, one application of **Altosid® P35** can prevent adult mosquito emergence from several subsequent wetting events. The actual length of control depends on the duration and frequency of wetting events.

APPLICATION RATES: **Altosid® P35** controls the major species of mosquitoes including: *Aedes*, *Anopheles*, *Psorophora*, *Culex*, *Culiseta*, *Coquilleidia* and *Mansonia* spp. Apply **Altosid® P35** at 2.5 - 20 lb/acre (5.6 - 11.2 kg/ha). Within these ranges, use lower rates when water is shallow [$< 6''$ -12"] and vegetation and/or organic matter are minimal. Use higher rates when water is deep [> 1 foot] and/or vegetation and organic matter are heavy. In water depths greater than 2 feet, double the application rate for each subsequent foot of water. Depending on water depth and degree of organic matter, lower use rates may provide less IGR residual. Application of **Altosid® P35** to sites subject to water flow or exchange will diminish the product's effectiveness and residual activity, which may require higher application rates and/or more frequent applications.

APPLICATION SITES: **Altosid® P35** may be applied to both crop and non-crop areas as directed above to temporary and permanent sites which support mosquito larval development. Examples of such sites include: snow pools, salt and tidal marshes, freshwater swamps and marshes (cattail, red cedar, white maple marshes), woodland pools and meadows, dredging spoil sites, drainage areas, ditches, wastewater treatment facilities, livestock runoff lagoons, retention ponds, harvested timber stacks, swales, storm water drainage areas, sewers, catch basins, tree holes, animal watering troughs, water-holding receptacles (e.g., tires, urns, bird baths, flower pots, cans, and other containers), irrigated and non-irrigated pastures, hoof prints and other natural and manmade water-holding sites, containers and depressions. Examples of crop areas include: irrigated croplands, pastures, rangeland, vineyards, rice fields (domestic and wild), date palm, citrus, fruit and nut orchards, berry fields, bogs and row crops.

STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage or disposal. **Pesticide Storage:** Store closed containers in a cool, dry place. **Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container Handling (Paper/Plastic Bags):** Nonrefillable container. Do not reuse or refill this container. Completely empty container into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(For refillable totes): Refillable container. Refill this container with this product only. Do not reuse this container for any other purpose. Return empty container to Central Garden & Pet Company [Central Life Sciences] for cleaning and recycling. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. If the container is not returned, completely empty container by tapping sides and bottom to loosen material. Then offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

WARRANTY

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The Directions for Use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Central Garden & Pet Company. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Central Garden & Pet Company makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Central Garden & Pet Company is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Central Garden & Pet Company disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

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

For information, call **1-800-248-7763** or visit our Web site: **www.centralmosquitocontrol.com**

Manufactured for:

Central Garden & Pet Company
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173

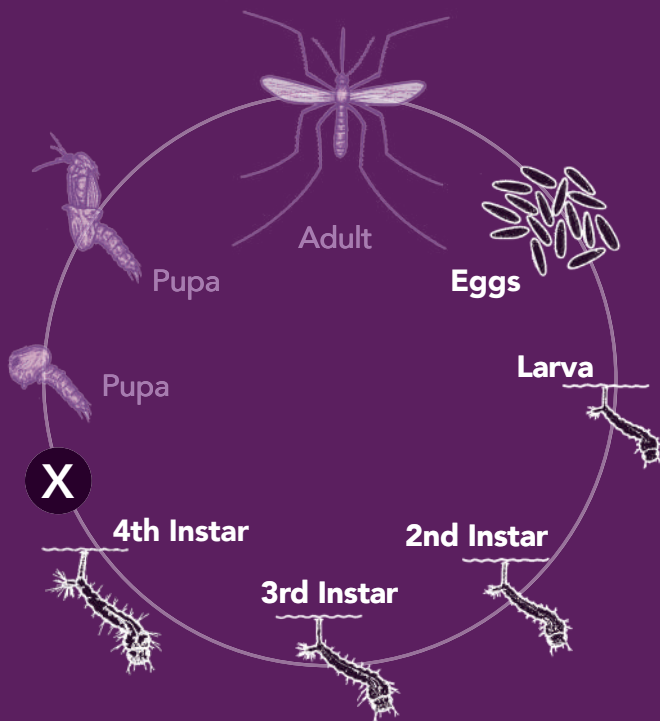


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October 2017
Schaumburg, IL

DUPLEX™

Following in the footsteps of our founder's trailblazing discovery of (S)-methoprene, we're proud to unveil our latest innovation: Duplex™-G. Duplex™-G offers dual-action control, helping you double down on coverage with both a biorational control agent and a biological control agent.



X Duplex™-G is effective in knocking down mosquitoes from the larvae through the 4th instar life stages.

The biological agent provides a quick kill, and you'll see dead larvae within 24-72 hours. The biorational agent provides a long residual, with larvae control up to 28 days with continuous flooding.



ONE PRODUCT. TWO CONTROLS.

(S)-Methoprene: The biorational control agent is an insect growth regulator (IGR) that interrupts the normal development of mosquito larvae without impacting non-target mammals, waterfowl, fish or beneficial predatory insects.

As the core control agent, (S)-methoprene increases residual effectiveness, releasing over a 28-day period when continually flooded. In situations where occasional flooding predominates, the (S)-methoprene core stops releasing when the habitat dries and resumes releasing as the habitat refloods. Control release technology has been optimized along with stability enhancements.

Bacillus thuringiensis subspecies israelensis (Bti) Strain BMP 144: The biological control agent layered on the outer shell is a feeding toxin to mosquito larvae without environmental impacts.

On the outer shell, *Bti* is also mixed with a floating agent, a release agent and an application protectant. The release agent will only deliver *Bti* to the water column when flooded. This ability allows for the pre-treatment of habitats prior to flooding. The release agent is referred to as Active Booster Release Technology. Water activates the release mechanisms that cause the separation of *Bti* and the floating agent from the (S)-methoprene core. Once the *Bti* and floating agent reach the water surface, the water surface's tension begins to separate the floating agent and *Bti*, causing the *Bti* to be bioavailable to mosquito larvae.

ACTIVE INGREDIENTS

- 5.35% *Bacillus thuringiensis subspecies israelensis (Bti) Strain BMP 144* solids, spores and insecticidal toxins
- 1.6% (S)-Methoprene



DUPLEX™ FORMULATION

DUPLEX™-G (GRANULES)

With consistent size, Duplex™-G granules offer a quick kill and a long residual in a formulation that provides calibration ease and normalized swath characterization for ground and aerial application equipment. It is a heavy granule with high bulk density, allowing for habitat penetration, no-drift application and on-target delivery to mosquito breeding habitats. Duplex™-G granules can be used as a pre-flood treatment on mosquito breeding habitats before water inundation from planned irrigation, snowmelt and rainfall. Active Booster Release Technology allows for 14-day pre-treatment in dry habitats and quickly releases the *Bti* into the "kill zone."



Duplex™-G Features:

- Quick kill with long residual
- Controls most species of mosquito larvae
- Active Booster Release Technology
- 14-day pre-treatment ability in dry habitats
- High bulk density
- Uniform granule size
- *Bti* kills 1st through 4th instar mosquito larvae

Duplex™-G Benefits:

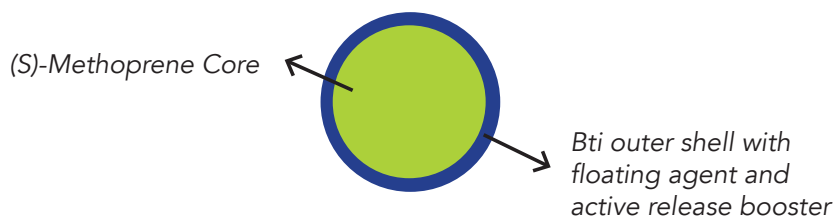
- No bioaccumulation of active ingredients
- Consistent product application through both ground and aerial equipment
- Excellent foliage penetration
- (S)-Methoprene disrupts adult mosquito development
- Consistent flow through application equipment
- Wide application range; 2.5 to 20 lbs per acre

Application Sites:

Duplex™-G granules can be applied to catch basins, crop areas, freshwater swamps, marshes, pastures, ponds, residential areas, storm drains, waste treatment and water-holding containers.

GRANULE DESIGN

The active ingredient *Bti* makes up the outer shell. The *Bti* is controlled by a release agent that only releases it when the water column is flooded, allowing for pre-flood treatment. When in water, the release agent allows *Bti* to separate from the (S)-methoprene core of the granule and float to the water surface.



IMPROVES RESISTANCE MANAGEMENT

With two modes of action, Duplex™-G granules help with resistance management. By combining the two active ingredients into a single product treatment, it eliminates the need for product rotation, creating fewer applications and less work for you.

DESIGNED FOR OPTIMAL ENVIRONMENTAL COMPATIBILITY

Since 1968, Central Life Sciences has been dedicated to creating mosquito control solutions that are environmentally conscious. Duplex™ is no different. While Duplex™ has two control agents, both agents are broken down by the environment over a short time, which prevents the bioaccumulation of active ingredients in the environment. And (S)-methoprene disrupts adult mosquito development, providing an environmental solution to controlling mosquitoes.

DUPLEX™-G EFFICACY DATA*

SPECIES: ANOPHELES QUADRIMACULATUS				
Application		BTI Percent Control		
lbs/acre	Water Depth	24 hrs	48 hrs	72 hrs
5	6 inches	96%	100%	100%
7.5	12 inches	99%	100%	100%
15	24 inches	99%	100%	100%

SPECIES: ANOPHELES QUADRIMACULATUS					
Application		(S)-Methoprene Emergence Inhibition			
lbs/acre	Water Depth	7 days	14 days	21 days	28 days
5	6 inches	BTI*100	100%	100%	89%
7.5	12 inches	BTI*100	100%	100%	99%
15	24 inches	BTI*100	100%	100%	88%

SPECIES: OCHLEROTATUS TAENIORHYNCHUS OR AEDES TAENIORHYNCHUS

Application		BTI Percent Control		
lbs/acre	Water Depth	24 hrs	48 hrs	72 hrs
2.5	4 inches	38%	75%	80%
5	6 inches	76%	100%	100%
7.5	12 inches	94%	100%	100%
7-DAY PRE-TREATMENT				
10	12 inches	100%	100%	100%

SPECIES: OCHLEROTATUS TAENIORHYNCHUS OR AEDES TAENIORHYNCHUS

Application		(S)-Methoprene Emergence Inhibition			
lbs/acre	Water Depth	7 days	14 days	21 days	28 days
2.5	4 inches	BTI*100	98%	36%	3%
5	6 inches	BTI*100	BTI*100	100%	82%
7.5	12 inches	BTI*100	BTI*100	100%	97%
7-DAY PRE-TREATMENT					
10	12 inches	BTI*100	BTI*100	100%	100%

*Entomology consultants LLC test data. 6 reps per treatment. Used Mulla's formula for BTI assessments. (S)-Methoprene assessments used percent emergence inhibition recorded by days after treatment.

NOTES

DUPLEX™-G TESTING PROTOCOL

INTRODUCTION:

Duplex™-G is a unique dual-active larvicide that consists of a *Bti* coated (S)-methoprene sand-based granule. At application, the *Bti*-coating is released and will begin controlling larvae immediately. Within hours of application after the *Bti* release, (S)-methoprene will begin releasing and controlling adult emergence. During the initial application, you will get both *Bti* and IGR effects. After the first week post-application, there will be IGR effects only.

To evaluate the effectiveness of an application, there are a few simple steps to take that are outlined in the following protocol. Since Duplex™-G is a dual-action larvicide, the first indicators of effectiveness will be direct mortality to larvae caused by *Bti*. After an application, observations should be made in the first 72 hours to determine mortality. Dip counts taken at various locations at the treated site are a good way to observe larval mortality. The *Bti* effectiveness will decline after the first 72 hours following the initial application.

Once the *Bti* effectiveness has declined, the IGR effect from (S)-methoprene will control subsequent broods of mosquito larvae for up to 28 days post-treatment. Dip counts are still a good way to evaluate control but the evaluation procedures are different. Pupae must be collected from the field and held in the lab to determine the inhibition of adult emergence. Collecting larvae is not an effective method for determining inhibition of adult emergence. Mosquito larvae must be in a treated environment upon molting to pupae. Water brought back from the treatment site will lose (S)-methoprene and there may not be enough left in the water to cause an effect.



DUPLEX™-G FIELD TESTING GUIDELINES:

Pre-treatment larval abundance (first and second instar larvae, third and fourth instar larvae, and pupae) should be recorded in both experimental and control sites. The sampling method should be appropriate to the type of breeding habitat, and the appropriate number of samples should be taken from each habitat based on the type and size of the habitat. Larval instars and pupae from each sample are counted and recorded.

Post-treatment larval abundance (all stages) should be monitored 24, 48 and 72 hours post-application and then weekly. Data should be recorded in a lab book or prepared data sheets. 10 random dip counts at each location will be recorded on the provided form for the first 72 hours minimum. *Bti* effects from Duplex™-G can persist for a week in some cases and should be monitored accordingly. After the first 48 hours, pupae may be collected if available and reared out for inhibition of emergence calculations. Inhibition of emergence begins at application, but waiting 48 hours after the initial treatment ensures that all pupae collected have developed in the presence of (S)-methoprene.

Collection of pupae starts at 48 hours, 1 week, 2 week, 3 week, 4 week and 5 week post-treatment, if possible.

Characterization of the habitats in terms of abiotic and biotic factors aids the interpretation of results. Rainfall and any change in water level or other parameters, such as algal bloom, water quality, outflow, temperature or predators in the habitats, should be recorded.

HELPFUL EVALUATION TIPS:

- Choose a site that is readily accessible containing abundant larval populations
- Ensure proper calibration of equipment and uniform application
- Existing pupae present at the site of treatment will not be affected by *Bti* or the IGR, wait 48 hours following the application to evaluate pupae for IGR effect
- Untreated sites may be used as a comparison to treatment sites
- Try to collect 25 larvae per dip for *Bti* evaluation and 25 pupae for IGR evaluation
- Record data and observations in a lab book or in prepared data sheets
- Take dip counts at random locations within the treatment site, dip count numbers will vary based on site size and is up to the investigator to determine the appropriate sampling size and location
- Duplex™-G has a range of application rates, it is suggested that on first evaluation 7.5 pounds per acre be used



DATA COLLECTION:

Use data sheets to record dip counts and pupae collected as follows:

1. Record conditions at treatment site and any factors that may affect application.
2. Record pre-treatment larval populations on the data sheet with 10 random dip counts for the treatment and control areas.
3. Make 10 random dip counts in treatment and control (if used) area every 24 hours until control drops below 70%, usually after 96 hours for *Bti* evaluation.
4. Begin collecting pupae (if present) after the first 48 hours and rearing them for emergence calculations.
5. Make pupal collections weekly or when present and check for emergence inhibition until control percentages drop below 70%.
6. Pupae may be collected after the first 48 hours for IGR effects.

CALCULATION METHODS FOR IN-FIELD EFFICACY EVALUATIONS

The efficacy and residual activity of the larvicide is determined from the post-treatment counts of live larvae and pupae in treated and control sites compared with the pre-treatment counts or the control.

The assessment of an IGR's efficacy is based on the inhibition level of adults' emergence and the percentage reduction in larval and pupal densities. Larvae and pupae are sampled as described above.

Adult emergence can be monitored directly in the field by using floating sentinel emergence traps in treated and untreated habitats, by pupal isolation, or by sampling and counting pupal skins. Adult emergence may also be assessed by collecting pupae (20–40 per replicate) and bringing them to the laboratory in appropriate containers with the water from the respective habitats, then transferring them to small cups inside the holding cages. Dead larvae and pupae found in the cups should be removed and any morphological abnormalities recorded.

When adult emergence is monitored in the laboratory using pupae collected from treated and untreated habitats, IE% is calculated using the following formula, on the basis of determining adult emergence from the number of pupae collected:

$$IE(\%) = 100 - \left(\frac{C1}{T1} \right) \times \left(\frac{C2}{T2} \right)$$

Where C1 = the number of larvae in control habitats before treatment, C2 = the number of larvae emerged in control habitats at a given interval after treatment, T1 = the number of larvae in treated habitats before treatment and T2 = the number of larvae in treated habitats after treatment.

$$IE(\%) = \left(\frac{C-T}{C} \right) \times 100$$

Where C = percentage emerging or living in control habitats and T = percentage emerging or living in treated habitats.



Duplex™-G

**A DUAL ACTION extended residual BIOLOGICAL LARVICIDE AND INSECT GROWTH REGULATOR
GRANULAR PRODUCT TO KILL MOSQUITO LARVAE AND PREVENT ADULT MOSQUITO EMERGENCE**
(including those mosquitoes that may transmit diseases, including West Nile virus, Dengue, Chikungunya, and Zika virus)

SPECIMEN LABEL

ACTIVE INGREDIENT:

Bacillus thuringiensis subspecies *israelensis* Strain
BMP 144 solids, spores, and insecticidal toxins*

..... 5.35%

(S)-Methoprene (CAS # 65733-16-6)..... 1.60%

OTHER INGREDIENTS: 93.05%

TOTAL: 100.00%

*Equivalent to 375 International Toxic Units (ITU/mg).

NOTE: The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

EPA REG. NO. 89459-93 EPA EST. NO. 39578-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

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.

HOTLINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Due to the size and abrasiveness of the granule, use protective eyewear and clothing (e.g., waterproof gloves) to minimize exposure during loading and handling. 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.

Mixers/loaders and applicators not in enclosed cabs must wear a NIOSH-approved particulate respirator with any N, P or R filter with NIOSH approval number prefix TC-84A; or a NIOSH-approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of equipment washwater or rinsate.

DIRECTIONS FOR USE: It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Do not apply directly to treated, finished drinking water reservoirs or animal watering troughs.

Zoëcon® Duplex™-G (Duplex™-G) is a unique combination of a *Bacillus thuringiensis* v. *israelensis* (*Bti*) biological larvicide and S-Methoprene Insect Growth Regulator (IGR) that provides dual action control. **Duplex™-G** provides quick kill of existing mosquito larvae and residual control of subsequent broods. This dual combination larvicide is highly effective against multiple broods of mosquitoes in a variety of habitats. **Duplex™-G**, when applied to the water column, releases effective levels of *Bti* to begin killing larvae within 24 hrs. after application. Once the *Bti* has killed existing larvae, the IGR in **Duplex™-G** provides residual control and prevents adult mosquito emergence for up to 28 days when applied at rates of 5 – 20 pounds per acre.

Duplex™-G releases effective levels of the *Bti* biological larvicide for up to 72 hours after application and S-Methoprene insect growth regulator prevents the emergence of adult mosquitoes. Continue applications throughout the entire season to maintain control. IGR treated larvae continue to develop normally to the pupal stage where they die.

Rotary and fixed-wing aircraft equipped with granular spreaders capable of applying rates listed below may be used to apply **Duplex™-G**. Ground equipment that will achieve even coverage at these rates may also be used.

Apply **Duplex™-G** uniformly and repeat at intervals of 14 to 28 days.

NOTE: **Duplex™-G** has no effect on mosquitoes that have reached the pupal or adult stage prior to treatment.

APPLICATION TIMING: Apply **Duplex™-G** at any stage of larval mosquito development. Granules may be applied 7 to 14 days prior to flooding (i.e., "pre-hatch" or "pre-flood") in areas which flood. In such areas, one application of **Duplex™-G** can prevent adult mosquito emergence from several subsequent floodings. The actual length of control depends on the duration and frequency of flooding events.

APPLICATION RATES: **Duplex™-G** controls the major species of mosquitoes including: *Aedes*, *Anopheles*, *Culex*, and *Culiseta*. Apply **Duplex™-G** at 2.5 - 20 lb/acre (5.6 - 11.2 kg/ha). Within these ranges, use lower rates when water is shallow [$<6''$ -12"] and vegetation and/or organic matter are minimal, and use higher rates when water is deep [>1 foot] and vegetation and/or organic matter are heavy. In water depths greater than 2 feet, double the highest application rate for each subsequent foot of water. Depending on water depth and degree of organic matter, lower use rates may provide less IGR residual. Application of **Duplex™-G** to sites subject to water flow or exchange will diminish the product's effectiveness and may require higher application rates and/or more frequent applications. Lower residual activity may be seen at rates used at 5 pounds per acre or less; for consistent 28-day control, use rates at 7.5 pounds per acre or higher.

APPLICATION SITES: **Duplex™-G** may be applied to both crop and non-crop areas as directed above to temporary and permanent sites that support mosquito larval development. Examples of such sites include: snow pools, salt and tidal marshes, freshwater swamps and marshes (cattail, red cedar, and white maple marshes), woodland pools and meadows, dredging spoil sites, drainage areas, ditches, wastewater treatment facilities, livestock runoff lagoons, retention ponds, harvested timber stacks, swales, storm water drainage areas, sewers, catch basins, tree holes, water-holding receptacles (e.g., tires, urns, flower pots, cans, and other containers), irrigated and non-irrigated pastures, hoof prints and other natural and manmade water-holding sites, containers and depressions. Examples of crop areas include: irrigated croplands; pastures; rangeland; vineyards; rice fields (domestic and wild); date palm, citrus, fruit, and nut orchards; berry fields; bogs and row crops.

STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage or disposal. **Pesticide Storage:** Store closed containers in a cool, dry place. **Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. **Container Handling:** **Plastic Bags:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable Totes (2000 lbs): Refillable container. Refill this container with this product only. Do not reuse this container for any other purpose. Return empty totes to Central Garden & Pet Company for cleaning and recycling. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. If the container is not returned, to clean the container before final disposal, completely empty container by tapping sides and bottom to loosen clinging material. Then offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

For information, call 1-800-248-7763 or visit our Web site: www.centralmosquitocontrol.com

WARRANTY: IMPORTANT: READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability. **CONDITIONS:** The Directions for Use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Central Garden & Pet Company. All such risks shall be assumed by the user or buyer. **DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Central Garden & Pet Company makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Central Garden & Pet Company is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Central Garden & Pet Company disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries, or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Central Garden & Pet Company's election, the replacement of product.

Manufactured for:

Central Garden & Pet Company
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



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April, 2017
Schaumburg, IL

STRIKE FORMULATIONS

STRIKE® MIDGE CONTROL

Strike® Midge Control is a microencapsulated formula capable of controlling filter flies and midges throughout an operation where standing water or wastewater is a factor. The active ingredient is protected and time-released, ensuring reach to all breeding sites and areas needing treatment. Strike® Midge Control is ideal for facilities experiencing chironomid midges in areas of the wastewater treatment process.



Strike® Midge Control Features:

- Microencapsulated formula
- Active ingredient (S)-methoprene
- Best for continuous applications and enclosed systems

STRIKE® ULTRA PROFESSIONAL MIDGE CONTROL

Strike® Ultra Professional Midge Control is a water-dilutable, emulsifiable concentrate that prevents the development of filter flies and midges. Strike® Ultra is ideal for treating smaller areas and trickle filters during the low-flow time at your wastewater treatment facilities. As an economical solution, Strike® Ultra is designed for facilities where fly breeding is concentrated and contained to a defined area.



Strike® Ultra Professional Midge Control Features:

- Water-dilutable
- Active ingredient (S)-methoprene
- Economical solution
- Best for trickle filters and small areas

STRIKE® PELLETS

With a 30-day release of the active ingredient (S)-methoprene, Strike® Pellets are specifically formulated to control filter flies, midges and other nuisance aquatic insect species. Strike® Pellets are ideal for ground and aerial applications in aquatic habitats such as wastewater treatment facilities, sewage lagoons, retention ponds, manure runoff areas, holding tanks and evisceration ponds or any natural body of water. Apply Strike® Pellets as uniformly as possible and, in some cases, around the perimeter of large bodies of water to help reduce pests in these areas.



Strike® Pellets Features:

- Insect growth regulator for up to 30 days
- Active ingredient (S)-methoprene
- EPA-approved for use in any natural body of water
- Best for ground and aerial applications

NOTES

STRIKE[®]

Midge Control

PREVENTS THE EMERGENCE OF ADULT FILTER FLIES AND MIDGES
KEEPS INFESTATIONS UNDER CONTROL

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6)..... 20%

OTHER INGREDIENTS:..... 80%

TOTAL:..... 100%

Formulation contains 1.72 lb/gal (205.2 g/l) active ingredient.

EPA REG. NO. 2724-446 EPA EST. NO. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. 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, using tobacco or using the toilet. Remove the wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIRST AID

Call a poison control center or doctor for treatment advice.

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.

If on skin or clothing • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes.

(CONTINUED)

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

INTRODUCTION

STRIKE[®] Midge Control (STRIKE[®]) is a unique product that controls filter flies (*Psychoda* spp.), midges (*Chironomidae*), and other nuisance aquatic insect species infesting waste water facilities. STRIKE[®] contains an Insect growth regulator (IGR) that is effective on the developing stages of insect pests. STRIKE[®] does not kill adults but affects the larval stages as they grow and develop. STRIKE[®] stops the formation of pupa of insect pests, thereby eliminating adult populations. STRIKE[®] stops the cycle of reproduction, keeping pest infestations under control. Continued use of the product prevents these pests from rebounding into unmanageable infestations.

DIRECTIONS FOR USE

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

MIXING AND HANDLING INSTRUCTIONS

1. **SHAKE WELL BEFORE USING.** STRIKE[®] may separate on standing and must be thoroughly agitated prior to dilution.
2. Do not mix with oil; use clean equipment.
3. Partially fill spray container with water; then add the labeled amount of STRIKE[®], agitate, and complete filling. Mild agitation during application is desirable. Accomplish agitation by use of recirculation pump, mixer, air pump, or other suitable equipment.
4. Use spray solution within 48 hours; always agitate before spraying.

APPLICATIONS

Waste Water Treatment Facility Pests: Use STRIKE® in trickling filters, sludge drying beds, clarifiers, holding ponds, lagoons, influent structures, stagnant or standing water, or other areas of waste water treatment facilities where midges, filter flies, and other nuisance aquatic insect pests are a problem.

WHAT TO EXPECT IN WASTE WATER TREATMENT FACILITIES

Continuous Flow Sewage (waste water): In order to achieve effective results, STRIKE® must be applied on a daily basis for at least 2 weeks. Failure to apply the material on a daily basis during the treatment phase may result in erratic results. Following initial applications of STRIKE®, a gradual reduction in the number of adult pests will be seen over approximately a 1 week period. Reduction in adult populations will be very noticeable within a 2 week period following continuous application. Due to varying conditions or heavy infestations, the period to expect control may be longer. Since the mode of action of STRIKE® is to prevent adult emergence, existing adults and pupae present at the time of initial application will complete their life cycle.

If application of STRIKE® is halted following population suppression, rebound of the population can be expected within 2 to 3 weeks after stopping application. For continuous suppression throughout the pest season, continue application of STRIKE®.

Sludge or Solid Waste Applications: For solid waste applications, use 5 fl oz per million gallons of sludge or solids. Apply the dilution until the drying beds have been filled. Following filling of the drying beds, the application of the dilution may be halted. Make applications of the dilution at the influent side as the sludge or solids enter into the drying beds. Application of STRIKE® to solids will prevent the emergence of adult insect pests thereby keeping infestations under control.

METHODS OF APPLICATION

Waste Water Treatment Facilities: Dilute STRIKE® with water prior to use. Apply STRIKE® with a metering pump, drip bucket, or other suitable equipment. Metering pumps are the most efficient and accurate method of application. Appropriate dilution of product will be influenced by the method of application. Depending on the dosage rate, prepare the desired volume of dilution to apply over a 6-8 hour period, or in cases of sludge beds, applied until the beds have been filled. When using delivery devices, it is important to calibrate the device to deliver the required amount of STRIKE® over a 6-8 hour period.

APPLICATION RATE

Waste Water Nuisance Pests: Application - 5 fl ounces of STRIKE® per 1 million gallons of sewage (waste water) in sufficient water to uniformly apply at the influent side over a 24 hour period.

Application to Waste Water – Trickling Filter: Apply 5 fl ounces STRIKE® per 1 million gallons of sewage [waste water] in sufficient water to uniformly apply the material. Apply at times of low periods of flow (typically evening through early morning hours) for 6-8 hours. Discontinue treatment during peak flow periods and repeat applications the following day during the low flow period. Continue this application method for 7 to 10 days or until suppression of pests is achieved. Repeat applications every 15 days or as necessary to control pests.

APPLICATION SITES

Waste Water Treatment Facilities: Apply STRIKE® to sewage as it flows into trickling filters, sludge drying beds, clarifiers, holding ponds, lagoons, influent structures, stagnant or standing water, or other areas of waste water facilities where pests are a problem.

Apply STRIKE® as the sewage enters (influent areas) the targeted processing area. Failure to add the material at the influent side may result in erratic results.

STORAGE AND DISPOSAL: Do not contaminate water, food, or feed by storage or disposal. **Pesticide Storage:** Store in a cool place away from other pesticides, food, and feed. In case of leakage or spill, soak up with sand or another absorbent material. **Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container Handling:** 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. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information, call **1-800-248-7763**.
www.strikeproducts.com

Wellmark International

1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



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October, 2018
Schaumburg, IL

STRIKE[®] Ultra

Professional Midge Control

AN INSECT GROWTH REGULATOR TO PREVENT THE EMERGENCE OF ADULT FILTER FLIES
AND NON-BITING MIDGES IN WASTE WATER TREATMENT FACILITIES

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6)..... 33.6%

OTHER INGREDIENTS*: 66.4%

TOTAL: 100.0%

*Contains petroleum distillates

This product contains 2.5 lb/gallon (288 grams/liter)

(S)-methoprene active ingredient.

EPA REG. NO. 2724-427

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

FIRST AID

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 on skin • 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.

(CONTINUED)

If swallowed • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give ANY liquid to the person. • Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 (24 hrs / 7 days) for emergency medical treatment information.

NOTE TO PHYSICIAN: Contains petroleum distillates – vomiting may cause aspiration pneumonia

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

INTRODUCTION

STRIKE[®] Ultra Professional Midge Control (STRIKE[®] Ultra) is a unique product that controls filter flies (*Psychoda* spp.), non-biting midges (*Chironomidae*), and other nuisance aquatic insect species infesting waste water facilities. STRIKE[®] Ultra contains an Insect growth regulator (IGR) that is effective on the developing stages of insect pests. STRIKE[®] Ultra does not kill adults but affects the larval stages as they grow and develop. STRIKE[®] Ultra stops the formation of pupae of insect pests, thereby controlling adult populations. Continued use of the product prevents these pests from rebounding into unmanageable infestations.

DIRECTIONS FOR USE

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

MIXING AND HANDLING INSTRUCTIONS

Partially fill spray container with water; then add the specified amount of STRIKE[®] Ultra, agitate, and complete filling with water. Agitate mildly during application. To agitate, use recirculation pump, mixer, air pump, or other suitable equipment.

USE APPLICATIONS

Waste Water Treatment Facility Pests: Use STRIKE® Ultra in trickling filters, sludge drying beds, clarifiers, holding ponds, lagoons, influent structures, stagnant or standing water, or other areas of waste water treatment facilities where non-biting midges, filter flies, and other nuisance aquatic insect pests are a problem.

WHAT TO EXPECT IN WASTE WATER TREATMENT FACILITIES

Continuous Flow Sewage (waste water): In order to achieve effective results, apply STRIKE® Ultra daily for 10 days. If applications are not made on a continuous basis, erratic results may occur. Following initial applications of STRIKE® Ultra, a gradual reduction in the number of adult pests will be seen over approximately a 1 week period. Reduction in adult populations will be noticeable within a 2 week period following continuous application. Due to varying weather or climate conditions or heavy infestations, a longer period may be necessary to achieve control. Since STRIKE® Ultra prevents adult emergence, existing adults and pupae present at the time of initial application will not be affected.

If application of STRIKE® Ultra is halted following population suppression, rebound of the population can be expected within 2 to 3 weeks after stopping application. For continuous suppression throughout the pest season, continue applications of STRIKE® Ultra.

Sludge or Solid Waste Applications: For solid waste applications, use 3 fl oz per million gallons of sludge or solids. Apply dilution until the drying beds have been filled. Following filling of the drying beds, halt the application. Apply the dilution at the influent side as the sludge or solids enter the drying beds.

METHODS OF APPLICATION

Waste Water Treatment Facilities: Dilute STRIKE® Ultra with water prior to use. Apply STRIKE® Ultra by using a metering pump, drip bucket, or other suitable equipment. Metering pumps are the most efficient and accurate method of application. The application method will influence appropriate product dilution. Prepare the desired volume of dilution to apply over a 6-8 hour period, or in cases of sludge beds, apply until the beds have been filled. When using delivery devices, calibrate the device to deliver the required amount of STRIKE® Ultra over a 6-8 hour period.

APPLICATION RATE

Waste Water Nuisance Pests: Initial Application - Apply 3 fl oz of STRIKE® Ultra per 1 million gallons of sewage (waste water) in sufficient water to apply uniformly at the influent side.

Application to Waste Water – Trickling Filter: Apply 3 fl oz of STRIKE® Ultra per 1 million gallons of sewage (waste water) in sufficient water to uniformly apply the

material. Apply at times of low periods of flow (typically evening through early morning hours) for 6-8 hours. Discontinue treatment during peak flow periods and repeat applications the following day during the low flow period. Continue this application method for 10 days or until suppression of pests is achieved. Once suppression is achieved, repeat the application every 15 days or as necessary to control pests.

APPLICATION SITES

Waste Water Treatment Facilities: Apply STRIKE® Ultra to sewage as it flows into trickling filters, sludge drying beds, clarifiers, holding ponds, lagoons, influent structures, stagnant or standing water, or other areas of waste water facilities where pests are a problem.

Apply STRIKE® Ultra as the sewage enters (influent areas) the targeted processing area. For best results, apply at the influent side.

STORAGE and DISPOSAL: Do not contaminate water, food, or feed by storage or disposal. **Pesticide Storage-** Store in a cool, dry place. **Pesticide Disposal** - Wastes resulting from use of this product may be disposed of on site or at 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

To the extent consistent with applicable law, seller makes no warranty concerning the use and handling of this product other than indicated on the label. To the extent consistent with applicable law, buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information or in case of an emergency, call **1-800-248-7763**.

www.strikeproducts.com

Manufactured for:

Wellmark International

1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



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January, 2019
Schaumburg, IL

STRIKE[®]

Pellets

PREVENTS NUISANCE MIDGE AND FILTER FLY EMERGENCE
CONTROLS WASTE WATER NUISANCE PESTS

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6)..... 4.25%

OTHER INGREDIENTS:..... 95.75%

TOTAL:..... 100.00%

EPA REG. NO. 2724-448

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

Call a poison control center or doctor for treatment advice.

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.

If on skin or clothing • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

DIRECTIONS FOR USE

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

INTRODUCTION

STRIKE[®] Pellets are a unique product that controls filter flies (*Psychoda* spp.), midges (*Chironomidae*), and other nuisance aquatic insect species infesting waste water facilities. **STRIKE[®]** Pellets contain an Insect Growth Regulator (IGR) that is effective on the developing stages of insect pests. **STRIKE[®]** Pellets do not kill adults but affects the larval stages as they grow and develop. **STRIKE[®]** Pellets stop the formation of pupae of insect pests, thereby eliminating adult populations. **STRIKE[®]** Pellets stop the cycle of reproduction, keeping pest infestations under control. Continued use of the product prevents these pests from rebounding into unmanageable infestations.

GENERAL DIRECTIONS

STRIKE[®] Pellets release effective levels of an Insect Growth Regulator for up to 30 days under typical environmental conditions. Continue treatment through the last brood of the season. Treated larvae continue to develop normally to the pupal stage where they die.

NOTE: This insect growth regulator has no effect on midges or filter flies which have reached the pupal or adult stage prior to treatment.

APPLICATION SITES AND RATES

Use lower application rates when water is shallow, vegetation and/or pollution are minimal, and insect populations are low. Use higher rates when water is deep (>2 ft), vegetation, pollution, and/or organic debris or water flow are high, and insect populations are high. In instances of high organic debris and water flow, residual activity may be diminished.

MIDGE HABITAT	RATES (lb/acre)
Midge larvae occur in natural and manmade aquatic habitats, both permanent and temporary. Examples of these include ditches, streams and ponds, and natural and manmade lakes. Apply pellets uniformly to the water surface. Repeat application as necessary.	5-10
FILTER FLY / MIDGE HABITAT	RATES (lb/acre)
Filter flies and midges are waste water treatment pests inhabiting sludge drying beds, clarifiers, holding tanks or ponds, sewage lagoons, evisceration ponds, paper or food waste ponds, stagnant or standing water, or other areas of waste water treatment facilities where midges, filter flies, and other nuisance aquatic insect pests are a problem.	5-10

APPLICATION METHODS

Midges: Apply **STRIKE**® Pellets up to 15 days prior to flooding, or at any stage of larval development after flooding or in permanent water sites. Fixed wing aircraft or helicopters equipped with granular spreaders capable of applying rates from 5 to 10 lb/acre may be used to apply **STRIKE**® Pellets. The pellets may also be applied using ground equipment which will achieve good, even coverage at the above rates. Apply **STRIKE**® Pellets to artificial containers, such as tires and catch basins, etc.

Waste Water Nuisance Pests: For applications to solid waste, including sludge and retention ponds, use the initial high rate of 10 lb/acre. Immediately following filling of the drying beds, apply the product uniformly to the surface of the bed. Application of **STRIKE**® Pellets to solids will prevent the emergence of adult insect pests thereby keeping infestations under control.

For applications in aquatic habitats, including waste water treatment facilities, evisceration ponds, sewage lagoons, manure runoff areas, retention ponds, and holding tanks, apply **STRIKE**® Pellets as uniformly as possible over the entire surface. In situations where the ponds are large, applications made around the perimeter of the ponds can be helpful in reducing pests. In these situations, apply up to a 20 foot band out from the bank around the pond perimeter.

Apply **STRIKE**® Pellets using suitable application equipment, such as, hand or motorized spreaders, backpack blowers, or aircraft (rotary or fixed wing). Even coverage over the surface of the area to be treated is critical for optimum performance.

What to Expect in Waste Water Facilities: Following initial applications of **STRIKE**® Pellets, a gradual reduction in the number of adult pests will be seen over approximately a one week period. Reduction in adult populations will be noticeable within a two week period following the application. Due to varying conditions or heavy infestations, the period to expect control may be longer. Since the mode of action of **STRIKE**® Pellets is to prevent adult emergence, existing adults and pupae present at the time of initial application will complete their life cycle.

STORAGE AND DISPOSAL: Do not contaminate water, food, or feed by storage or disposal. Store closed containers of **STRIKE**® Pellets in a cool, dry place. **Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container Handling:** Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent). Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

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For information or in case of an emergency, call **1-800-248-7763**. www.strikeproducts.com

Manufactured for:

Central Garden & Pet Company
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173

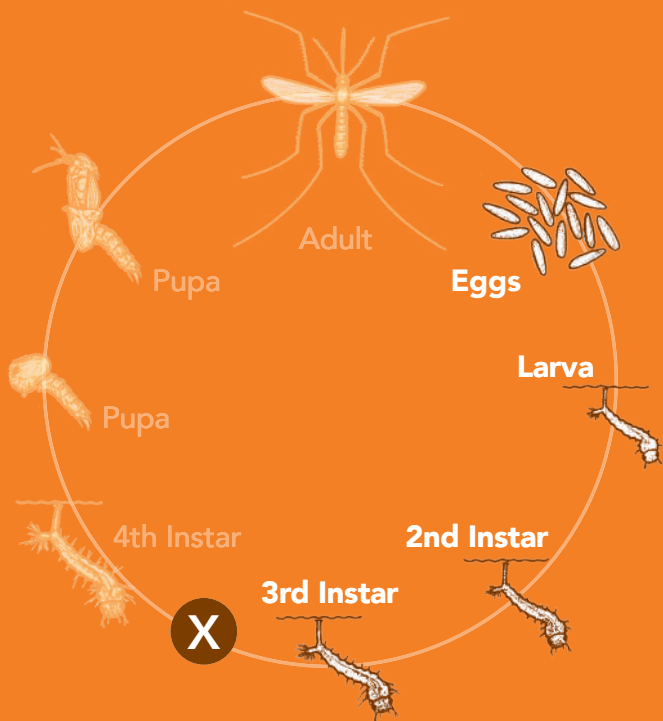


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February 2018
Schaumburg, IL

FOURSTAR® LARVICIDE

FourStar® larvicide is a unique microbial that ends mosquito larval development using naturally occurring bacteria, *Bacillus sphaericus* (Bsph) and *Bacillus thuringiensis israelensis* (Bti). These active ingredients are inherent to soil and contain protein crystals that, when ingested, rupture the gut wall of the larvae causing larval death.



Mosquitoes lay their eggs in standing water, like ponds, ditches and catch basins. FourStar® microbial larvicides can be applied in these areas.

Growing mosquitoes remain in water until they are adults. FourStar® microbial larvicides are effective in the first three instars.

X FourStar® microbial larvicides stop mosquito development prior to the pupal stage.



DESIGNED TO LAST

To enhance performance, FourStar® microbial larvicides contain a dual action release technology. This innovative technology regulates the release of active ingredients to the water surface as well as throughout the water column to ensure a long residual and maximum coverage.

FourStar® products feature:

- Positive environmental profile
- The first microbial (*Bsph/Bti*) to offer extended residual
- Optimized delivery of the active ingredient to target

FOURSTAR® FORMULATION	RESIDUALS	USES
45 DAY BRIQUETS	Up to 45 days	Use in standing water without the fear of harming aquatic life in areas frequented by humans, livestock and wildlife, storm drains, catch basins, underground drainage systems, storm water retention areas, ponds and other potential mosquito breeding areas
90 DAY BRIQUETS	Up to 90 days	
180 DAY BRIQUETS	Up to 180 days	
CONTROLLED RELEASE GRANULE (CRG)	Up to 60 days	Pre-flooding application, standing water, roadside ditches, irrigation ditches, pastures, salt marshes, catch basins and storm drains
BTI CRG (CONTROLLED RELEASE GRANULE)	Up to 40 days	Coastal areas, intermittent floodwater habitat, saltwater areas, sites with canopy vegetation and wet/dry accounts

FOURSTAR® FORMULATIONS

FOURSTAR® BRIQUETS

FourStar® *Bsph/Bti* Microbial Briquets are formulated with control durations of 45, 90 or 180 days. Briquets can be applied to standing water without fear of harming aquatic life as well as in areas frequented by humans, livestock and wildlife. They may also be applied to potential mosquito breeding areas prior to flooding. Wetting and drying will not reduce their effectiveness.



FourStar® *Bsph/Bti* Combination Briquets 45 Day, 90 Day and 180 Day Features:

- Proven microbial active ingredients
- 6% *Bsph* and 1% *Bti*
- Long-term residual control
- Sustained release technology

Application Rate:

To control mosquito larvae, place one briquet in sites to cover up to 100 ft² of surface area. When mosquito populations are high, water is heavily polluted, and/or algae are abundant, double the application rate to two briquets per 100 ft².

FOURSTAR® GRANULES

FourStar® Granules are heavy, high-density and sand-based larvicides designed for mosquito habitats with vegetative canopy. A dual action controlled release technology allows FourStar® Granules to remain effective through wet and dry periods. A variety of formulations can kill mosquito larvae with a range of residual and multiple floodings.

FourStar® Multi-Brood Controlled Release Granule (CRG): When Timing Is Everything

FourStar® CRG granule is the first microbial granule to offer pre-flood application. That means it maintains effectiveness through wet and dry periods. A dual action controlled release technology in FourStar® CRG granule can kill larvae for up to 60 days and four floodings.



FourStar® CRG Features:

- High-density, spherical silica sand carrier
- 9 to 1 (9% *Bsph*/1% *Bti*) combination active ingredients
- Dual action controlled release technology
- Bulk density of 51 lbs/ft³
- Up to 60 days control
- Effective in intermittent flood areas

FourStar® CRG Benefits:

- Can be applied to pre-flood areas
- Wet/dry effectiveness reduces applications
- Active ingredient ratio prevents resistance
- Weight provides optimal vegetation penetration
- Less target drift
- More coverage per application

Application Rate:

FourStar® CRG granule is approved for ground and aerial application at a minimum of 7.5 to 10 lbs per acre, up to 20 lbs per acre.

FourStar® Multi-Brood Controlled Release Granule (Bti CRG)

FourStar® Bti CRG granule is a heavy, high-density and sand-based larvicide designed for both freshwater and saltwater habitats with vegetative canopy. A dual action controlled release technology allows FourStar® Bti CRG granule to remain effective through wet and dry periods. It can kill larvae for up to 40 days and four floodings.



FourStar® Bti CRG Features:

- High-density, spherical silica sand carrier
- 10% *Bti* active ingredient
- Dual action controlled release technology
- Up to 40 days residual
- Effective in intermittent flood areas

FourStar® Bti CRG Benefits:

- Can be applied to pre-flood areas
- Wet/dry effectiveness reduces applications
- Weight provides optimal vegetation penetration
- Less target drift
- More coverage per application

Application Rate:

FourStar® Bti CRG granule is approved for ground and aerial application at a minimum of 7.5 to 10 lbs per acre, up to 20 lbs per acre.

Briquets

Specimen Label

Sustained Release 45 Day Microbial Briquets

ACTIVE INGREDIENTS:

* <i>Bacillus sphaericus</i> 2362, Serotype H5a5b, Strain AML614	6.00%
fermentation solids, spores and insecticidal toxins	
** <i>Bacillus thuringiensis</i> subspecies <i>israelensis</i> Strain BMP 144	1.00%
fermentation solids, spores and insecticidal toxins	

OTHER INGREDIENTS:	93.00%
TOTAL:	100.00%

* Equivalent to *60 Bs ITU/mg and **70 ITU/mg respectively. The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION:

Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. 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. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

ENVIRONMENTAL HAZARDS:

Do not apply to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

FIRST AID

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 by mouth to mouth if possible. • Call poison control center or doctor for treatment advice.
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 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 for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing eyes. • Call poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

DIRECTIONS FOR USE

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

APPLICATION DIRECTIONS

FourStar® Briquets are a highly selective microbial insecticide effective against mosquitoes in a variety of habitats for up to 45 days or more. FourStar® Briquets release effective levels of *Bacillus sphaericus* and *Bacillus thuringiensis* subspecies *israelensis* to the water surface over time as the briquet dissolves.

APPLICATION SITES

FourStar® Briquets can be applied to areas that contain aquatic life, fish and plants, as well as areas used by or in contact with humans, animals, horses, livestock, pets, birds or wildlife. Examples of application sites include, but are not limited to: storm drains, catch basins, underground drainage systems, storm water retention areas, retention ponds, abandoned swimming pools, ornamental fountains and ponds, fish ponds, water gardens, animal drinking troughs, standing water, water holding receptacles, man-made and natural sites where mosquitoes may develop.

APPLICATION RATES

For control of mosquito larvae, place one (1) briquet in sites up to 100 square feet of surface area. For large sites, apply 1 additional briquet for each additional 100 square feet of water surface, regardless of water depth. When mosquito populations are high, water is heavily polluted, and/or algae are abundant, double the above application rate.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place.

Pesticide Disposal: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill empty carton or packaging material. Offer for recycling if available or crush and discard carton in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE TO USER

Seller makes no warranty express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with label instructions.

Always read the label before using this product.

For product information, call 1-800-248-7763 or visit our web site:

www.fourstarmicrobials.com



Manufactured for: B2E Microbials LLC
DBA FourStar Microbials LLC
1501 East Woodfield Road, #200W
Schaumburg, Illinois, 60173 U.S.A.

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EPA Reg. No. 83362-3 | EPA Est. No. 86884-OR-1
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Briquets

Specimen Label

Sustained Release 90 Day Microbial Briquets

ACTIVE INGREDIENTS:

* <i>Bacillus sphaericus</i> 2362, Serotype H5a5b, Strain AML614	6.00%
fermentation solids, spores and insecticidal toxins	
** <i>Bacillus thuringiensis</i> subspecies <i>israelensis</i> Strain BMP 144	1.00%
fermentation solids, spores and insecticidal toxins	

OTHER INGREDIENTS:	93.00%
TOTAL:	100.00%

* Equivalent to *60 Bs ITU/mg and **70 ITU/mg respectively. The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION:

Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. 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. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

ENVIRONMENTAL HAZARDS:

Do not apply to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

FIRST AID

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 by mouth to mouth if possible. • Call poison control center or doctor for treatment advice.
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 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 for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing eyes. • Call poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.	

DIRECTIONS FOR USE

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

APPLICATION DIRECTIONS

FourStar® Briquets are a highly selective microbial insecticide effective against mosquitoes in a variety of habitats for up to 90 days or more. **FourStar® Briquets** release effective levels of *Bacillus sphaericus* and *Bacillus thuringiensis* subspecies *israelensis* to the water surface over time as the briquet dissolves.

APPLICATION SITES

FourStar® Briquets can be applied to areas that contain aquatic life, fish and plants, as well as areas used by or in contact with humans, animals, horses, livestock, pets, birds or wildlife. Examples of application sites include, but are not limited to: storm drains, catch basins, underground drainage systems, storm water retention areas, retention ponds, abandoned swimming pools, ornamental fountains and ponds, fish ponds, water gardens, animal drinking troughs, standing water, water holding receptacles, man-made and natural sites where mosquitoes may develop.

APPLICATION RATES

For control of mosquito larvae, place one (1) briquet in sites up to 100 square feet of surface area. For large sites, apply 1 additional briquet for each additional 100 square feet of water surface, regardless of water depth. When mosquito populations are high, water is heavily polluted, and/or algae are abundant, double the above application rate.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place.

Pesticide Disposal: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill empty carton or packaging material. Offer for recycling if available or crush and discard carton in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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Always read the label before using this product.

For product information, call 1-800-248-7763 or visit our web site:

www.fourstarmicrobials.com



Manufactured for: B2E Microbials LLC
DBA FourStar Microbials LLC
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Schaumburg, Illinois, 60173 U.S.A.

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EPA Reg. No. 83362-3 | EPA Est. No. 86884-OR-1

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Specimen Label

Sustained Release 180 Day Microbial Briquets

ACTIVE INGREDIENTS:

* <i>Bacillus sphaericus</i> 2362, Serotype H5a5b, Strain AML614	6.00%
fermentation solids, spores and insecticidal toxins	
** <i>Bacillus thuringiensis</i> subspecies <i>israelensis</i> Strain BMP 144	1.00%
fermentation solids, spores and insecticidal toxins	

OTHER INGREDIENTS:	93.00%
TOTAL:	100.00%

* Equivalent to *60 Bs ITU/mg and **70 ITU/mg respectively. The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION:

Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. 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. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

ENVIRONMENTAL HAZARDS:

Do not apply to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

FIRST AID	
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 by mouth to mouth if possible. • Call poison control center or doctor for treatment advice.
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 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 for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing eyes. • Call poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.	

DIRECTIONS FOR USE

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

APPLICATION DIRECTIONS

FourStar® Briquets are a highly selective microbial insecticide effective against mosquitoes in a variety of habitats for up to 180 days or more. FourStar® Briquets release effective levels of *Bacillus sphaericus* and *Bacillus thuringiensis* subspecies *israelensis* to the water surface over time as the briquet dissolves.

APPLICATION SITES

FourStar® Briquets can be applied to areas that contain aquatic life, fish and plants, as well as areas used by or in contact with humans, animals, horses, livestock, pets, birds or wildlife. Examples of application sites include, but are not limited to: storm drains, catch basins, underground drainage systems, storm water retention areas, retention ponds, abandoned swimming pools, ornamental fountains and ponds, fish ponds, water gardens, animal drinking troughs, standing water, water holding receptacles, man-made and natural sites where mosquitoes may develop.

APPLICATION RATES

For control of mosquito larvae, place one (1) briquet in sites up to 100 square feet of surface area. For large sites, apply 1 additional briquet for each additional 100 square feet of water surface, regardless of water depth. When mosquito populations are high, water is heavily polluted, and/or algae are abundant, double the above application rate.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place.

Pesticide Disposal: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill empty carton or packaging material. Offer for recycling if available or crush and discard carton in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE TO USER

Seller makes no warranty express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with label instructions.

Always read the label before using this product.

For product information, call 1-800-248-7763 or visit our web site:

www.fourstarmicrobials.com



Manufactured for: B2E Microbials LLC
DBA FourStar Microbials LLC
1501 East Woodfield Road, #200W
Schaumburg, Illinois, 60173 U.S.A.

FourStar and the FourStar design are trademarks of B2E Microbials LLC | Made in USA

EPA Reg. No. 83362-3 | EPA Est. No. 86884-OR-1

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Specimen Label

Multi-Brood Controlled Release Granule

ACTIVE INGREDIENTS:

<i>Bacillus sphaericus</i> Serotype H5a5b, strain 2362 solids,	
AML SPH 88*	9.0%
<i>Bacillus thuringiensis</i> subspecies <i>israelensis</i> Strain BMP 144 solids,	
spores and insecticidal toxins*	1.0%
OTHER INGREDIENTS:	90.0%
TOTAL:	100.0%

* Equivalent to 90 Bs ITU/mg and 70 Bti ITU/mg respectively.

Note: The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID

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 by mouth-to-mouth if possible. • 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 for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing eyes. • Call a poison control center or doctor for treatment advice.
If on skin	<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.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION:

Causes moderate eye irritation. 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, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Mixers / loaders must wear a dust / mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

ENVIRONMENTAL HAZARDS:

Do not contaminate water when disposing of equipment washwaters or rinsate. Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

DIRECTIONS FOR USE

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

APPLICATION DIRECTIONS

FourStar® CRG is a highly selective multi-brood microbial insecticide granule effective against mosquito larvae in a variety of aquatic habitats for up to 60 days. **FourStar® CRG** releases effective levels of *Bacillus sphaericus* and *Bacillus thuringiensis* subspecies *israelensis* to the water surface and throughout the water column over time.

FourStar® CRG can be applied prior to flooding, (i.e. "pre-hatch") to known breeding sites that flood intermittently. In such areas, one application of **FourStar® CRG** prevents adult mosquito emergence for up to four subsequent floodings or up to 60 days. The actual length of control depends on the duration and frequency of flooding events. Alternate wetting and drying will not reduce granule effectiveness.

Apply uniformly according to rates listed below by conventional aerial or ground equipment as needed to maintain mosquito control. Reapply after 60 days under typical environmental conditions. More frequent applications may be made if monitoring indicates that larval populations have reestablished or weather conditions have rendered initial treatments ineffective.

Mosquito species effectively controlled by FourStar® CRG.

- *Aedes vexans*
- *Anopheles quadrimaculatus*
- *Coquillettidia perturbans*
- *Culex spp.*
- *Ochlerotatus melanion* (*Aedes melanion*)
- *Ochlerotatus nigromaculis* (*Aedes nigromaculis*)
- *Ochlerotatus sollicitans* (*Aedes sollicitans*)
- *Ochlerotatus stimulans* (*Aedes stimulans*)
- *Ochlerotatus triseriatus* (*Aedes triseriatus*)
- *Psorophora columbiae*
- *Psorophora ferox*

APPLICATION SITES

Apply **FourStar® CRG** pre-hatch or post-hatch as directed above to temporary and permanent water sites which support mosquito larval development.

FourStar® CRG can be applied to areas that contain aquatic life, fish and plants as well as areas in contact with humans, animals, horses, livestock, pets, birds or wildlife. Examples of application sites include: freshwater marshes, cattail marshes, woodland pools and meadows, grassy swales, floodplains, flood water, standing water, roadside ditches, canals, catch basins, storm drains, storm water collection areas and impoundments, lakes and ponds, abandoned swimming pools, ornamental fountains and ponds, water gardens, water holding receptacles, and other natural and man-made sites where mosquitoes may develop.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential spray drift. The applicator and treatment coordinator are responsible for considering all these factors when making decisions.

APPLICATION RATES

To control mosquito larvae, apply 7.5 to 10 lbs of **FourStar® CRG** per acre. Use 10 to 20 lbs of **FourStar® CRG** per acre where late instar larvae predominate, larval populations are high, water is heavily polluted and/or algae are abundant, or under conditions where local experience indicates the need for higher rates to achieve extended control.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances.

NOTICE TO USER

To the extent consistent with applicable law, seller makes no warranty express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. To the extent consistent with applicable law, user assumes all risks of use, storage or handling not in strict accordance with label instructions.

Specimen Label

Multi-Brood Controlled Release Granule

ACTIVE INGREDIENTS:

<i>Bacillus thuringiensis</i> subspecies <i>israelensis</i> Strain BMP 144 solids, spores and insecticidal toxins*	10%
OTHER INGREDIENTS:	90%
TOTAL:	100%

* Equivalent to 700 International Toxic Units (ITU/mg).

Note: The percent active ingredient does not indicate product performance, and potency measurements are not federally standardized.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION:

Causes moderate eye irritation. 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, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Mixers / loaders and applicators not in enclosed cabs or aircraft must wear gloves and a dust / mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

FIRST AID

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 by mouth-to-mouth if possible. • Call 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 for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing eyes. • Call poison control center or doctor for treatment advice.
If on skin	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call poison control center or doctor for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS:

Do not contaminate water when disposing of equipment washwaters or rinsate. Do not apply to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

DIRECTIONS FOR USE

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

APPLICATION DIRECTIONS

FourStar® Bti CRG is a highly selective multi-brood microbial insecticide granule effective against mosquito larvae in a variety of aquatic habitats for up to 40 days or more. **FourStar® Bti CRG** releases effective levels of *Bacillus thuringiensis* subspecies *israelensis* to the water surface and throughout the water column over time.

FourStar® Bti CRG can be applied prior to flooding (i.e., "pre-hatch") to known breeding sites that flood intermittently. In such areas, one application of **FourStar® Bti CRG** prevents adult mosquito emergence for up to four subsequent floodings. The actual length of control depends on the duration and frequency of flooding events. Alternate wetting and drying will not reduce granule effectiveness.

Apply uniformly according to rates listed below by conventional aerial or ground equipment as needed to maintain mosquito control. Reapply after 40 days under typical environmental conditions. More frequent applications may be made if monitoring indicates that larval populations have reestablished or weather conditions have rendered initial treatments ineffective.

APPLICATION SITES

Apply **FourStar® Bti CRG** pre-hatch or post-hatch as directed above to temporary and permanent water sites, which support mosquito larval development. **FourStar® Bti CRG** can be applied to areas that contain aquatic life, fish and plants, as well as areas in contact with humans, animals, horses, livestock, pets, birds, or wildlife.

Examples of application sites include: tidal water, salt marshes, mangroves, estuaries, freshwater marshes, cattail marshes, woodland pools and meadows, grassy swales, floodplains, flood water, standing water, roadside ditches, canals, woodland pools, catch basins, storm drains, storm water collection areas, retention and detention impoundments, lakes and ponds, abandoned swimming pools, water holding receptacles, and other natural and man-made sites where mosquitoes may develop.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential spray drift. The applicator and treatment coordinator are responsible for considering all these factors when making decisions.

APPLICATION RATES

To control mosquito larvae, apply 7.5 to 10 lbs of **FourStar® Bti CRG** per acre. Use 10 to 20 lbs of **FourStar® Bti CRG** per acre where late instar larvae predominate, larval populations are high, water is heavily polluted, and/or algae are abundant, or under conditions where local experience indicates the need for higher rates to achieve extended control.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

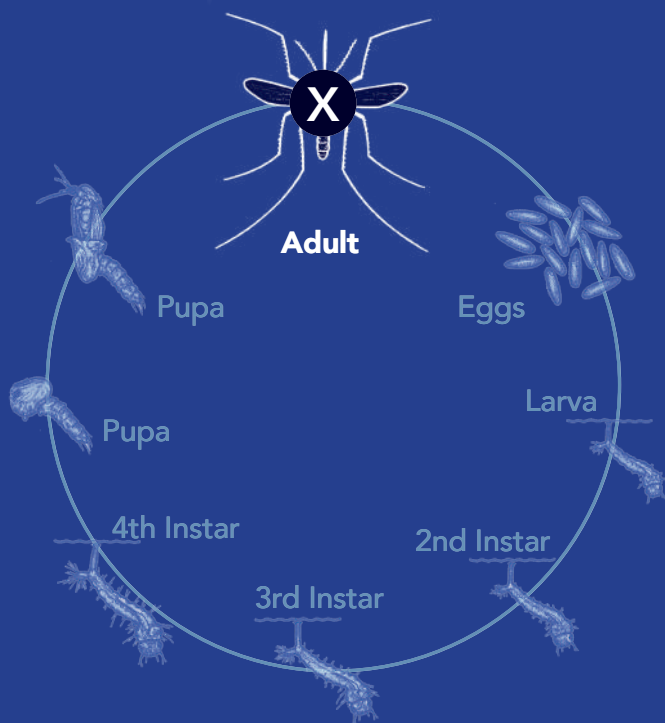
Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances.

NOTICE TO USER

To the extent consistent with applicable law, seller makes no warranty, express or implied, of merchantability, fitness, or otherwise concerning the use of this product other than as indicated on the label. To the extent consistent with applicable law, user assumes all risks of use, storage, or handling not in strict accordance with label instructions.

ZENIVEX® ADULTICIDE

Zenivex® mosquito adulticide gives you alternatives for adult mosquito control – Aqua Zenivex™ E20 (20% Etofenprox), Zenivex® E20 and Zenivex® E4 RTU (4% Etofenprox). It is a high-efficacy, reduced-risk adulticide that provides quick, permanent knockdown and reliable control of adult mosquito populations in most mosquito habitats. The active ingredient Etofenprox is a non-organophosphate, non-carbamate, non-ester pyrethroid with a small environmental footprint.



X Zenivex® mosquito adulticide provides quick, permanent knockdown of adult mosquitoes.



ADULT MOSQUITO CONTROL

The most effective mosquito control programs use adulticides in conjunction with larvicides. This is especially necessary when there are an excessive number of adult mosquitoes in an area or when the outbreak of disease poses a health threat to your community. Aqua Zenivex™ E20, Zenivex® E20 and Zenivex® E4 RTU are mosquito adulticides that will fit into your Integrated Mosquito Management (IMM) program in addition to Altosid® larvicides.

THE ZENIVEX® ADULTICIDE DIFFERENCE

Water-dilutable Aqua Zenivex™ E20, Zenivex® E20 and the ready-to-use (RTU) Zenivex® E4 are low odor formulations that can be used in hand, ground or aerial Ultra Low Volume (ULV) applications. Zenivex® adulticides also require no aquatic setbacks and are approved for use over crops in rural as well as urban settings.

Zenivex® mosquito adulticide features:

- No synergist, therefore no Piperonyl Butoxide (PBO)
- Ultra Low Volume (ULV) usage
- Diluted or undiluted application options
- No aquatic setbacks
- EPA reduced-risk classification

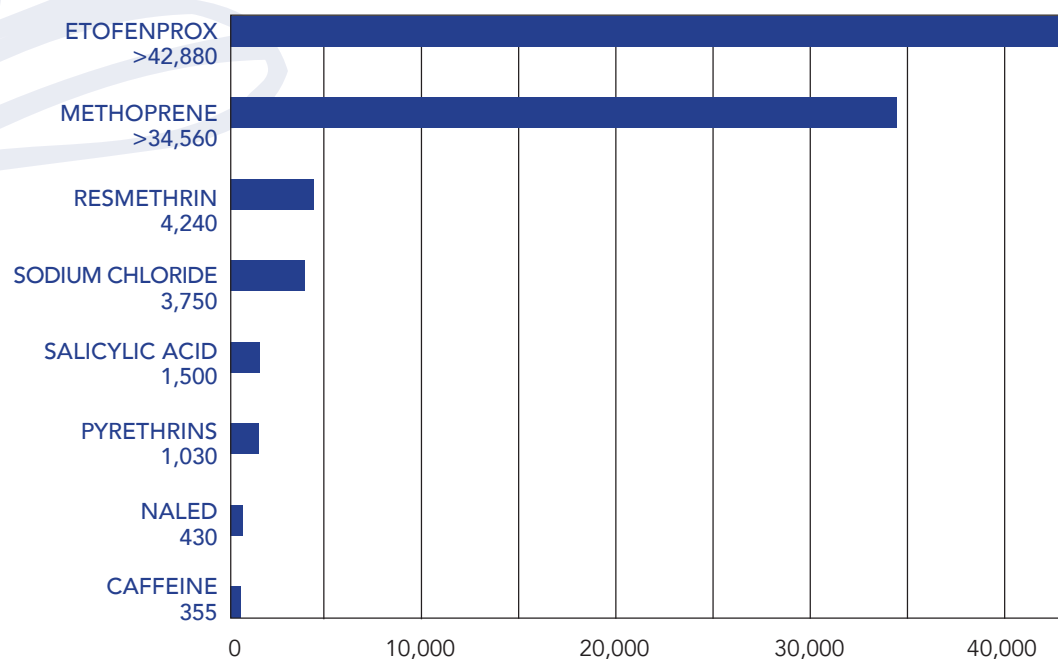
IT'S THE ETOFENPROX

The Etofenprox molecule is a non-organophosphate, non-carbamate, non-ester pyrethroid molecule and is especially effective on mosquito species resistant to organophosphates.



COMPARATIVE ACUTE ORAL TOXICITIES

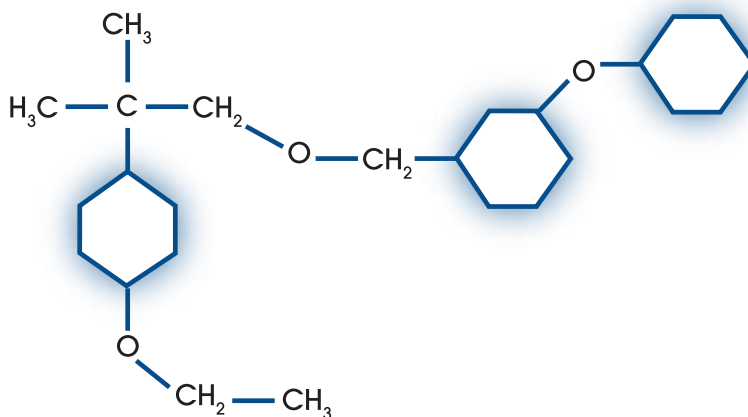
An LD50 is a measure of toxicity. The longer the LD50 bar, the lower the toxicity. Compared to other leading mosquito control products, Etofenprox, the active ingredient in Zenivex® products, is one of the least toxic.



ETOFPENPROX CHEMICAL CHARACTERISTICS

The EPA has classified Etofenprox as reduced risk. Because of the Etofenprox molecule*, Zenivex® mosquito adulticides offer a positive environmental profile. The molecule rapidly breaks down in sunlight and is non-persistent in soil, water and sediment. Compared to the active ingredient in other leading mosquito control products, Etofenprox, the active ingredient in Zenivex® mosquito adulticides, is one of the least toxic to humans and the environment.

*The Etofenprox molecule



FIELD TESTED AND MOSQUITO EFFECTIVE

Efficacy trials for Zenivex® mosquito adulticides have been very successful at all label rates. A battery of tests have been conducted throughout the Northeast, Southeast, South and Western United States on a variety of mosquito species.* The tests involved caged mosquitoes placed up to 300 feet perpendicular to a spray line with mortality checked at timed intervals. Several brands of ULV foggers were used throughout the evaluations, and all of them delivered Zenivex® mosquito adulticide with uniform consistency.



ZENIVEX® TARGETING ALL MOSQUITO SPECIES

Currently Tested Species:

- *Aedes aegypti*
- *Aedes albopictus*
- *Aedes dorsalis*
- *Aedes melanimon*
- *Aedes vexans*
- *Anopheles crucians*
- *Anopheles quadrimaculatus*
- *Coquillettidia sp.*
- *Culex nigripalpus*
- *Culex pipiens*
- *Culex quinquefasciatus*
- *Culex tarsalis*
- *Culiseta melanura*
- *Ochlerotatus nigromaculis*
- *Ochlerotatus salinarius*
- *Ochlerotatus sollicitans*
- *Ochlerotatus taeniorhynchus*
- ...testing continues.

*Data on file. Additional test trial results may be found at www.centralmosquitocontrol.com/resources/field-tests-and-faqs

NOTES

Aqua ZenivexTM

E20

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

- **FOR EFFECTIVE ADULT MOSQUITOES, NON-BITING MIDGE CONTROL AND BLACK FLY CONTROL**
- **FOR USE AS A ULV, THERMAL OR SPACE SPRAY BY AIR AND GROUND APPLICATION TO CONTROL ADULT MOSQUITOES**
- **APPROVED FOR USE OVER AGRICULTURAL CROPS (INCLUDING THOSE INTENDED FOR HUMAN CONSUMPTION), PASTURE AND RANGELAND**
- **CAN BE USED UNDILUTED OR DILUTED**
- **FORMULATION ALLOWS DILUTION WITH WATER RATHER THAN OIL**
- **QUICK PERMANENT KNOCKDOWN OF ADULT MOSQUITOES AND OTHER TARGET INSECTS**
- **CONTROLS NON-BITING MIDGES AND NUISANCE FLIES**
- **CONTROLS ADULT MOSQUITOES THAT MAY CARRY WEST NILE, EASTERN EQUINE ENCEPHALITIS, ST. LOUIS ENCEPHALITIS, AND CHIKUNGUNYA VIRUSES**

SPECIMEN LABEL

ACTIVE INGREDIENT:

Etofenprox (CAS #80844-07-1) 20%

OTHER INGREDIENTS: 80%

TOTAL 100%

Contains 1.48 lbs Etofenprox per gallon

EPA Reg. No. 89459-81

EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN WARNING

See additional Precautionary Statements

PRECAUTIONARY STATEMENTS – HAZARDS TO HUMANS & DOMESTIC ANIMALS – WARNING

Causes substantial but temporary eye injury. Do not get in eyes. Avoid contact with skin or clothing. Applicators and other handlers must wear long-sleeved shirt, long pants, socks and shoes. Repeated exposure to etofenprox can cause skin irritation.

FIRST AID

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.

(continued)

If on skin

- 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

USER SAFETY REQUIREMENTS

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them. Wash thoroughly with soap and water after handling. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition into bodies of water may be hazardous to fish and other aquatic organisms. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Time applications to provide the maximum possible interval between treatment and the next period of bee activity. Do not apply to blooming crops or weeds when bees are foraging the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

DIRECTIONS FOR USE

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

READ AND FOLLOW ALL LABEL DIRECTIONS. Before making the first application of the season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

PRODUCT INFORMATION

Aqua Zenivex™ E20 is an effective insecticide used at low doses to control adult mosquitoes, non-biting midges, biting and non-biting flies. Use Aqua Zenivex™ E20, either undiluted as Ultra-Low Volume (ULV) or diluted with water, for the control of pest species in or near residential, industrial, commercial, urban, recreational areas, woodlands, golf courses, and other areas where these pests are a problem. Aqua Zenivex™ E20 may be applied over agricultural areas prior to or following harvest for the control of adult mosquitoes within or adjacent to these areas. Apply Aqua Zenivex™ E20 aerially (both fixed and rotary aircraft) for low volume applications or through mist-blowers, backpack, and handheld sprayers for ground applications. Aqua Zenivex™ E20 will control non-biting midges, black flies and mosquitoes and can be used as part of a total integrated pest management program for controlling disease vectors. Apply Aqua Zenivex™ E20 at rates from 0.00175 to 0.00700 pounds of etofenprox per acre. Dilute this product with water. Apply when wind is ≥ 1 mph. Do not apply when wind speeds exceed 10

mph. A temperature inversion is preferable to keep the fog close to the ground and apply when labeled insects are most active.

Do not spray more than 0.18 lbs etofenprox per acre per site per year. Do not make more than 25 applications per site per year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

GROUND APPLICATION

Use a vehicle-mounted cold aerosol ULV sprayer to apply the product. Direct the spray equipment nozzle to provide even distribution of the product. For best results, apply perpendicular to the wind direction using a swath width of 300 ft. Spray equipment must be adjusted so that the volume median diameter (VMD) is between 7-30 microns ($10\mu \leq Dv_{0.5} \leq 30\mu$) and that 90% of the spray is contained in droplets smaller than 50 microns ($Dv_{0.9} < 50\mu$). Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that nozzle flow rate(s) are properly calibrated.

The appropriate application rate can be achieved by altering the dilution rate of Aqua Zenivex™ E20. Refer to the following chart for examples.

Application rate pound AI per acre	Vehicle Speed MPH	Flow rates			
		Undiluted	Diluted 1 to 1	Diluted 1 to 2	Diluted 1 to 4.5
		Oz/minute	Oz/minute	Oz/minute	Oz/minute
0.00175	10	0.9	1.8	2.7	5.0
	15	1.4	2.7	4.1	7.6
	20	1.8	3.6	5.5	10.1
0.00350	10	1.8	3.6	5.5	10.1
	15	2.7	5.4	8.3	15.1
	20	3.6	7.2	11.0	20.2
0.00700	10	3.6	7.2	11.0	20.2
	15	5.4	10.8	16.5	30.3
	20	7.2	14.4	22.0	40.4

Use the higher label rates when spraying areas where dense vegetation is present. Conduct applications when temperatures are between 50-95° F.

Backpack Sprayer ULV Application: Apply Aqua Zenivex™ E20 diluted or undiluted through non-thermal ULV backpack sprayer capable of applying the product in the 7 to 30 micron range. Apply product to the area as evenly as possible. Apply at the rate of 0.00175 to 0.00700 pounds etofenprox per acre.

Urban ULV Mosquito Control Applications: For control of

resting or flying adult mosquitoes, biting flies and non-biting midges in areas such as utility tunnels, sewers, storm drains and catch basins, pipe chases, underground basements, underground passages, parking decks, crawl spaces or uninhabited buildings, apply Aqua Zenivex™ E20 using mechanical foggers, handheld or truck-mounted ULV equipment, thermal foggers or other spray equipment suitable for this application. Apply Aqua Zenivex™ E20 at rates up to but not exceeding 0.00700 pounds of etofenprox per acre.

Thermal Fogging Application: Apply using a truck, dolly mounted, handheld, or other thermal fogging equipment. Following the equipment manufacturer's instructions, apply this product at a rate of 0.00175 to 0.00700 pounds etofenprox per acre. Direct fog to areas where mosquitoes and other pests are located. The volume median diameter (VMD) of droplets produced by thermal foggers is less than 60 microns ($Dv_{0.5} < 60\mu$) and 90% of the spray is contained in droplets smaller than 100 microns ($Dv_{0.9} < 100\mu$).

AERIAL APPLICATION

Apply Aqua Zenivex™ E20 aerially, either diluted or undiluted, by fixed wing or rotary aircraft. Apply at the rate of 0.00175 to 0.00700 pounds of etofenprox per acre. Apply using ULV equipped and capable aircraft. Spray equipment must be adjusted so that the volume median diameter (VMD) produced is less than 60 microns ($Dv_{0.5} < 60\mu$) and that 90% of the spray is contained in droplets smaller than 100 microns ($Dv_{0.9} < 100\mu$). Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be calibrated annually to confirm that nozzle flow rate(s) are accurate. Do not apply Aqua Zenivex™ E20 at altitudes below 100 feet. Apply at altitudes from 100–300 feet. Apply when wind speed on the ground is ≥ 1 mph. Apply when labeled insects are most active. For best results, use Global Positioning System (GPS) equipped aircraft.

Applications over crops or to areas favoring drift over crops

Aqua Zenivex™ E20 may be applied over crops (including row, tree, fruit, citrus, pasture and other areas where agricultural enterprises take place) or to areas where drift over cropland could occur. Aqua Zenivex™ E20 can be applied to these areas by either ground or aerial application. Use label rates and follow Directions For Use as directed in this label. Applications over crops or where drift may occur over crops are limited to 4 applications per month to the same site but no more than two applications within a seven day interval. Do not apply more than 0.028 pounds of active ingredient per month to the same site within a month. Do not spray more than 0.18 lbs etofenprox per acre per site per year. Do not make more than 25 applications per

site per year.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

PESTICIDE STORAGE AND DISPOSAL

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

Storage and Spill Procedures: Store upright at room temperature, but do not store at temperatures below 50° F. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Disposal: Refillable 275 Gallon Totes: Refillable container. Refill this container with pesticide 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 refiller. If not refilled, offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration. To clean the container before final disposal, triple rinse (or equivalent) promptly after emptying. Triple rinse as follows. Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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.

In case of an emergency or for product use information, call 1-800-248-7763.

To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

Manufactured for:

Central Garden & Pet Company
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



Zenivex[®]

E20

For use only by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision

- **FOR THE CONTROL OF ADULT MOSQUITOES, NON-BITING MIDGES, NUISANCE AND BITING FLIES AND BLACK FLIES**
- **FOR USE AS A SPACE SPRAY BY AIR AND GROUND APPLICATION TO CONTROL ADULT MOSQUITOES**
- **APPROVED FOR USE OVER AGRICULTURAL CROPS (INCLUDING THOSE INTENDED FOR HUMAN CONSUMPTION), PASTURE AND RANGELAND**
- **CAN BE USED UNDILUTED OR DILUTED**
- **QUICK PERMANENT KNOCKDOWN OF ADULT MOSQUITOES**
- **CONTROLS ADULT MOSQUITOES THAT MAY TRANSMIT DISEASES INCLUDING WEST NILE VIRUS, EASTERN EQUINE ENCEPHALITIS, ST. LOUIS ENCEPHALITIS, DENGUE, CHIKUNGUNYA, AND ZIKA VIRUS**

SPECIMEN LABEL

ACTIVE INGREDIENT:

Etofenprox (CAS #80844-07-1) 20%

OTHER INGREDIENTS*: 80%

TOTAL 100%

*Contains petroleum distillates

Contains 1.48 lbs etofenprox per gallon

EPA Reg No. 2724-791 EPA Est. No. 2724-TX-01

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional Precautionary Statements

PRECAUTIONARY STATEMENTS - HAZARDS TO HUMANS & DOMESTIC ANIMALS - CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Applicators and other handlers must wear long-sleeved shirt, long pants, socks and shoes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and launder before reuse. Repeated exposure to etofenprox can cause skin irritation.

FIRST AID

If swallowed • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.

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 eyes. • Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

Note to Physician: May pose an aspiration pneumonia hazard. Contains petroleum distillate.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition into bodies of water may be hazardous to fish and other aquatic organisms. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will

facilitate movement of applied material away from water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Time applications to provide the maximum possible interval between treatment and the next period of bee activity. Do not apply to blooming crops or weeds when bees are foraging the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

PHYSICAL/CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

READ AND FOLLOW ALL LABEL DIRECTIONS. Before making the first application of the season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

GENERAL

Zenivex® E20 is an effective insecticide used at low volumes to control adult mosquitoes, non-biting midges, biting and non-biting flies. Use **Zenivex® E20**, either undiluted as Ultra-Low Volume (ULV) or diluted with mineral oil or other suitable oil diluent, for the control of pest species in or near residential, industrial, commercial, urban, recreational areas, woodlands, golf courses, and other areas where these pests are a problem. **Zenivex® E20** may be applied over agricultural areas prior to or following harvest for the control of adult mosquitoes within or adjacent to these areas. Apply **Zenivex® E20** aerially (both fixed and rotary aircraft) for low volume applications or through mist-blowers, backpack, and handheld sprayers for ground applications. **Zenivex® E20** will control mosquitoes and flies and can be used as part of a total integrated pest management program for controlling disease vectors. Apply **Zenivex® E20** at rates from 0.00175 to 0.00700 pounds of etofenprox per acre. Dilute this product with oil (10-50 cps) only; do not mix with water. Apply when wind is ≥ 1 mph. Do not apply when wind speeds exceed 10 mph. A temperature inversion is preferable to keep the fog close to the ground and apply when labeled insects are most active.

Do not spray more than 0.18 lbs etofenprox per acre per site per year. Do not make more than 25 applications per site per year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the

occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

GROUND APPLICATION – Use a vehicle-mounted cold aerosol ULV sprayer to apply the product. Direct the spray equipment nozzle to provide even distribution of the product. For best results, apply perpendicular to the wind direction using a swath width of 300 ft. Spray equipment must be adjusted so that the volume median diameter (VMD) is between 10-30 microns ($10\mu \leq D_{v0.5} \leq 30\mu$) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v0.9} < 50\mu$). Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

The appropriate application rate can be achieved by altering the dilution rate of **Zenivex® E20**. Refer to the following chart for examples.

Application Rate Pound A.I. per Acre	Vehicle Speed MPH	Flow Rates			
		Undiluted	Diluted 1 to 1	Diluted 1 to 2	Diluted 1 to 4.5
		Oz/Minute	Oz/Minute	Oz/Minute	Oz/Minute
0.00175	10	0.9	1.8	2.7	5.0
	15	1.4	2.7	4.1	7.6
	20	1.8	3.6	5.5	10.1
0.00350	10	1.8	3.6	5.5	10.1
	15	2.7	5.4	8.3	15.1
	20	3.6	7.2	11.0	20.2
0.00700	10	3.6	7.2	11.0	20.2
	15	5.4	10.8	16.5	30.3
	20	7.2	14.4	22.0	40.4

Use the higher label rates when spraying areas where dense vegetation is present. Conduct applications when temperatures are between 50-95° F.

Backpack Sprayer ULV Application: Apply **Zenivex® E20** diluted or undiluted through non-thermal ULV backpack sprayer capable of applying the product in the 10 to 30 micron range. Apply product to the area as evenly as possible. Apply at the rate of 0.00175 to 0.00700 pounds etofenprox per acre.

Urban ULV Mosquito Control Applications: For control of resting or flying adult mosquitoes, biting flies and non-biting midges in areas such as utility tunnels, sewers, storm drains and catch basins, pipe chases, underground basements, underground passages, parking decks, crawl spaces or uninhabited buildings, apply **Zenivex® E20** using mechanical foggers, handheld or truck-mounted ULV equipment, thermal foggers or other spray equipment suitable for this application. Apply **Zenivex® E20** at rates up to but not exceeding 0.00700 pounds of etofenprox per acre.

Thermal Fogging Application: Apply using a truck, dolly-mounted, handheld, or other thermal fogging equipment. Following the equipment manufacturer's instructions, apply this product at a rate of 0.00175 to 0.00700 pounds

etofenprox per acre. Direct fog to areas where mosquitoes and other pests are located. The volume median diameter (VMD) of droplets produced by thermal foggers is less than 60 microns ($D_{v0.5} < 60\mu$) and 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9} < 100\mu$).

AERIAL APPLICATION – Apply **Zenivex® E20** aerially, either diluted or undiluted, by fixed wing or rotary aircraft. Apply at the rate of 0.00175 to 0.00700 pounds of etofenprox per acre. Apply using ULV equipped and capable aircraft. Spray equipment must be adjusted so that the volume median diameter (VMD) produced is less than 60 microns ($D_{v0.5} < 60\mu$) and that 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9} < 100\mu$). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated. Do not apply **Zenivex® E20** at altitudes below 100 feet. Apply at altitudes from 100-300 feet. Apply when wind speed on the ground is ≥ 1 mph. Apply when labeled insects are most active. For best results, use Global Positioning System (GPS) equipped aircraft.

In Florida: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

APPLICATIONS OVER CROPS OR TO AREAS FAVORING DRIFT OVER CROPS

Zenivex® E20 may be applied over crops (including row, tree, fruit, citrus, pasture and other areas where agricultural enterprises take place) or to areas where drift over cropland could occur. **Zenivex® E20** can be applied to these areas by either ground or aerial application. Use label rates and follow Directions For Use as directed in this label. Applications over crops or where drift may occur over crops are limited to 4 applications per month to the same site but no more than two applications within a seven day interval. Do not apply more than 0.028 pounds of active ingredient per month to the same site within a month. Do not spray more than 0.18 lbs etofenprox per acre per site per year. Do not make more than 25 applications per

site per year.

PESTICIDE STORAGE AND DISPOSAL

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

Storage and Spill Procedures: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste. **Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. **Container Disposal: Refillable 30 Gallon Drums, 120 Gallon Mini-Tote and 275 Gallon Tote: Refillable container. Refill this container with pesticide 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 refiller. If not refilled, offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration. **To clean the container before final disposal,** triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with mineral oil or other suitable oil diluents. 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.

In case of an emergency or for product use information, call 1-800-248-7763.

www.zenivex.com

Manufactured for:

Wellmark International

1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



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January, 2022
Schaumburg, IL

Zenivex® E4

RTU

For use only by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

- **FOR THE CONTROL OF ADULT MOSQUITOES, NON-BITING MIDGES, AND BLACK FLIES**
- **FOR USE AS A SPACE SPRAY BY AIR AND GROUND APPLICATION TO CONTROL ADULT MOSQUITOES**
- **APPROVED FOR USE OVER AGRICULTURAL CROPS (INCLUDING THOSE INTENDED FOR HUMAN CONSUMPTION), PASTURE AND RANGELAND**
- **READY TO USE WITHOUT DILUTION**
- **CONTROLS ADULT MOSQUITOES THAT MAY CARRY WEST NILE VIRUS, EASTERN EQUINE ENCEPHALITIS, ST. LOUIS ENCEPHALITIS**
- **CONTROLS NON-BITING MIDGES, NUISANCE AND BITING FLIES**
- **QUICK, PERMANENT KNOCKDOWN OF ADULT MOSQUITOES**

SPECIMEN LABEL

ACTIVE INGREDIENT:

Etofenprox (CAS #80844-07-1). 4%

OTHER INGREDIENTS*: 96%
Total: 100%

*Contains petroleum distillates

Contains 0.30 lbs etofenprox per gallon

EPA Reg. No. 2724-807

EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN CAUTION

See additional Precautionary Statements,

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Applicators and other handlers must wear long-sleeved shirt, long pants, socks and shoes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and launder before reuse. Repeated exposure to etofenprox can cause skin irritation.

FIRST AID

If swallowed • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.

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 eyes. • Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

NOTE TO PHYSICIAN: May pose an aspiration pneumonia hazard. Contains petroleum distillate.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition into bodies of water may be hazardous to fish and other aquatic organisms. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are

present, and weather conditions will facilitate movement of applied material away from water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Time applications to provide the maximum possible interval between treatment and the next period of bee activity. Do not apply to blooming crops or weeds when bees are visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

PHYSICAL/CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. **READ AND FOLLOW ALL LABEL DIRECTIONS.** Before making the first application of the season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

GENERAL

ZENIVEX® E4 RTU is an effective insecticide used at low volumes to control adult mosquitoes, non-biting midges, biting and non-biting flies. Use **Zenivex® E4 RTU** undiluted as UltraLow Volume (ULV) for the control of pest species in or near residential, industrial, commercial, urban, recreational areas, woodlands, golf courses, and other areas where these pests are a problem. **Zenivex® E4 RTU** may be applied over agricultural areas prior to or following harvest for the control of adult mosquitoes within or adjacent to these areas. Apply **Zenivex® E4 RTU** aerially (both fixed and rotary aircraft) for low volume applications or through mist-blowers, backpack, and handheld sprayers for ground applications. **Zenivex® E4 RTU** will control mosquitoes and flies and can be used as part of a total integrated pest management program for controlling disease vectors. Apply **Zenivex® E4 RTU** at rates from 0.00175 to 0.0070 pounds of etofenprox per acre by ground ULV. Use this product undiluted only; do not mix with water. Apply when wind is ≥ 1 mph. Do not apply when wind speeds exceed 10 mph. A temperature inversion is preferable to keep the fog close to the ground and applications should be made when labeled insects are most active. Do not spray more than 0.18 lbs etofenprox per acre per site per year. Do not make more than 25 applications per site per year. More frequent

treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

GROUND APPLICATION

Use a vehicle-mounted cold aerosol ULV sprayer to apply the product. Direct the spray equipment nozzle to provide even distribution of the product. For best results, apply perpendicular to the wind direction using a swath width of 300 ft. Spray equipment must be adjusted so that the volume median diameter (VMD) is between 10-30 microns ($10\mu \leq D_{v0.5} \leq 30\mu$) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v0.9} < 50\mu$). Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

The appropriate application rate can be achieved by using the following table. Refer to the following chart for examples.

Application rate pound A.I. per acre	Flow rates		Vehicle Speed
	Undiluted		
	Oz/Acre	Oz/Minute	
0.00175	0.75	2.25	5
		4.50	10
		7.00	15
0.00350	1.5	4.50	5
		9.00	10
		13.50	15
0.00700	3.0	9.00	5
		18.00	10

Use the higher label rates when spraying areas where dense vegetation is present. Conduct applications when temperatures are between 50-95° F.

Backpack Sprayer ULV Application

Apply **Zenivex® E4 RTU** undiluted through non-thermal ULV backpack sprayer capable of applying the product in the 10 to 30 micron range. Apply product to the area as evenly as possible. Apply at the rate of 0.00175 to 0.0070 pounds etofenprox per acre.

Urban ULV Mosquito Control Applications

For control of resting or flying adult mosquitoes, biting flies and non-biting midges in areas such as utility tunnels, sewers, storm drains and catch basins, pipe chases, underground basements, underground passages, parking decks, crawl spaces or uninhabited

buildings, apply **Zenivex® E4 RTU** using mechanical foggers, hand-held or truck-mounted ULV equipment, thermal foggers or other spray equipment suitable for this application. Apply **Zenivex® E4 RTU** at rates up to but not exceeding 0.0070 pounds of etofenprox per acre.

Thermal Fogging Application

Apply using a truck, dolly mounted, handheld, or other thermal fogging equipment. Following the equipment manufacturer's instructions, apply this product at a rate of 0.00175 to 0.0070 pounds etofenprox per acre. Direct fog to areas where mosquitoes and other pests are located. The volume median diameter (VMD) of droplets produced by thermal foggers is less than 60 microns ($D_{v0.5} < 60\mu$) and 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9} < 100\mu$).

AERIAL APPLICATION

Apply **Zenivex® E4 RTU** aerially, undiluted, by fixed wing or rotary aircraft. Apply at the rate of 0.00175 to 0.0070 pounds of etofenprox per acre. Apply using ULV equipped and capable aircraft. Spray equipment must be adjusted so that the volume median diameter (VMD) produced is less than 60 microns ($D_{v0.5} < 60\mu$) and that 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9} < 100\mu$). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated. Do not apply **Zenivex® E4 RTU** at altitudes below 100 feet. Apply at altitudes from 100-300 feet. Apply when wind speed on the ground is ≥ 1 mph. Apply when labeled insects are most active. For best results, use Global Positioning System (GPS) equipped aircraft.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

APPLICATIONS OVER CROPS OR TO AREAS FAVORING DRIFT OVER CROPS

Zenivex® E4 RTU may be applied over crops (including row, tree, fruit, citrus, pasture and other areas where agricultural enterprises take place) or to areas, where drift over cropland could occur. **Zenivex® E4 RTU** can be applied to these areas by either ground or aerial application. Use label rates and follow directions for use as directed in this label. Applications over crops or where drift may occur over crops are limited to 4 applications per month to the same site but no more than two applications within a seven day interval. Do not apply more than 0.028 pounds of active

ingredient per month to the same site within a month. Do not spray more than 0.18 lbs etofenprox per acre per site per year. Do not make more than 25 applications per site per year.

PESTICIDE STORAGE AND DISPOSAL

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

STORAGE AND SPILL PROCEDURES: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Refillable 30 Gallon Drums, 120 Gallon Mini-Tote and 275 Gallon Tote:

Refillable container. Refill this container with pesticide 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 refiller. If not refilled, offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration. To clean the container before final disposal, triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with mineral oil or other suitable oil diluents. 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. **Non-refillable 2.5 gallon containers: Non-refillable container.** Triple rinse (or equivalent), promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain container for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full of with mineral oil or other suitable oil diluents and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank. Drain container for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Once triple rinsed, recycle if available, or puncture and dispose of in a sanitary landfill, or by incineration.

To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

In case of an emergency or for product use information, call **1-800-248-7763**.

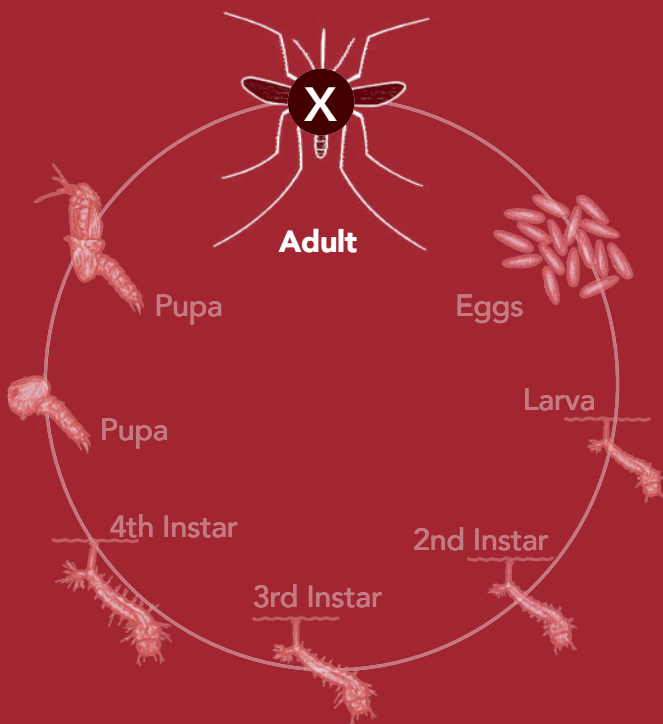
www.zenivex.com

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173



PERM-X™ AND PYRONYL™ ADULTICIDES

Perm-X™ and Pyronyl™ adulticides are cost-effective concentrates that are available in a wide variety of formulations to fit your mosquito abatement program. Each formulation differs in its ratio of piperonyl butoxide (PBO) to active ingredients to give users a rotation of consistently effective mosquito control. This improves the action of the insecticide and allows for lower use rates.



X Perm-X™ and Pyronyl™ adulticides provide quick, permanent knockdown of adult mosquitoes.



Pyronyl™

PERM-X™ AND PYRONYL™ FORMULATIONS

PERM-X™

Perm-X™ formulations are convenient low-odor adulticides recommended for application as an Ultra Low Volume (ULV) thermal or non-thermal aerosol (cold fog) in residential, recreational, industrial, urban and other labeled areas where mosquitoes are a problem.



Perm-X™ Formulations Features:

- Quick knockdown
- No agitation or feeding frenzy effect
- Listed crop tolerances
- A variety of formulations with different ratios of PBO to active ingredient

Perm-X™ Formulations Benefits:

- Can be used undiluted or diluted with oil or water
- Low-odor formulation for ULV, thermal and mist blowing vector control
- Non-corrosive, oil-based formulation

PYRONYL™

Pyronyl™ formulation concentrates are convenient formulations that can be used in a variety of applications to control mosquitoes in adult and larval stages. Pyronyl™ formulation concentrates kill at a wide variety of usage rates.

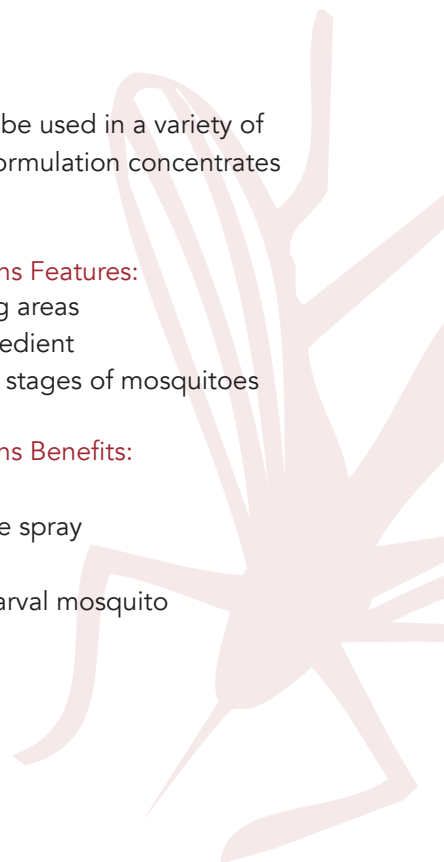
Pyronyl™

Pyronyl™ Formulation Concentrations Features:

- Approved for use in food handling areas
- Combination PBO and active ingredient
- Controls both the adult and larval stages of mosquitoes

Pyronyl™ Formulation Concentrations Benefits:

- Effective control of mosquitoes
- Can be applied as an indoor space spray
- Can be used undiluted or with oil
- Versatile adulticide product with larval mosquito kill capabilities



Aqua Perm-X™ UL 30-30

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

CONTROLS: Adult Mosquitoes (including organophosphate-resistant mosquitoes), Midges (biting and non-biting) and Black Flies

FOR USE AS A: ULV, thermal and barrier applications using ground and aerial equipment in areas including: residential, industrial, commercial and within or adjacent to listed crops and range grasses.

Formulation allows for dilution with water or oil. Refer to label for additional use sites.

SPECIMEN LABEL

ACTIVE INGREDIENTS:

Permethrin (CAS# 52645-53-1).....	30%
Piperonyl Butoxide (CAS# 51-03-6).....	30%
OTHER INGREDIENTS*.....	40%
TOTAL:.....	100%

*Contains Petroleum Distillates

Contains 2.52 lbs. a.i. Permethrin per gallon and 2.52 lbs. a.i. Piperonyl Butoxide per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION

See Additional Precautionary Statements, First Aid, Directions for Use including Storage and Disposal instructions.

For Chemical Spill, Leak, Fire, or Exposure,
Call: CHEMTREC 1-800-424-9300.

For Medical Emergencies Only, Call: 1-800-248-7763.

EPA Reg.No. 89459-76

EPA Est. No. 2724-TX-1

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wear long sleeved shirt, long pants, shoes, socks, and chemical-resistant gloves (barrier laminate, nitrile rubber, neoprene rubber, or viton, Selection Category E). Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIRST AID

If swallowed	<ul style="list-style-type: none">• Immediately call a poison control center or doctor.• Do not induce vomiting unless told to by a poison control center or doctor.• Do not give any liquid to the person.• Do not give anything by mouth to an unconscious person.
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(continued)

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.
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HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

NOTE TO PHYSICIAN: Contains petroleum distillate. May pose an aspiration pneumonia hazard.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, nitrile rubber, neoprene rubber, and viton. If you want more options, follow the instructions for category E on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeve shirt and long pants,
- Shoes plus socks,

- Chemical-resistant gloves for all handlers except for applicators using motorized ground equipment, pilots, and flaggers,
- Chemical-resistant apron for mixers/loaders, persons cleaning equipment and persons exposed to concentrate.

See Engineering Controls for additional requirements.

USER SAFETY REQUIREMENTS

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to the use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

Bee Warning: This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift on blooming crops or weeds while bees are actively visiting the treatment areas, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

DIRECTIONS FOR USE

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

HOW TO APPLY AND WHERE TO USE

This product is designed for application as an Ultra-Low Volume (ULV) or thermal aerosol to control adult mosquitoes and flies of nuisance, public health or disease vector importance in areas including: residential areas, industrial areas, commercial areas, urban areas, parks, campgrounds, woodlands, athletic fields, golf courses, playgrounds, recreational areas, overgrown waste areas, roadsides, and other areas where adult mosquitoes and flies may be found.

Apply this product with ULV cold aerosol generators, thermal aerosol

generators, mist-blowers, backpack sprayers, or handheld sprayers. Mist-blowers, backpack sprayers, handheld sprayers and low-pressure hand sprayers may be used for barrier or surface applications.

FOR BEST RESULTS, treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the fog near the ground, e.g., cool temperatures, and consistent wind speeds are not greater than 10 mph. Applications during the cool hours of night or early morning are usually preferable. Apply this product only when wind speed is greater than 1 mph.

Do not retreat the same site more than once in 3 days. Do not exceed 25 applications at 0.007 lbs. permethrin per acre per application or 0.25 lbs. PBO per acre per application, or 0.18 lbs. of permethrin per acre per season or 2 lbs. PBO per acre per year. When targeting *Aedes taeniorhynchus* and other difficult species, applications of PBO may be made up to 0.08 lbs. PBO per acre. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

Apply this product over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas. Application can only be made where the following crops are present:

Alfalfa	Celery	Kiwifruit	Potatoes
Almonds	Cherries	Horseradish	Range grasses
Apples	Corn, fodder	Leafy vegetables (except <i>Brassica</i>)	Soybeans
Artichokes, globe	Corn, forage	Lettuce, head	Spinach
Asparagus	Corn, grain (field and pop)	Mushrooms	Tomatoes
Avocados	Corn, stover	Onions, dry bulb	Vegetables, cucurbit
Broccoli	Corn, sweet kernel + cob with husks removed	Peaches	Walnuts
Brussels sprouts	Eggplant	Pears	Watercress
Cabbage	Filberts	Peppers, bell	
Cauliflower	Garlic	Pistachios	

Do not allow spray treatment to drift on cropland (other than crops listed) or water supplies.

In treatment of corrals, feedlots, animal confinements/houses, swine lots and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.

This product provides effective control of adult mosquitoes, black flies, gnats, biting and non-biting midges, stable flies, horse flies, deer flies, sheep flies, horn and heel flies, and nuisance flying insects such as house flies. Air temperatures should be greater than 50° F when conducting all types of applications.

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.

Not for use in outdoor residential misting systems. Not for use in metered release systems.

GROUND APPLICATION

Vehicle-Mounted ULV Cold Aerosol Generators (Cold Fog): Apply through non-thermal ULV application equipment and base all acreage calculations on the equipment manufacturer's recommended swath width. Spray equipment must be adjusted so the volume median diameter or mass median diameter is less than 30 microns ($D_{v0.5} < 30 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v0.9} < 50 \mu\text{m}$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated. Apply at a rate not to exceed 0.007 lb. of permethrin per acre. An optimum swath is created when this product is applied from a truck being driven perpendicular to the wind direction. Direct the spray head of the equipment to ensure an optimum distribution of the spray cloud throughout the area. For best results, apply when insects are most active and meteorological conditions are conducive to keeping the spray cloud near the ground. An inversion of air temperatures and a light breeze of approximately 1 to 3 mph are preferable. During applications, consistent ground wind speeds should not exceed 10 mph. Application of this product during cooler hours of the night or early morning is recommended.

This product may be applied through all ULV Cold Aerosol Generators, or other similar equipment designed for non-thermal ULV aerosol applications. The desired application rate may be obtained from the chart below or by altering the dilution rate, the flow rate of the insecticide from the application equipment and the vehicle speed. Some examples are provided in the following chart. When an alternate rate is required, adjust the flow rate accordingly, provided the droplet size and spectrum remain within the label specifications

FLOW RATE (Fluid Ounces Per Minute)						
Dilutions Based on a 15-Gallon Tank*						
Application Rate (Pounds of Permethrin a.i./Acre)	Vehicle Speed (MPH)	Undiluted	Diluted 1:4	Diluted 1:5	Diluted 1:6:5	Diluted 1:9
0.00150	10	0.46	2.32	2.77	3.50	4.70
	15	0.70	3.47	4.15	5.20	7.00
	20	0.93	4.64	5.60	7.00	9.30
0.00175	10	0.55	2.70	3.24	4.05	5.40
	15	0.82	4.05	4.84	6.07	8.10
	20	1.09	5.40	6.48	8.10	10.80
0.00350	10	1.09	5.40	6.48	8.10	10.80
	15	1.65	8.10	9.68	12.10	16.10
	20	2.19	10.80	12.90	16.10	21.50
0.00700	10	2.19	10.70	12.90	16.10	21.50
	15	3.28	16.10	19.40	24.20	
	20	4.38	21.40	25.80		

*Dilution Instructions: Fill tank with the appropriate amount of water for the desired dilution, then add this product and mix well. The use of metering pumps, injector systems or other mixing systems is optional. Note: When using oil as a diluent, agitate well before use.

Where dense vegetation is present, use higher rates of application and/or a slower speed for best results.

BACKPACK OR HANDHELD SPRAYER APPLICATION: Apply through non-thermal ULV application equipment and base acreage calculations on a 300 foot swath. To apply undiluted at 0.007 lb. of permethrin per acre, adjust

equipment to an output rate of 0.86 fluid ounces per minute and walk at 4 mph. To apply 0.0035 lb. of permethrin per acre, dilute 1 part of this product with 6 parts of diluent and apply at a rate of 3 fluid ounces per minute and walk at 4 mph.

THERMAL AEROSOL APPLICATION: For use in truck-mounted, handheld or other thermal fogging equipment. Spray equipment must be adjusted so the volume median diameter or mass median diameter is less than 30 microns ($D_{v0.5} < 30 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 48 microns ($D_{v0.9} < 48 \mu\text{m}$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated. Apply this product mixed with water or oil at a rate not to exceed 0.007 lb. per acre. Base acreage calculations on a 300 foot swath. For best results, direct the thermal fog into and allow to drift through areas where adult mosquitoes are found.

BARRIER APPLICATIONS: To control resting or flying adult mosquitoes in areas including animal quarters, roadsides, urban areas, residential areas, commercial areas, industrial areas, golf courses, parks, recreational areas, tire piles and all public areas where adult mosquitoes occur or find harborage. May be used to treat aggregation and harborage areas such as the perimeter of residential buildings, commercial buildings, storage buildings, crawlspaces, transport trailers, abandoned or uninhabited buildings and other areas where adult mosquitoes find harborage.

When this product is applied as a barrier application using low pressure hand sprayers, hydraulic sprayers or ground ULV equipment, do not apply within 100 feet (30 meters) of lakes and streams.

To apply this product using low pressure hand sprayers or other similar equipment, for the control of mosquitoes on resting or aggregation surfaces, mix 0.0875 fluid ounces (2.59 ml) in one gallon of water and apply sufficient spray to dampen the surface – approximately 700-750 square feet of treated area. Use equipment that is capable of delivering an even distribution of the labeled rate over the treatment area. For application using backpack or truck-mounted mist-blower equipment, apply this product undiluted at a rate not to exceed 5.08 fluid ounces per acre. If diluted, apply at a rate not to exceed 0.1 lb. permethrin a.i. per acre. Diluted or undiluted applications may be made onto foliage at the perimeter of areas such as recreational areas, parks, or golf courses from which mosquitoes or flies are to be excluded. Applications may be directed into harborage areas or other resting areas where adult mosquitoes or flies may be found.

URBAN ULV MOSQUITO CONTROL APPLICATIONS: For control of resting or flying adult mosquitoes, biting flies and biting midges in harborage areas such as but not limited to utility tunnels, sewers, storm drains and catch basins, pipe tunnels, basements, underground passages, parking decks, crawlspaces under buildings, abandoned buildings or uninhabited buildings. Apply this product, diluted or undiluted, using mechanical foggers, handheld or truck-mounted ULV equipment, thermal foggers or other spray equipment suitable for this type of application. This product may be applied at rates up to but not exceeding 0.007 lb. permethrin per acre.

AERIAL APPLICATION

Apply this product, either diluted or undiluted, at rates up to 0.007 lb. permethrin/PBO per acre by fixed wing or rotary aircraft equipped with a spraying system capable of making a ULV application. For aerial applications of this product, use ULV equipment and nozzles such as rotary atomizers or similar spray equipment. Spray equipment must be adjusted so the volume median diameter produced is less than 60 microns ($D_{v0.5} < 60 \mu\text{m}$) and that

90% of the spray is contained in droplets smaller than 115 microns ($D_{v0.9} < 115 \mu\text{m}$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial application of this product shall be made at altitudes ranging from 75 feet to 300 feet. Do not apply by fixed wing aircraft at a height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs. Do not apply when ground wind speed exceeds 10 mph. Aerial applications of this product shall only be made when recommended by public health officials and trained personnel of mosquito abatement districts and other mosquito control programs.

For best results, apply this product when insects are most active and meteorological conditions are conducive to keeping the spray cloud near the ground. Aerial applications using aircraft equipped with global positioning systems (GPS) may be needed to compensate for windy conditions and to ensure drift into target areas.

IN FLORIDA: Do not apply by aircraft unless approved by the Florida Department of Agriculture and Consumer Services.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, 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. Triple rinse (or equivalent) promptly after emptying.

(Containers ≤ 5 gallons): 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 1/4 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 or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

(Containers > 5 gallons): 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 or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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 must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Central Garden & Pet Company or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Central Garden & Pet Company and Seller harmless for any claims relating to such factors.

Central Garden & Pet Company 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 this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Central Garden & Pet Company, and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, CENTRAL GARDEN & PET COMPANY MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall Central Garden & Pet Company or 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 CENTRAL GARDEN & PET COMPANY 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 CENTRAL GARDEN & PET COMPANY OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

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

Central Garden & Pet Company, 1501 East Woodfield Road, 200W, Schaumburg, Illinois 60173

NOTE: This specimen label is for informational purposes only. All uses may not be approved in all states. See product labeling for use directions.

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VEC 15-016

Perm-X™ UL 31-66

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

CONTROLS: Adult Mosquitoes, Biting and Non-biting Midges, Black Flies and other outdoor flying insects as listed on this label which cause public health annoyance in residential, municipal, and recreational areas.

FOR USE AS A: ULV thermal or non-thermal aerosol using ground or aerial equipment in areas including: residential, recreational areas, parks, campsites, woodlands, athletic fields, golf courses, municipalities, gardens, playgrounds, and non-crop waste areas and over listed growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas.

Refer to label for additional use sites.

SPECIMEN LABEL

ACTIVE INGREDIENTS:

Permethrin (CAS# 52645-53-1)..... 31%

Piperonyl Butoxide (CAS# 52645-53-1)..... 66%

OTHER INGREDIENTS:..... 3%

TOTAL: 100%

*Contains 2.8025 lb. A.I. Permethrin plus 5.9668 lbs. A.I. Piperonyl Butoxide per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente. (If you do not understand the label, find someone to explain it to you in detail.) See Precautionary Statements First Aid, Precautionary Statements and Directions for Use including Storage and Disposal instructions.

EPA Reg.No. 89459-45
EPA Est. No. 2724-TX-1

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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

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

(continued)

If on skin or clothing	<ul style="list-style-type: none">• Call a poison control center or doctor for advice.
If in eyes	<ul style="list-style-type: none">• 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.• Call a poison control center or doctor for treatment advice.
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.

HOT LINE NUMBER: Have this product container or label with you when calling a poison control center or doctor, or going for treatment. You may contact 1-800-248-7763 for information including health concerns, medical emergencies or pesticide incidents.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are listed below. Mixers, loaders, applicators and other handlers (including during mixing/loading, repair and cleaning of equipment and disposal of pesticide) must wear the following:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves such as barrier laminate, viton, neoprene rubber or nitrile rubber
- Chemical-resistant apron for mixers/loaders, persons cleaning equipment and persons exposed to the concentrate

In addition to the above PPE, mixers and loaders supporting aerial applications to forests must wear at least a NIOSH-approved respirator with:

- A dust/mist filter with MSHA/NIOSH approval number prefix TC-21C, or any R, P, or HE filter.

See Engineering Controls for additional requirements.

USER SAFETY REQUIREMENTS

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS

- Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to aquatic organisms including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and other aquatic organisms. Before making the first application of the season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate water when disposing of equipment washwaters.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

DIRECTIONS FOR USE

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

PRECAUTIONS AND USE RESTRICTIONS

- Apply this product only as specified on this label.
- For use only by federal, state, tribal or local government officials responsible for public health or vector control or by persons certified by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications or by persons under their direct supervision.
- Apply this product at temperatures greater than 50°F and when wind speed equals or exceeds 1 mph.
- Not for use in metered release systems.
- Not for use in outdoor residential misting systems.
- Do not make applications during rain.
- Do not spray this product on or allow it to drift onto cropland (other than crops listed), or potable water supplies.
- In the treatment of corrals, feedlots, animal confinements/houses, swine lots, poultry ranges and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.
- For hand carried and/or lawn mower foggers: Do not fog wet foliage. Do not fog when wind conditions exceed 10 mph. Only use a clean, well maintained and properly calibrated fogger, known to give excellent performance. Fog down wind.
- Do not re-treat a site more than once in 3 days.
- Do not apply by fixed wing aircraft at a height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.

Do not retreat the site more than once in three days. Do not exceed 25 applications at 0.007 lbs. permethrin per acre per application or 0.0149 lbs piperonyl butoxide per acre per application, or 0.18 lbs of permethrin per acre per season or 0.383 lbs piperonyl butoxide per acre per year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne diseases in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

Spray Droplet Size Determination

Ground-Based Application: Spray equipment must be adjusted so that the volume median diameter is less than 30 microns ($D_{v0.5} < 30 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v0.9} < 50 \mu\text{m}$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using laser based equipment must be used to produce acceptable droplet spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at ≤ 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns ($D_{v0.5} < 70 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 145 microns ($D_{v0.9} < 145 \mu\text{m}$). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at > 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns ($D_{V0.5} < 70 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 145 microns ($D_{V0.9} < 145 \mu\text{m}$). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

GROUND BASED APPLICATIONS

ULV NON-THERMAL AEROSOL (COLD FOG): To control Mosquitoes, Midges and Black flies, apply PERM-X™ UL 31-66 using truck-mounted ground ULV (cold fog) equipment. When applying this product undiluted, apply at a flow rate of 0.4794 to 1.91183 fluid ounces per minute at an average speed of 10 mph. These rates are equivalent to 0.00175 to 0.007 pounds of permethrin a.i. and 0.0038 to 0.0149 pounds of piperonyl butoxide a.i. per acre. If a different vehicle speed is used, adjust the rate accordingly. Vary flow rates accordingly to vegetation density and mosquito population. Use higher flow rates in heavy vegetation or when insect populations are high. An accurate flow rate control system must be used to ensure proper flow rate. PERM-X™ UL 31-66 may also be applied by diluting, 1 part to 1 part of a 60 to 100 second mineral oil or another suitable solvent, applied so as not to exceed the maximum a.i. rates per acre as shown in the rates charts. If an alternate dilution rate is required, adjust the flow rate accordingly, provided the droplet size and spectrum remain within label specifications. Do not exceed a flow rate of 20 oz/minute unless recommended and required by equipment manufacturers and/or Public Health Officials for vehicle speeds of 10 to 20 mph and when the fogging equipment is capable of such higher rates of output per minute.

THERMAL FOGGING: Apply PERM-X™ UL 31-66 diluted or by suitable Thermal Foggers mounted on trucks. If diluted, use a 60 to 100 second viscosity mineral oil, or another suitable non-phytotoxic diluent to reduce oil requirement and sludge buildup in equipment. May be applied at truck speeds of 5 to 20 mph but do not exceed the maximum active ingredient application rates. For use with Hand Carried and/or Lawn Mower thermal foggers, adjust the sprayer to apply the desired a.i. per acre based on a 50 foot swath and walking speed of 2 mph. Do not fog to wet foliage. Thermal fogging applications of PERM-X™ UL 31-66 can be made to deliver 0.00175 to 0.007 lb of permethrin a.i. per acre and 0.00175 to 0.01490 piperonyl butoxide per acre.

USE AS AN INSECT BARRIER TREATMENT: For use in non-Thermal ULV, motorized, portable, backpack, and fog type mist blower equipment, apply PERM-X™ UL 31-66 with equipment adjusted to deliver ULV size droplets with a volume median diameter of 50–100 microns. PERM-X™ UL 31-66 may be applied undiluted or diluted (see application rates tables section). If diluted, use a 30 to 100 second mineral oil, or another, (if recommended by Public Health Officials), suitable non-phytotoxic diluent. Use 0.00175 pounds permethrin a.i. per acre at a 50 ft. (15.2 m) swath width, while walking at a speed of 2 mph (3.2 kph). Whether applied undiluted or diluted, or at a different speed, make sure that the same amount of permethrin a.i. is applied per acre.

**AERIAL APPLICATION

Make Ultra-Low Volume aerial applications of PERM-X™ UL 31-66 according to the application rate table on this label. Application should be made by suitable aerial ULV equipment at an altitude ranging from 120-175 feet depending on the terrain and weather conditions. The recommended airspeed

for fixed wing aircraft with flat fan nozzles is from 120 to 160 mph. For aircraft equipped with rotary nozzles, apply at sufficient airspeed to deliver the appropriate amount of PERM-X™ UL 31-66 a.i. per acre. Do not exceed 0.007 lbs. permethrin a.i. and 0.01490 lbs. piperonyl butoxide per acre. Do not apply greater than 0.3197 fluid oz. of undiluted PERM-X™ UL 31-66 per acre as listed in the rates chart.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

PERM-X™ UL 31-66 HOW TO APPLY AND WHEN TO USE

Conditions and Rates To Use Perm-X™ UL31-66 Undiluted						
Pounds A.I. Per Acre		Application Rates				Fl. Oz. of Perm-X™ UL 31-66 per Acre
		Fl. Oz. per Minute at Vehicle Speeds				
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.01490	0.9591	1.9183	2.8773	3.8364	0.3197
0.00350	0.00750	0.4797	0.9054	1.4391	1.9188	0.1599
0.00175	0.00380	0.2398	0.4794	0.7191	0.9588	0.0799

DILUTION RATES FOR PERM-X™ UL 31-66 FOR A 1:4 DILUTION

Mix 1 part PERM-X™ UL 31-66 with 4 parts Suitable Mineral Oil: Apply as follows:						
Pounds of A.I. Per Acre		Application Rates Fl. Oz. Per Minute At Vehicle Speeds				Fl. Oz. Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.01490	4.4727	9.5454	14.3181	19.0908	1.5909
0.00350	0.00750	2.3865	4.7730	7.1595	9.5460	0.7955
0.00175	0.00380	1.1934	2.3868	3.5803	4.7736	0.3978

DILUTION RATES FOR PERM-X™ UL 31-66 FOR A 1:8 DILUTION

Mix 1 part PERM-X™ UL 31-66 with 8 parts Suitable Mineral Oil: Apply as follows:						
Pounds of A.I. Per Acre		Application Rates Fl. Oz. Per Minute At Vehicle Speeds				Fl. Oz. Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.01490	8.4000	16.8000	25.2000	33.6000	2.8000
0.00350	0.00750	4.2000	6.4000	12.6000	16.8000	1.4000
0.00175	0.00380	2.1000	4.2000	6.3000	8.4000	0.7000

DILUTION RATES FOR PERM-X™ UL 31-66 FOR A 1:2 DILUTION

Mix 1 part PERM-X™ UL 31-66 with 2 parts Suitable Mineral Oil: Apply as follows:						
Pounds of A.I. Per Acre		Application Rates Fl. Oz. Per Minute At Vehicle Speeds				Fl. Oz. Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.01490	2.8767	5.7534	8.6302	11.5068	0.9589
0.00350	0.00750	1.4385	2.8770	4.3255	5.7540	1.4795
0.00175	0.00380	0.7184	1.4388	2.1582	2.8770	0.2398

For proper ground application, mount the fog applicator so that the nozzle is at least 4 ½ feet above ground level and directed out the back of the vehicle. May be applied at speeds of 5 mph up to 20 mph. Failure to follow these label directions may result in reduced effectiveness. For **Aerial Application, refer to the **Aerial Application section on this label. PERM-X™ UL 31-66 may be used as is, or diluted with a suitable solvent such as a 60 to 100 second viscosity mineral oil and applied at a rate not to exceed 0.3197 fl. oz. of PERM-X™ UL 31-66 per acre. Both aerial and ground applications

should be made when the wind is less than 10 mph. For exact rates, see the "UNDILUTED" or the "DILUTION" Rates charts on this label.

PERM-X™ UL 31-66 is recommended for application as an Ultra Low Volume (ULV) Thermal or Non-Thermal aerosol (cold fog) to control adult mosquitoes, and other insects as listed on this label, in residential and recreational areas where these insect pests become a problem; such as, but not limited to parks, campsites, woodlands, athletic fields, golf courses, municipalities, gardens, playgrounds, and non-crop waste areas. Treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the fog close to the ground, e.g., cool temperatures and wind speeds are not greater than 10 mph. Applications during the cool hours of night or early morning are usually preferable.

URBAN ULV MOSQUITO APPLICATIONS

For control of resting or flying adult mosquitoes, biting flies and biting midges in application sites of residential, municipal and recreational areas such as: utility tunnels, sewers, storm drains and catch basins, pipe chases, underground basements, underground passages, parking decks, crawlspaces or underground buildings. This product may be applied using mechanical foggers, hand-held or truck-mounted ULV equipment suitable for these applications. Apply at rates, up to but not exceeding, 0.007 lbs active ingredient permethrin per acre. See Rate(s) charts.

MAY BE APPLIED OVER THE FOLLOWING CROPS

PERM-X™ UL 31-66 may be applied over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas. Application can only be made where the following crops are present:

Alfalfa	Corn, grain	Onion, bulb
Almond	Corn, stover	Peach
Apple	Corn, sweet, kernel + cob with husks removed	Pepper, bell
Artichoke	Eggplant	Pistachio
Asparagus	Fruit, pome, group 11	Potato
Avocado	Garlic	Soybean, seed
Broccoli	Range grasses	Spinach
Brussels sprouts	Horseradish	Tomato
Cabbage	Leaf petioles, subgroup 4B	Vegetable, cucurbit, group 9*
Cauliflower	Leafy greens, subgroup 4A	Walnut
Celery	Lettuce, head	Watercress
Cherry	Mushroom	
Corn, forage		

*40 CFR 180.41 Crop Group 9: Cucurbit Vegetables, includes Crop Subgroup 9A (melon) and Crop Subgroup 9B (squash/cucumber)

STORAGE & DISPOSAL

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

PESTICIDE STORAGE: Store product in its original labeled container in a cool, dry, locked place designated for such insecticides and out of reach of children. Do not expose to extreme temperatures. In case of spillage, soak up with absorbent material such as sawdust or fuller's earth; sweep up and place in a labeled container and dispose of as follows.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable Containers 5 gallons or less - Nonrefillable container. Do not refill or reuse this container. Triple rinse (or equivalent) 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 mineral oil (or other solvent used to dilute the product) 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. Once triple rinsed, recycle if available. Some agricultural pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact your local solid waste agency for disposal instructions. If recycling is not available, dispose of in a sanitary landfill or by incineration if allowed by state and local ordinances. **Nonrefillable Containers over 5 gallons to 55 gallons -** Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with mineral oil (or other solvent used to dilute the product). 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. Once triple rinsed, recycle if available. Some agricultural pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact your local solid waste agency for disposal instructions. If recycling is not available, dispose of in a sanitary landfill or by incineration if allowed by state and local ordinances. **Refillable bulk containers over 55 gallons -** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. 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 of mineral oil. Agitate vigorously or recirculate mineral oil with pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Central Garden & Pet Company, 1501 East Woodfield Road, 200W, Schaumburg, Illinois 60173

NOTE: This specimen label is for informational purposes only. All uses may not be approved in all states. See product labeling for use directions. Perm-X is a trademark of Wellmark International. © 2015, 2018 Wellmark International.

VEC 18-012

Perm-X™ UL 4-4

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

CONTROLS: Adult Mosquitoes, Biting and Non-biting Midges, Black Flies and other outdoor flying insects as listed on this label

FOR USE AS A: ULV thermal or non-thermal aerosol using ground or aerial equipment in areas including: residential, recreational areas, parks, campsites, woodlands, athletic fields, golf courses, municipalities, playgrounds, and non-crop waste areas and over listed growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas.

Refer to label for additional use sites.

SPECIMEN LABEL

ACTIVE INGREDIENTS:

Permethrin	4%
Piperonyl Butoxide	4%
OTHER INGREDIENTS*	92%
TOTAL:	100%

* Contains Petroleum Distillates

Contains 0.2783 lb ai permethrin and 0.2783 lb ai piperonyl butoxide per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente.

(If you do not understand the label, find someone to explain it to you in detail).

See additional Precautionary Statements.

EPA Reg.No. 89459-47

EPA Est. No. 2724-TX-1

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Causes moderate eye irritation.

FIRST AID

If swallowed	<ul style="list-style-type: none">• Immediately call a Poison Control Center or physician for treatment advice.• Do not induce vomiting unless told to do so by the Poison Control Center or physician.• Do not give any liquid to the person.• Do not give anything by mouth to an unconscious or convulsing person.
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 physician for treatment advice.

(continued)

If in eyes	<ul style="list-style-type: none">• 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 physician for treatment advice.
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 physician for treatment advice.

HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may contact 1-800-248-7763 for emergency medical treatment information. You may also contact 1-800-248-7763 for information including health concerns, medical emergencies or pesticide incidents.

(continued)

NOTE TO PHYSICIAN: Contains Petroleum Distillates - vomiting may cause aspiration pneumonia.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on an EPA Chemical-resistance selection chart. Mixers, loaders, applicators and other handlers (including during mixing/loading, repair and cleaning of equipment and disposal of pesticide) must wear the following:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves such as barrier laminate, viton, neoprene rubber or nitrile rubber except for applicators using motorized ground equipment, pilots, and flaggers
- Chemical-resistant apron for mixers/loaders, persons cleaning equipment and persons exposed to the concentrate.

In addition to the above PPE, mixers and loaders supporting aerial applications to forests must wear at least a NIOSH-approved respirator with:

- A dust/mist filter with MSHA/NIOSH approval number prefix TC-21C, or any R, P, or HE filter.

See Engineering Controls for additional requirements.

USER SAFETY REQUIREMENTS

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

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS

- Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if permits or other regulatory requirements exist.

Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

DIRECTIONS FOR USE

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

For use only by federal, state, tribal or local government officials responsible for public health or vector control or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications or by persons under their direct supervision.

Precautions and Use Restrictions

- Apply this product only as specified on this label.
- Apply this product at temperatures greater than 50°F and when wind speed equals or exceeds 1 mph.
- Not for use in metered release systems or animal premise automatic misting systems.
- Not for use in outdoor residential misting systems.
- Do not spray this product on or allow it to drift onto cropland (other than those listed) or potable water supplies.
- In the treatment of corrals, feedlots, animal confinements/houses, swine lots, poultry ranges and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.
- For hand carried and/or lawn mower foggers: Do not fog wet foliage. Do not fog when wind conditions exceed 10 miles per hour. Only use a clean, well maintained and properly calibrated fogger, known to give excellent performance. Fog down wind.
- Do not apply by fixed wing aircraft at a height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.
- Apply when wind speed is greater than 1 mph.
- Do not make applications during rain.
- Except when applying to storm drains, drainage pipes and pipe chases as instructed on this label, do not apply directly to sewers and drains or to any area like a gutter where drainage to sewers, storm drains, water bodies or aquatic habitat can occur.
- Do not use in dairy barns or facilities.

Do not retreat site more than once in 3 days. Do not exceed 25 applications at 0.007 lbs permethrin per acre per application or 0.007 lbs piperonyl butoxide per acre per application, or 0.18 lbs of permethrin per acre per season or 0.18 lbs piperonyl butoxide per acre per year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

Perm-X™ UL 4-4 is recommended for application as an Ultra Low Volume (ULV) thermal or non-thermal aerosol (cold fog) for control of adult mosquitoes and flies in residential, recreational, industrial, urban and other areas where these insect pests are found. Perm-X™ UL 4-4 provides effective control of mosquitoes and flies in areas such as parks, campsites, woodlands, athletic fields, golf courses, residential areas, municipalities, roadsides, animal quarters, barns, playgrounds, and non-crop waste areas. Treat when mosquitoes or insects are most active and weather conditions are conducive

to keeping the fog close to the ground, e.g., cool temperatures and ground wind speeds are not greater than 10 mph. Applications during the cool hours of night or early morning are usually preferable. Repeat treatment when recommended by Public Health officials or Mosquito Abatement Districts.

Perm-X™ UL 4-4 may be applied over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies with or adjacent to those areas. Application can only be made where the following crops are present:

Alfalfa	Celery	Horseradish	Soybean, seed
Almond	Cherry	Leaf petioles, subgroup 4B	Spinach
Apple	Corn, forage	Leafy greens, subgroup 4A	Tomato
Artichokes	Corn, grain	Lettuce, head	Vegetable, curcubit, group 9*
Asparagus	Corn, stover	Mushroom	Watercress
Avocado	Corn, sweet, kernel + cob with husks removed	Onion, bulb	Walnut
Broccoli	Eggplant	Peach	
Brussels sprouts	Fruit, pome, group 11	Pepper, bell	
Cabbage	Garlic	Pistachio	
Cauliflower	Range grasses	Potato	

*40 CFR 180.41 Crop Group 9: Cucurbit Vegetables, includes Crop Subgroup 9A (melon) and Crop Subgroup 9B (squash/cucumber).

Do not allow spray treatment to drift on pastureland, cropland, (other than crops listed) or water supplies. In treatment of corrals, feedlots, animal confinements/houses, swine lots and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.

Spray Droplet Size Determination

Ground-Based Application: Spray equipment must be adjusted so that the volume median diameter is less than 30 microns ($D_{v0.5} < 30 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v0.9} < 50 \mu\text{m}$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using laser based equipment must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at < 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ($D_{v0.5} < 60 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9} < 100 \mu\text{m}$). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at > 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns ($D_{v0.5} < 70 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 145 microns ($D_{v0.9} < 145 \mu\text{m}$). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor,

pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

GROUND APPLICATION

ULV NON-THERMAL AEROSOL (COLD FOG): To control adult mosquitoes, flies, and gnats (black flies), apply Perm-X™ UL 4-4 using truck-mounted ground ULV (cold fog) equipment with a swath width of 300 feet in areas such as residential, recreational, industrial areas. Apply when insects are most active and conditions are conducive to keeping the fog close to the ground. Apply the undiluted product at flow rates of 2.728 to 19.092 fluid ounce per minute at a truck speed of 10 mph. These rates are equivalent to 0.001 to 0.007 pounds of permethrin a.i. per acre. If a different vehicle speed is used, adjust the flow rate accordingly. An accurate flow control system must be used to ensure proper flow rate. Use the maximum flow rates and application rates on this label to treat heavy vegetation or when target insect populations are high. Do not exceed the highest flow rates specified by the manufacturer. Perm-X™ UL 4-4 may also be applied by diluting with a light mineral oil or another suitable solvent, applied so as not to exceed 0.007 lbs a.i. per acre using a swath width of 300 feet for calculation. Refer to Chart 2 for suggested rates for diluted use. Perm-X™ UL 4-4 may be used to treat outdoor aggregation and harborage sites including storm drains, underground drainage pipes, and pipe chases.

THERMAL AEROSOL APPLICATIONS: For use in thermal fogging equipment such as truck-mounted thermal fog generators or other equipment capable of making thermal fogging applications. Perm-X™ UL 4-4 may be applied either diluted or undiluted. If diluted, use a light mineral oil, or another suitable non-phytotoxic diluent. Do not exceed the maximum rate of 0.007 lbs. a.i. per acre. May be applied with truck-mounted equipment at speeds of 5 mph to 20 mph. Use a swath width of 300 feet for calculation. For use with handheld, backpack or lawn mower thermal fogging equipment, do not exceed the maximum rate of 0.007 lbs a.i. per acre. Use a walking speed of 2 mph (3.2 kph) and a swath width of 300 feet for calculations. May be used to treat aggregation and harborage sites such as abandoned buildings, warehouses, storm drains, underground drainage pipes, pipe chases and other areas where adult mosquitoes find harborage.

BARRIER APPLICATIONS: For use in non-thermal ULV, motorized, portable, backpack, handheld or truck-mounted fogging equipment or mist blower equipment, apply Perm-X™ UL 4-4 with equipment adjusted to deliver ULV particles of 50 to 100 volume median diameter. Perm-X™ UL 4-4 may be applied undiluted or diluted (see Application Rates Charts on this label). If diluted, use a light mineral oil, or another suitable, non-phytotoxic diluent. For truck-mounted applications, use not more than 0.007 lbs permethrin per acre. Use a 300 ft (15.2 m) swath width (see Application Rates Charts on this label) for calculations. For backpack or handheld applications, use not more than 0.007 lbs a.i. per acre. Use a 300 ft swath width and a walking speed of 2 mph (3.2 kph) for calculations. Direct spray onto foliage at the perimeter of areas from which mosquitoes or flies are to be excluded or direct spray into harborage areas where adult mosquitoes or flies may be found. May be used to treat aggregation and harborage sites such as abandoned buildings, residential buildings, warehouses, storm drains, underground drainage pipes and other areas where adult mosquitoes find harborage.

AERIAL APPLICATION

Use aircraft specially equipped and capable of applying Ultra-Low Volumes of Perm-X™ UL 4-4. Applications can be made diluted or undiluted but cannot exceed the specified rates of 0.007 lbs permethrin per acre and 0.007 lbs

piperonyl butoxide per acre, equivalent to 3.1819 fl oz of undiluted Perm-X™ UL 4-4 per acre. Applications should be made at an altitude of 100 to 300 feet. Apply at airspeed sufficient to deliver the appropriate amount of active ingredient per acre. The minimum height (from the ground) for aerial application of this product is 100 feet. Treat when insects are most active and meteorological conditions are conducive to keeping the spray cloud close to the ground. In order to compensate for windy conditions and ensure drift onto the target area, aerial application with aircraft equipped with Global Positioning Systems (GPS) is recommended.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

CHART NO. 1 - FOR USE UNDILUTED

Conditions and Rates To Use Perm-X™ UL 4-4 Undiluted for Mosquito Control						
Pounds Per Acre		Application Rates				Fluid Ounces and Milliliters Per Acre
		Fluid Ounces per Minute				
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.0070	0.0070	9.546	19.092	28.637	38.183	3.1819 (94.10 ml)
0.0035	0.0035	4.773	9.545	14.318	19.091	1.5909 (47.05 ml)
0.001	0.001	1.363	2.728	4.092	5.455	0.4546 (13.44 ml)

CHART NO. 2 - DILUTE 1 PART WITH 2 PARTS MINERAL OIL

Amounts to Use After Diluting 1 Part Perm-X™ UL 4-4 with 2 Parts Mineral Oil						
Pounds of A.I. Per Acre		Application Rates for Fluid Ounces of Diluted Product Per Minute Per MPH				Diluted Fl Oz (ml) to Apply per Acre
		5 mph	10 mph	15 mph	20 mph	
Permethrin	PBO					
0.0070	0.0070	26.250	52.50	78.75	105.00	8.75 (258.76 ml)
0.0035	0.0035	13.125	26.25	39.38	52.50	4.38 (129.53 ml)
0.0010	0.0010	3.750	7.50	11.25	15.00	1.25 (36.96 ml)

STORAGE & DISPOSAL

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

PESTICIDE STORAGE: Store product in its original labeled container in a cool, dry, locked place designated for such insecticides and out of reach of children. In case of spillage, soak up with absorbent material such as sawdust, or fuller's earth, sweep up and place in a labeled container and dispose of as follows.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not refill or reuse this container. Clean container promptly after emptying. **For Containers 5 gallons or less** – Triple rinse as follows: Empty the remaining contents into

(continued)

application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 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. Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **For Containers greater than 5 gallons** – 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. Then, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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 must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Central Garden & Pet Company or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Central Garden & Pet Company and Seller harmless for any claims relating to such factors. Central Garden & Pet Company 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 this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Central Garden & Pet Company, and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, CENTRAL GARDEN & PET COMPANY 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 extent consistent with applicable law, in no event shall Central Garden & Pet Company or 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 CENTRAL GARDEN & PET COMPANY 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 CENTRAL GARDEN & PET COMPANY OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

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

Central Garden & Pet Company, 1501 East Woodfield Road, 200W, Schaumburg, Illinois 60173

NOTE: This specimen label is for informational purposes only. All uses may not be approved in all states. See product labeling for use directions. Perm-X is a trademark of Wellmark International. © 2015, 2018 Wellmark International.

VEC 18-013

Perm-XTM UL 30-30

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

CONTROLS: Adult Mosquitoes, Biting and Non-biting Midges, Black Flies and other outdoor flying insects as listed on this label.

FOR USE AS A: ULV thermal or non-thermal aerosol using ground or aerial equipment in areas including: residential, recreational areas, parks, campsites, woodlands, athletic fields, golf courses, municipalities, playgrounds, and non-crop waste areas and over listed growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas. Refer to label for additional use sites.

SPECIMEN LABEL

ACTIVE INGREDIENTS:

Permethrin	30%
Piperonyl Butoxide	30%
OTHER INGREDIENTS*:	40%
TOTAL:	100%

* (butyl carbityl)(6-propylpiperonyl) ether and related compounds.

** Contains Petroleum Distillate

Contains 2.51 lbs a.i. Permethrin/gallon and 2.51 lbs a.i. Piperonyl Butoxide/gallon

KEEP OUT OF REACH OF CHILDREN CAUTION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente.

(TO THE USER: If you cannot read English, do not use this product until the label has been fully explained to you.)

See inside label booklet for additional Precautionary Statements.

EPA Reg.No. 89459-44

EPA Est. No. 2724-TX-1

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation.

FIRST AID	
If swallowed	<ul style="list-style-type: none">• Immediately call a poison control center or doctor.• Do not induce vomiting unless told to by a poison control center or doctor.• Do not give any liquid to the person.• Do not give anything by mouth to an unconscious person.
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. <p style="text-align: right;">(continued)</p>

If in eyes	<ul style="list-style-type: none">• 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 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 by mouth-to-mouth, if possible.• Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. You may contact 1-800-248-7763 for emergency medical treatment information. You may also contact 1-800-248-7763 for information including health concerns, medical emergencies or pesticide incidents. <p style="text-align: right;">(continued)</p>	

NOTE TO PHYSICIAN: Contains Petroleum Distillates - vomiting may cause aspiration pneumonia.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are listed below. Mixers, loaders, applicators and other handlers including during mixing/loading, repair and cleaning of equipment and disposal of pesticide must wear the following:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves such as barrier laminate, viton, neoprene rubber or nitrile rubber
- Chemical-resistant apron for mixers/loaders, persons cleaning equipment and persons exposed to the concentrate

In addition to the above PPE, mixers and loaders supporting aerial applications to forests must wear at least a NIOSH-approved respirator with:

- A dust/mist filter with MSHA/NIOSH approval number prefix TC-21C, or any R, P, or HE filter.

See Engineering Controls for additional requirements.

USER SAFETY REQUIREMENTS

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

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS

- Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates.

Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

DIRECTIONS FOR USE

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

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control application or by persons under their direct supervision.

Precautions and Use Restrictions

- Apply this product only as specified on this label.
- Apply this product at temperatures greater than 50° F and when wind speed equals or exceeds 1 mph.
- Not for use in metered release systems.
- Not for use in outdoor residential misting systems.
- Do not spray this product on or allow it to drift onto cropland (other than crops listed) or potable water supplies.
- In the treatment of corrals, feedlots, animal confinements/houses, swine lots, poultry ranges and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.
- For hand carried and/or lawn mower foggers: Do not fog wet foliage. Do not fog when wind conditions exceed 10 mph. Only use a clean, well maintained and properly calibrated fogger known to give excellent performance. Fog down wind.
- Do not apply by fixed wing aircraft at a height less than 100 feet or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.
- Apply when wind speed is greater than 1 mph.
- Do not make applications during rain.

Do not retreat site more than once in 3 days. Do not exceed 25 applications at 0.007 lbs permethrin per acre per application or 0.007 lbs PBO per acre per application or 0.18 lbs of permethrin per acre per season or 0.18 lbs PBO per acre per year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

HOW TO APPLY

For proper ground application, mount the fog applicator so that the nozzle is at least 4 ½ feet above ground level and directed out the back of the vehicle. May be applied at speeds of 5 mph up to 20 mph. Failure to follow these label directions may result in reduced effectiveness. For "Aerial Application", refer to the Aerial Application section on this label. PERM-X™ UL 30-30 may be used as is, or diluted with a suitable solvent, i.e., a 60 to 100 second viscosity mineral oil and applied at a rate not to exceed 0.9636 fl oz of PERM-X™ UL 30-30 per acre. Both aerial and ground applications should be made when the wind is less than 10 mph. For exact rates, see the "UNDILUTED" or the "DILUTION" Rates charts on this label. PERM-X™ UL 30-30 is approved for application as an Ultra Low Volume (ULV) Thermal or Non-thermal aerosol (cold fog) to control adult mosquitoes, and other insects as listed on this label, in residential and recreational areas where these insect pests become a problem, such as parks, campsites, woodlands, athletic fields, golf courses, residential area, municipalities, gardens, play grounds, and non-crop waste areas. Treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the fog close to the ground, e.g., cool

temperatures and wind speeds not greater than 10 mph. Applications during the cool hours of night or early morning are usually preferable. Repeat treatment when recommended by Public Health officials, or Mosquito Abatement Districts.

Spray Droplet Size Determination

Ground-Based Application: Spray equipment must be adjusted so that the volume median diameter is less than 30 microns ($D_{v0.5} < 30 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v0.9} < 50 \mu\text{m}$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using laser-based equipment must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at ≤ 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ($D_{v0.5} < 60 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9} < 100 \mu\text{m}$). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at > 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns ($D_{v0.5} < 70 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 145 microns ($D_{v0.9} < 145 \mu\text{m}$). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

ULV NON-THERMAL AEROSOL (COLD FOG)

To control adult mosquitoes, flies, and gnats (black flies) apply PERM-X™ UL 30-30 using truck-mounted ground ULV (cold fog) equipment with a swath width of 300 feet in areas such as residential, recreational, industrial areas. For best results, apply when insects are most active and conditions are conducive to keeping the fog close to the ground. Apply the undiluted product at flow rates of 0.5472 to 2.1816 fluid ounce per minute at a truck speed of 10 mph. These rates are equivalent to 0.00175 to 0.007 pounds of permethrin a.i. and 0.00175 to 0.007 pounds of piperonyl butoxide a.i. per acre. If a different vehicle speed is used, adjust the flow rate accordingly. An accurate flow control system must be used to ensure proper flow rate. Use the maximum flow rates and application rates listed on this label to treat heavy vegetation or when target insect populations are high. Do not exceed the highest flow rates specified by the manufacturer. PERM-X™ UL 30-30 may also be applied by diluting with 60-100 second mineral oil or another suitable solvent, applied so as not to exceed 0.007 lb a.i. per acre using a swath width of 300 feet for calculation. Refer to the rates chart for suggested rates for diluted use. PERM-X™ UL 30-30 may be used to treat outdoor aggregation and harborage sites including storm drains, underground drainage pipes, and pipe chases.

THERMAL AEROSOL FOGGING

Refer to the DILUTION RATES tables for fogging applications. Droplet size of thermal “fog” will be very small usually in the 0.5 to 1.0 micron range.

TRUCK-MOUNTED - Apply PERM-X™ UL 30-30 diluted or undiluted with suitable thermal fogging equipment. If diluted, use a 60 to 100 second viscosity mineral oil or another suitable non-phytotoxic diluent, to reduce oil requirement and sludge buildup in equipment. Do not exceed the maximum 0.007 lb a.i. permethrin per acre rate. May be applied at speeds of 5 mph up to 20 mph. For use with HAND CARRIED and/or LAWN MOWER FOGGERS, use the same rates of a.i. per acre with a 50 foot swath width at a walking speed of 2 mph. Apply PERM-X™ UL 30-30 at 0.00175 lb to 0.007 lb of a.i. permethrin/a.i. piperonyl butoxide per acre.

USE AS AN INSECT BARRIER AS AN INSECT BARRIER – USE A “BACKPACK” FOG-TYPE MIST BLOWER

For use in Non-Thermal ULV, motorized, portable, backpack, fog-type mist blower equipment, apply PERM-X™ UL 30-30 with equipment adjusted to deliver ULV particles of 50 to 100 volume median diameter. PERM-X™ UL 30-30 may be applied undiluted or diluted (see Application Rates tables section). If diluted, use a 30 to 100 second viscosity mineral oil, or another, (if recommended by Public Health Officials), suitable non-phytotoxic diluent. Use 0.00175 to 0.007 pound permethrin a.i. per acre at a 50 ft (15.2 m) swath width, while walking at a speed of 2 mph (3.2 kph). Whether applied undiluted or diluted or at a different speed, make sure that the same amount of permethrin a.i. – PBO a.i. is applied/acre.

DIRECTIONS FOR AERIAL APPLICATION

Use aircraft specially equipped and capable of applying Ultra-Low Volumes of PERM-X™ UL 30-30 according to the rate chart on this label. Applications can be made diluted or undiluted but cannot exceed the specified rates of 0.007 lbs permethrin per acre and 0.007 lbs PBO per acre, equivalent to 0.3646 fl oz of undiluted PERM-X™ UL 30-30 per acre. Applications should be made at an altitude of 100 to 300 feet. Apply at airspeed sufficient to deliver the appropriate amount of active ingredient per acre. A forward speed of 150 mph achieving a swath width of 500 feet is recommended. The minimum height (from the ground) for aerial application of this product is 100 feet. Treat when insects are most active and meteorological conditions are conducive to keeping the spray cloud close to the ground. In order to compensate for windy conditions and ensure drift onto the target area, aerial application with aircraft equipped with Global Positioning Systems (GPS) is recommended.

PROHIBITION ON AERIAL USE IN FLORIDA: Not for aerial use in Florida UNLESS specifically authorized by the Bureau of Entomology and Pest Control, Florida Department of Agriculture and Consumer Services.

This product can be applied over specific growing crops prior to harvest and range grasses for the control of adult mosquitoes and biting flies within or adjacent to these areas. Application can only be made where the following crops are present:

Alfalfa, Almonds, Apples, Artichokes, Asparagus, Avocados, Broccoli, Brussel sprouts, Cabbages, Cantaloupes, Cauliflower, Celery, Cherries, Corn (field and pop), Corn (sweet), Eggplants, Filberts (Hazelnuts), Garlic, Horseradish, Lettuce, Onions (dry bulb only), Papayas (FL only), Peaches/Nectarines, Pears, Bell peppers, Pistachios, Potatoes, Soybeans, Spinach, Tomatoes, and Walnuts.

Cucurbit vegetables, including Chayote (fruit), Chinese wax gourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon and winter melon), Pumpkin,

Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, and winter squash types such as: acorn squash and spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

Leafy Vegetables, including Leafy vegetables (except *brassica*) (Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (rocket), Chervil, Chrysanthemum (edible leaved and garland), Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)).

Conditions and Rates To Use Perm-X™ UL 30-30 Undiluted						
Pounds A.I. Per Acre		Application Rates				Fluid Ounces of Perm-X™ UL 30-30 per Acre
		Fluid Ounces per Minute at MPH				
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	1.0938	2.1876	3.2814	4.3752	0.3646
0.00350	0.00350	0.5468	1.0938	1.6507	2.1876	0.1823
0.00175	0.00175	0.2736	0.5472	0.8208	1.0944	0.0912

DILUTION RATES FOR PERM-X™ UL 30-30 FOR A 1:4 DILUTION

Mix 1 part PERM-X™ UL 30-30 with 4 parts Suitable Mineral Oil: Apply as follows:						
Pounds of A.I. Per Acre		Application Rates				FI Oz Finished Spray Per Acre
		FI Oz Per Minute At Vehicle Speeds				
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	5.3847	10.7694	16.1541	21.5388	1.7949
0.00350	0.00350	2.6925	5.3850	8.0775	10.7700	0.8975
0.00175	0.00175	1.3464	2.6928	4.0932	5.3856	0.4488

DILUTION RATES FOR PERM-X™ UL 30-30 FOR A 1:8 DILUTION

Mix 1 part PERM-X™ UL 30-30 with 8 parts Suitable Mineral Oil: Apply as follows:						
Pounds of A.I. Per Acre		Application Rates Fl Oz Per Minute At Vehicle Speeds				Fl Oz Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	9.5457	19.0914	28.6371	38.1828	3.1819
0.00350	0.00350	4.7727	9.5454	14.3181	19.0908	1.5909
0.00175	0.00175	2.3862	4.7730	7.1595	9.5460	0.7955

DILUTION RATES FOR PERM-X™ UL 30-30 FOR A 1:2 DILUTION

Mix 1 part PERM-X™ UL 30-30 with 2 parts Suitable Mineral Oil: Apply as follows:						
Pounds of A.I. Per Acre		Application Rates FI Oz Per Minute At Vehicle Speeds				FI Oz Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	3.2814	6.5628	9.8442	13.1256	1.0938
0.00350	0.00350	1.6407	3.2814	4.9221	6.5628	0.5469
0.00175	0.00175	0.8205	1.6410	2.4615	3.2820	0.2735

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE AND SPILL PROCEDURES: Store upright at room temperatures. Do not expose to extreme temperatures. In case of spill or leakage, ventilate the area, wear chemical resistant gloves, and footwear. Retrieve and filter the liquid in some manner and use as directed on this label, or "soak-up" the liquid with absorbent material such as sawdust, soil, fuller's earth, etc. and dispose of the resulting chemical waste as follows.

PESTICIDE DISPOSAL: Wastes resulting from a spill or use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Non-refillable container. Do not reuse or refill this container. Clean container promptly after emptying. **Containers 5 gallons or less – 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 mineral oil (or other solvent used when diluting the product) 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. Then offer for recycling if available, reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities. **Containers larger than 5 gallons – Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with mineral oil (or other solvent used when diluting the product). 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. Then, offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved state and local authorities. **Refillable 275 Gallon Stainless Steel Tote:** Refillable container. Refill this container with pesticide 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 refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full of mineral oil or other suitable oil diluents. Agitate vigorously or recirculate mineral oil with pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Once triple rinsed, recycle if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Central Garden & Pet Company, 1501 East Woodfield Road, 200W, Schaumburg, Illinois 60173

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VEC 20-009

Pyronyl™

525 Oil Concentrate

KILLS: Ants, Flies, Fruit Flies, Gnats, Small Mites, Lice, Cockroaches, Mosquitoes, Wasps and other listed insects

FOR USE IN: Cattle Barns, Horse Barns, Poultry Houses, Swine Houses, Stables and Animal Quarters

FOR USE AS: Outdoor and Wide Area Mosquito Abatement

ON ANIMAL USE: Beef and Dairy Cattle

SPECIMEN LABEL

ACTIVE INGREDIENTS:

Pyrethrins 5%

Piperonyl Butoxide* 25%

OTHER INGREDIENTS** 70%

TOTAL: 100%

*(butylcarbityl)(6-propylpiperonyl) ether and related compounds

**Contains Petroleum Distillates

This product contains 0.367 pounds of Pyrethrins and 1.83 pounds of Piperonyl Butoxide Technical per gallon.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIRST AID

If Swallowed	<ul style="list-style-type: none">• Immediately call a Poison Control Center or physician.• Do not induce vomiting unless told to do so by the Poison Control Center or physician.• Do not give any liquid to the person.• Do not give anything by mouth to an unconscious or convulsing person.
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Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may contact 1-800-248-7763 for emergency medical treatment information. You may also contact the National Pesticide Telecommunication Network at 1-800-858-7378 for information including health concerns, medical emergencies or pesticide incidents.

NOTE TO PHYSICIAN: Contains petroleum distillate – vomiting may cause aspiration pneumonia.

Personal Protective Equipment (PPE): Mixers, loaders, applicators, and other handlers must wear the following: • long-sleeve shirt, • long pants, • shoes and socks

In addition to the above PPE, applicators using a high pressure hand wand in an enclosed area must wear at least a NIOSH-approved respirator with: • a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or • any R, P, or HE filter.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Additional Precautionary Statements and Directions for Use

EPA Reg.No. 89459-24

EPA Est. No. 2724-TX-1

In addition to the above PPE, applicators using hand held foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with: • a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or • a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or • a cartridge or canister with any R, P, or HE filter. See Engineering Controls for additional requirements.

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

User Safety Recommendations:

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed on the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

ENVIRONMENTAL HAZARDS

For Terrestrial Applications: This product is toxic to aquatic organisms, including fish and invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through runoff. This product has a potential for runoff for several weeks

after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Except as specified in the Directions for Use, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

For Wide Area Mosquito Adulticide Applications: This pesticide is toxic to aquatic organisms, including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. When applying as a wide area mosquito adulticide, before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply when bees are visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

When applying as a wide area mosquito adulticide, do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body.

DIRECTIONS FOR USE

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

GENERAL PRECAUTIONS AND USE RESTRICTIONS

- Entry Restrictions:

Except when applying to beef cattle, dairy cattle and horses and applying as a wide area mosquito adulticide, do not enter or allow others to enter treated area until sprays have dried and vapors, mists and aerosols have dispersed and the treated area has been thoroughly ventilated.

Except when applying to beef cattle, dairy cattle and horses and applying as a wide area mosquito adulticide, do not apply this product in a way that will contact workers or other persons either directly or through drift.

Except when applying to beef cattle, dairy cattle and horses and applying as a wide area mosquito adulticide, only protected handlers may be in the area during application.

- Remove or cover exposed food and drinking water before application.
- Remove or cover dishes, utensils, food processing equipment and food preparation surfaces or wash them before use.
- Remove pets, birds and cover fish aquariums before spraying.
- Do not make space spray applications when food handling and processing facilities are in operation. Prior to space spray applications, cover or remove food. Prior to space spray applications, cover food processing surfaces or clean after treatment and before use.
- Do not remain in treated area. Exit area immediately and remain outside the treated area until aerosols, vapors, and /or mists have dispersed.
- For direct application to non-domestic animals: Do not apply more than one time per day.

- When used in dairy barns or facilities: Close milk bulk tank lids to prevent contamination from spray and from dead or falling insects. Remove or cover milking utensils before application. Wash teats of animals before milking.
- Do not apply directly into sewers or drains or to any area like a gutter where drainage to storm sewers, water bodies or aquatic habitat can occur. Do not allow the product to enter any drain during or after application.
- Not for use in outdoor residential misting systems.
- Do not make applications during rain.
- Do not wet plants to point of runoff or drip.
- Do not water the treated area to the point of runoff.
- Do not use in aircraft cabins.

INDOOR USE AS A SPACE SPRAY UNDILUTED: In non-residential areas only, close windows and doors and shut off ventilating systems. Use a fogger or vaporizer adjusted to deliver an aerosol spray (no droplets over 50 microns in diameter and 80% less than 30 microns). Apply at a rate of ½ fluid ounce per 1,000 cubic feet of space. Direct the spray toward the ceiling and upper corners of the area behind obstructions. Keep the area closed for at least 15 minutes.

FOR COCKROACHES ONLY – Apply at a rate of 1 fluid ounce per 1,000 cubic feet of space. Open all closets, cabinets, drawers, and other potential harborage. Direct spray toward ceiling and upper corners of the area and into, under and behind obstructions, cabinets, appliances and furnishings if the equipment and constructions of the treatment so allow. Keep area closed for at least 1 hour before ventilation.

This method of application will kill COCKROACHES and exposed, accessible stages of FLIES, (including FRUIT FLIES), MOSQUITOES, SMALL MITES, CHEESE SKIPPERS, BOXELDER BUGS, EARWIGS, ANTS and the following common stored product pests: GRANARY WEEVILS, RICE BEETLES, SPIDER BEETLES, MOTHS, MEDITERRANEAN FLOUR MOTHS, INDIAN MEAL MOTHS, TOBACCO MOTHS, YELLOW MEALWORMS, DARK MEALWORMS, GRAIN MITES, CADELLES and RED FLOUR BEETLES.

DRIED FRUIT PRODUCTS in storage or being processed, to kill CONFUSED FLOUR BEETLES, DRIED FRUIT BEETLES, INDIAN MEAL MOTHS, and SAWTOOTHED GRAIN BEETLES: remove and destroy infested products. As noted above, disperse this product as a fine mist in the air above the trays and shelves. Use ½ fluid ounce per 1,000 cubic feet of space. Repeat application at this dosage in any given month. Leave the room closed for one hour.

STORED FOOD: (Stored in multi-wall bags or cloth bags) in warehouses, storage rooms, flour mills, grain elevators, granaries to kill ANGOUMOIS GRAIN MOTHS, CADELLES, CONFUSED FLOUR BEETLES, INDIAN MEAL MOTHS, MEDITERRANEAN FLOUR MOTHS, RICE WEEVILS, SAWTOOTHED GRAIN BEETLES, YELLOW MEALWORMS, CHEESE MITES, CHEESE SKIPPERS, CIGARETTE BEETLES, GRAIN MITES, GRANARY WEEVILS, DARK MEALWORMS, RED FLOUR BEETLES: remove and destroy infested products. As noted above, disperse the product first by directing spray into corners, under pallets, and around stacks of packaged foods hitting as many insects as possible and then treat as a space spray. Infested stored product should be fumigated or treated by other effective methods using an approved product intended for this purpose. Use a dosage of ½ fluid ounce per 1,000 cubic feet of space. This application will kill accessible, exposed stages of those stored product pests listed above.

INDOOR USE AS A SPACE SPRAY, DILUTED: for use in conventional mechanical fogging equipment to kill FLIES, FRUIT FLIES, MOSQUITOES, SMALL FLYING MOTHS and GNATS. Close room and shut off all air conditioning or ventilating system equipment. Dilute 1 part concentrate plus 49 parts oil (refined kerosene) and mix well. Apply at the rate of 1 to 2 fluid ounces per 1,000 cubic feet filling the room with mist. Keep area closed for at least 15 minutes.

SURFACE SPRAY: To insure maximum kill of crawling insects (ANTS, BOXELDER BUGS, CLOVER MITES, DRUGSTORE BEETLES, EARWIGS, LICE, SPIDER BEETLES), dilute 1 part concentrate plus 49 parts oil (refined kerosene) and mix well and apply as a coarse wetting spray using approximately 1 gallon of spray mixture to 750 square feet of surface. Spray walls, floors and other surfaces of bins and storage and handling areas thoroughly, being especially careful to treat cracks, crevices, and similar hiding places. Treat unloading, handling and processing areas and inside conveying, processing and handling equipment. Spray thoroughly around the base of heavy machinery and equipment. Spray insects directly when possible.

For transit protection, clean and spray truck beds, boxcars, and ship's hold before loading. Dilute 1 part concentrate plus 49 parts oil (refined kerosene) and mix well and apply as a coarse wetting spray using approximately 1 gallon of spray mixture to 750 square feet of surface. Thoroughly treat walls and floors and spray each layer of cartons or containers lightly as stacked.

To kill INDIAN MEAL MOTHS and ANGOUMOIS GRAIN MOTHS in stored grain, dilute 1 part concentrate plus 49 parts oil (refined kerosene), mix well and apply to the surface of binned grain at a rate of 1 gallon per 1,000 square feet. Apply at monthly intervals with the first appearance of moths and continuing until early fall. In case of severe infestation, break up webbing with rake before spraying and make a second application in two weeks.

To kill MOSQUITOES, GNATS, WASPS and SKIPPERS: treat walls, ceilings, moldings, screens, door and window frames, beams, light cords and similar resting places.

CONTACT AND SURFACE SPRAY: To kill cockroaches, dilute 2.5 fluid ounces to make one gallon of finished solution in oil. Use a good sprayer adjusted to deliver a coarse, wet spray applying 1 gallon of solution per 1,000 sq ft. Direct the spray into hiding places, containers of stored foods, around bases of machinery, behind shelves and drawers. Spray cockroaches directly whenever possible.

INDOOR METERED RELEASE DEVICE:

Not for use in residential areas.

Do not use in nurseries or rooms where infants, ill or aged persons are confined.

Do not place metering device directly over or within 8 feet of exposed food, dishes, utensils, food processing equipment and food handling or preparation.

Do not install within 3 feet of air vents.

Carefully follow directions for the dispenser unit when installing the dispenser and replacing cans or conducting maintenance.

The maximum application rate for metered release devices is 0.00046 lb pyrethrins per 1,000 cubic feet. Dilute 2.5 fluid ounces to make one gallon of finished solution and apply no more than 7.9 fluid ounces per 1,000 cu ft.

ANIMAL QUARTER USE: (Cattle barns, horse barns, poultry houses, swine houses, zoos): as a space spray diluted for use in conventional mechanical fogging equipment to kill FLIES, MOSQUITOES, SMALL FLYING MOTHS and GNATS, dilute 1 part concentrate plus 49 parts oil (refined kerosene) and mix well. Apply at the rate of 2 fluid ounces per 1,000 cubic feet of space above the animals. Direct spray towards the upper portions of the enclosure filling the room with moisture. Keep area closed for at least 15 minutes.

INDOOR MISTING SYSTEMS USED IN COMMERCIAL BARNs, STABLES AND ANIMAL QUARTERS

To kill listed flying insects, dilute 2.5 fluid ounces of Pyronyl™ 525 Oil Concentrate per gallon of oil (125 fluid ounces of concentrate in 50 gallons of oil).

Do not apply when food, feed and/or water is present.

When using this product, installers and service technicians must comply with the license, certification or registration requirements of the state(s), tribe(s)

or local authority(ies) where they are installed.

When applying via a remote activation device, do not apply when people and pets are present. If possible, when applying via automatic timer, set the timing for application when people and pets are unlikely to be present.

Direct nozzles to spray towards the target area and away from areas where people are typically present.

Do not use in an evaporative cooling system.

Do not use in misters located within 3 feet of air vents, air conditioner units or windows.

If used in a system with a reservoir tank for the end use dilution, the system reservoir tank must be locked. Securely attach the end-use pesticide label and a dilution statement to the system reservoir tank in a weather protected area or plastic sleeve. The dilution statement must be phrased as follows: this container holds _____ parts Pyronyl™ 525 Oil Concentrate to _____ parts oil.

If used in a direct injection system, the pesticide container must be locked. Securely attach the end-use label to the pesticide container in a weather protected area or plastic sleeve.

This product must only be used in systems that have been calibrated to apply no more than the maximum application rate of 0.000476 lbs pyrethrins and 0.008 lbs piperonyl butoxide per 1,000 cubic feet per day. This is equivalent to 8.2 fluid ounces of diluted product per 1,000 cubic feet per day.

FOR USE IN FEDERALLY INSPECTED MEAT AND POULTRY PLANTS: to kill exposed or accessible stages of COCKROACHES, SILVERFISH, WATERBUGS, EARWIGS, ANTS, SPIDERS, FLIES, FRUIT FLIES, MOSQUITOES, SMALL FLYING MOTHS, and GNATS, dilute one part concentrate with 5 parts base oil (refined kerosene) and use with a ULV spraying device at the rate of one fluid ounce per 1,000 cubic feet of room space. Apply the spray into all cracks and crevices in woodwork, walls, floors, underneath sinks, behind pipes and in all places where these insects shelter. Contact as many insects as possible.

OUTDOOR APPLICATIONS, UNDILUTED: for use by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

To kill ADULT MOSQUITOES, GNATS and SMALL FLYING MOTHS, this concentrate is formulated to be diluted with a suitable oil diluent, such as, but not limited to, light mineral oil, deodorized kerosene or petroleum distillate, for use in cold fog aerosol generators.

This concentrate may be diluted or used as supplied for mosquito control programs involving residential, industrial, recreational and agricultural areas, swamps, marshes, overgrown waste areas, roadsides and pastures where adult mosquitoes occur.

This product can be used over the following growing crops:

ROOT AND TUBER VEGETABLES: arracacha, arrowroot, purple arrowroot, Japanese artichoke, Jerusalem artichoke, beet, sugar beet, edible burdock, carrot, cassava (bitter or sweet), celeriac, chervil (turnip rooted), chicory, dasheen (taro), ginger, ginseng, horseradish, leren, parsley (turnip rooted), parsnip, potato, radish, Japanese radish (daikon), rutabaga, salsify, black salsify, Spanish salsify, sweet potato, tanager (cocoyam), turmeric, turnip, true yam, bean yam.

LEAVES OF ROOT AND TUBER VEGETABLES: beet, sugar beet, edible burdock, carrot, cassava (bitter or sweet), celeriac, chervil (turnip rooted), chicory, dasheen (taro), parsnip, radish, Japanese radish (daikon), rutabaga, black salsify, sweet potato, tanager (cocoyam), turnip, true yam.

BULB VEGETABLES (Allium spp.): garlic, great-headed garlic, leek, onion (dry bulb or green), spring onion (scallion), Welsh onion, shallot.

LEAFY VEGETABLES: amaranth (leafy amaranth, Chinese spinach, tampala), arugula (roquette), celery, celtuce, chervil, corn salad, chrysanthemum

(edible leaved), chrysanthemum (garland), cress (garden), cress (upland, yellow rocket, winter cress), dandelion, dock (sorrel), endive, escarole, fennel (Florence), lettuce (head and leaf), orach, parsley, purslane (garden and winter), rhubarb, romaine, spinach, fine spinach (Malabar, Ceylon), spinach (New Zealand), Swiss chard.

BRASSICA (COLE) LEAFY VEGETABLES: broccoli, broccoflower, cavalo broccoli, Chinese broccoli (gailan), broccoli raab (rapini), Brussels sprouts, cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), cauliflower, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens.

LEGUME VEGETABLES (SUCCULENT OR DRIED): adzuki beans, asparagus beans, black-eyed peas, broad beans (fava beans), catjang, chick peas (garbanzo beans), Chinese longbeans, cowpeas, crowder peas, field beans, guar, jackbeans, sword beans, kidney beans, lablab beans (hyacinth beans), lima beans, lentils, moth beans, mung beans, navy beans, peas (dwarf, edible, pod, English, garden green, field, snowpeas, sugar snap peas), pigeon peas, pinto beans, rice beans, runner beans, snap peas, southern peas, soybeans, grain lupin, sweet lupin, white lupin, pole beans, tepary beans, urd beans, wax beans, yardlong beans.

LEGUME VEGETABLE FOLIAGE: plant part of any legume vegetables included in the legume vegetable group that will be used as animal feed, including any variety of beans and field peas.

FRUITING VEGETABLES: eggplant, ground cherry, pepino, peppers (bell, chili, cooking, pimento, sweet peppers), tomatillo, tomato.

CUCURBIT VEGETABLES: balsam pear (bitter melon), Chinese wax gourd (Chinese preserving melon), citron melon, cucumber, gherkins, edible gourd, melons (hybrids, ananas, canary, cantaloupe, casaba, charentais, Crenshaw, galia, honeydew, honeyballs, mangomelon, muskmelon, Persian melon, piel de sapo), pumpkin, squash (summer and winter), western shipper melon, watermelon (including hybrids, seeded and unseeded.)

CITRUS FRUITS: calamondin, citrus citron, citrus hybrids, grapefruit, kumquat, lemon, lime, mandarin, tangerine, orange (sweet and sour), pummelo, satsuma mandarin.

POME FRUITS: apple, crabapple, loquat, mayhaw, pear, Oriental pear, quince.

STONE FRUITS: apricot, cherries (sweet and sour), nectarine, peach, plum, prune, Chickasaw plum, Damson plum, Japanese plum, plumcot.

SMALL FRUITS AND BERRIES: bingleberries, blackberries, blueberries, cranberries, currants, dewberries, elderberries, gooseberries, grapes, huckleberries, loganberries, lowberries; ollalieberries, black raspberries, red raspberries, strawberries, youngberries.

TREE NUTS: almond, beech nut, Brazil nut, butternut, cashew, chestnut, chinquao, filbert (hazelnut), hickory nut, macadamia nut (bush nut), pecan, pistachio, walnut (black and English or Persian).

ORIENTAL VEGETABLES: Japanese artichoke, Chinese broccoli (gailan), Chinese cabbage (bok choy), Chinese mustard cabbage (gai choy), dasheen, ginger, ginseng, Chinese longbeans, mung beans, citron melon, balsam pear (bitter melon), Japanese radish (daikon), Chinese spinach, Chinese wax gourd.

SUBTROPICAL FRUITS: avocado, banana, carob, Barbados cherry, cherimoya, date, durian (jackfruit), feijoa, fig, guava, kiwifruit, lychee, mango, papaya, passionfruit, pawpaw, persimmon, pineapple, pomegranate.

CEREAL GRAINS: barley, buckwheat, corn (sweet, pop and field), millet, proso, oats, pearl, rice, rye, sorghum (milo), teosinte, triticale, wheat, wild rice.

FORAGE, FODDER AND STRAW OF CEREAL GRAINS: barley, buckwheat, corn (sweet, pop and field), millet, proso, oats, pearl, rice, rye, sorghum (milo), teosinte, triticale, wheat, wild rice.

GRASSES FOR SEED, FORAGE, FODDER AND HAY: includes any grass (Gramineae), green or cured, except sugar cane and those listed under

“cereal grains”, that will be used to graze or feed livestock, such as pasture grasses, range grasses, grasses grown for hay or silage, Bermuda grass, bluegrass, brome grass, fescue, annual ryegrass, festulolium, hybrid ryegrass, Italian ryegrass, meadow fescue, orchard grass, Sudangrass, sorghum-Sudan, tall fescue, timothy, wheat hay, turfgrasses, bentgrass, Kentucky bluegrass, specialty grasses.

NON-GRASS ANIMAL FEEDS: alfalfa, velvet bean, clover, kudzu, lespedeza, lupin, Sainfoin, trefoil, crown vetch, milk vetch.

HERBS AND SPICES: allspice, angelica, anise (anise seed), annatto, balm, basil, borage, burnet, chamomile, caper buds, caraway, black caraway, cardamom, cassia bark, cassia buds, catnip, celery seed, chervil, chive, Chinese chive, clary, cove bud, coriander (cilantro or Chinese parsley), coriander (cilantro) seed, costmary, cilantro, cumin, curry leaf, dill (weed, seed), fennel (Italian and sweet), fenugreek, grains of paradise, horehound, hyssop, juniper berry, lavender, lemongrass, lovage (leaf and seed), lace, marigold, marjoram (sweet, wild), mustard (seed), nasturtium, nutmeg, oregano, mint, paprika, parsley, pennyroyal, pepper (white or black), poppyseed, rosemary, rue, saffron, sage, savory (including summer or winter), sweet bay (bay leaf), tansy, tarragon, thyme, vanilla, watercress, wintergreen, woodruff, wormwood.

OILSEED CROPS: canola, crambe, rapeseed, flax safflower, sesame, soybean, sunflower.

ADDITIONAL CROPS: artichoke, asparagus, avocado, coffee, cotton, hemp, hops, jojoba, mushrooms, olives, okra, peanuts, safflower, sesame, sugar cane, sunflower, tea, tobacco.

Best results are expected from application when the meteorological conditions favor an inversion of air temperatures in the area treated, and when the wind is not excessive. Apply only when wind speed is greater than or equal to 1 mph.

Back pack applications may require a greater rate of dilution than the dilution used for vehicle or aircraft mounted sprayers, in order to achieve the desired rate of application of active ingredients per acre.

The maximum application rate for wide area mosquito adulticide applications is 0.0025 lbs pyrethrin/acre, or 0.025 lbs piperonyl butoxide/acre, whichever is lower. When targeting *Aedes Taearhynchus* and other difficult species, applications may be made up to 0.008 lbs pyrethrin/acre/day, or 0.08 lbs piperonyl butoxide/acre/day, whichever is lower.

Do not apply more than 0.2 lbs pyrethrin/acre/year, or 2 lbs piperonyl butoxide/acre/year, whichever is lower, in any treated area. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

Ground-based applications for wide-area mosquito abatement application: spray equipment must be adjusted so that the volume median diameter is less than 30 microns ($D_{v,0.5} < 30 \mu m$) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v,0.9} < 50 \mu m$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial applications for wide-area mosquito abatement application: spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ($D_{v,0.5} < 60 \mu m$) and that 90% of the spray is contained in droplets smaller than 80 microns ($D_{v,0.9} < 80 \mu m$). The effects of flight speed, and for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor,

pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Release Height for Aerial Application

Fixed Wing- Apply using a nozzle height of no less than 100 feet above the ground or canopy.

Rotary Wing- Apply using a nozzle height of no less than 75 feet from the ground or canopy.

To kill MOSQUITO LARVAE, dilute at the rate of 9 fluid ounces per 50 gallons of oil and apply at the rate of 20 to 25 gallons per acre. Apply as a coarse wetting spray to the border or on shallow water of wetlands, swamps and marshes where mosquito larvae are known to breed.

TEMPORARY REDUCTION OF ANNOYANCE AND POTENTIAL VECTORS, UNDILUTED, from FLIES, MOSQUITOES and SMALL FLYING MOTHS OUTDOORS: the aforementioned application for outdoor ground application will afford temporary reduction of annoyance from these pests in public gathering places (drive-in restaurants, drive-in-theaters, golf courses, municipalities, sewers, parks, playgrounds and recreational areas). Direct application into tall grass, shrubbery and around lawns where these pests may hover or rest. Apply while air is still. Avoid wetting foliage. Application should be made prior to attendance.

FOR USE IN THERMAL FOGGING EQUIPMENT: following the above directions and precautions, prepare a solution containing 0.1% pyrethrins and 0.5% piperonyl butoxide by mixing 2½ fluid ounces of this product with 125 ½ fluid ounces of fuel oil, refined soybean oil or light mineral oil, to equal one gallon of spray. Apply at a rate of not more than 0.0025 pounds of pyrethrins and 0.0125 pounds of piperonyl butoxide per acre. For control of nuisance species in Texas, it may be necessary to use a dose of up to 0.008 pounds of pyrethrins and 0.04 pounds of piperonyl butoxide per acre.

In additional outdoor areas (corrals, feed lots, swine lots and zoos), fill area with mist, directing application into tall grass, shrubbery and around lawns where these pests may hover or rest. Apply while air is still. Avoid wetting foliage. In zoos, avoid exposure of reptiles to the product.

FOR USE ON ANIMALS: to protect beef and dairy cattle, and horses from HORN FLIES, MOSQUITOES, and GNATS, dilute 1 part of concentrate plus 49 parts oil (refined kerosene) and mix well. Apply a light mist sufficient to wet the tips of the hair. To control STABLE FLIES, HORSE FLIES and DEER FLIES on beef and dairy cattle and horses, apply 2 fluid ounces per adult animal, sufficient to wet the hair but not to soak the hide.

To control the motile stages of BLOOD SUCKING LICE on beef and dairy cattle, apply the spray to thoroughly wet the hair. Use 2 fluid ounces or less per animal and repeat every 2 to 3 weeks as required.

OUTDOOR METERED RELEASE DEVICES

Directions for use in outdoor metered release devices

If the device works on an automatic timer, set the timing for application when people, pets, and/or food are unlikely to be present.

If the device works when a person operates a remote activation device, then application of this pesticide when people, pets and/or food are present is prohibited.

Direct nozzle to spray towards the target area and away from areas where people are typically present.

The pesticide container must be locked.

Do not install within 3 feet of air vents, air conditioner units, or windows.

Carefully follow directions for the dispenser unit when installing the dispenser and replacing cans or conducting maintenance.

STORAGE AND DISPOSAL

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

STORAGE: If container is damaged: stop any leaks by repositioning the container or by patching or otherwise repairing the leaks. Take care to avoid contact with pesticide and wear protective gear. On cleanup of spilled liquids, wear protective equipment as required to prevent contact with the product or its vapors. Cover the spilled areas with generous amounts of absorbent material, such as clay, diatomaceous earth, sand or sawdust. Sweep the contaminated absorbent onto a shovel and put the sweepings into a salvage drum. Dispose of wastes as below. Place any leaking container into a similar drum or glass container. Do not store, use, pour, or spill near heat or open flame.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. **{Containers 5 gallons or less}** 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 solvent used to dilute product 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **{Containers greater than 5 gallons}** Triple rinse as follows. Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with solvent used to dilute product. 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. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Central Garden & Pet Company, 1501 East Woodfield Road, 200W, Schaumburg, Illinois 60173

NOTE: This specimen label is for informational purposes only. All uses may not be approved in all states. See product labeling for use directions.

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VEC 23-007

For the most current information, including Safety Data Sheets, please refer to www.CentralMosquitoControl.com.



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