

U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (H7505C) 411 "M" St., S.W. Washington, D.C. 20460

NOTICE OF PESTICIDE: \_x\_ Registration \_\_\_ Reregistration

(under FIFRA, as amended)

EPA Req. Number:

Date of Issuance:

10182-433

JUL 1 6 1998

Term of Issuance:

Unconditional

Name of Pesticide Product:

Archer Insect Growth Regulator

Name and Address of Registrant (include ZIP Code):

ZENECA INC ZENECA AG PRODUCTS P.O. Box 15458 Wilmington, DE 19850-5458

Note: Changes in labeling differing is substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA sec. 3(c)(5).

Make the following changes to the labeling before releasing the product for shipping:

- a. Revise the EPA Registration Number to read, "EPA Reg. No. 10182-433\*.
- b. Add the statement, "Contains petroleum distillates.", just below the ingredients statement.
- c. Change the Statement Of Practical Treatment for If Swallowed to read: "Call a physician or Poison commtrol center immediately. Do not induce vomiting because of aspiration pneumonia hazard.".
- D. Add the statement, "This product is toxic to fish and aquatic invertebrates.", to the Environmental Hazards statement.

Signature of Epproving Official:

July 14, 1998

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E. Add a Statement Of Practical Treatment for If Inhaled to read: "IF INHALED: remove victim to fresh air. If nopt breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.".

Submit two (2) copies of the revised final printed label for the record.

If the final printed labeling is not received prior to shipment of this product, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these requirements.

A stamped copy of the label is enclosed for your records.

Sincerely,

Joseph M. Tavano

Insecticide Branch

Registration Division (7505C)

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# ARCHER® Insect Growth Regulator

An insect growth regulator (IGR) for use in homes, apartments, schools, warehouses, offices and other private, commercial or public buildings, in non-food preparation areas of food handling and processing establishments, in transport vehicles, animal housing facilities, and barrier treatments on and adjacent to buildings and structures and in pet areas.

ACTIVE INGREDIENT:

2-[1-Methyl-2-(4-phenoxyphenoxy) ethoxy] pyridine	1.3%
INERT INGREDIENTS:	8.7%
TOTAL	0.0%

EPA Reg. No. 10182-EPA Est. No.

## KEEP OUT OF REACH OF CHILDREN

## CAUTION

See inside for Statement of Practical Treatment and additional Precautionary Statements

## ARCHER insect growth regulator is an emulsifiable concentrate

- Use of ARCHER insect growth regulator provides a single IGR that provides effective control of cockroaches, fleas, ticks, ants, carpet and litter beetles, and flying insects by preventing the development of juvenile pest stages.
- ARCHER insect growth regulator can be used as part of an integrated pest management (IPM) program, in combination with other insecticides or alone, and as an aid to prevent the development of insecticide resistance.
- ARCHER insect growth regulator is photostable for up to 14 days, delivering effective residual control of outdoor pests such as fleas and cockroaches, even in areas with direct sunlight.
- ARCHER insect growth regulator does not cause stain or odor when used as directed.
- Reduces egg production in house flies and prevents larval development into adults.

Net Contents:

ZENECA Professional Products
ZENECA Inc.
Wilmington, DE 19850-5458

JUL 16 1998

Under the Federal Insecticide, Fungicide, and Redenlicide Act, as amended, for the posticide registered under RPA Reg. No. 10192-433

## STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

IF SWALLOWED: Call a physician or Poison Control Center immediately. Do not induce vomiting.

IF ON SKIN OR CLOTHING: Remove contaminated clothing and wash before reuse. Wash skin with soap and warm water. Get medical attention if irritation persists.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D (327-8633).

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.

FOR PRODUCT INFORMATION: Call the ZENECA Product Information Toll-Free Hotline 1-888-617-7690.

## PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

## CAUTION

HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. DO NOT BREATHE VAPORS OR SPRAY MIST. Avoid contact with skin or eyes. In case of contact, flush with plenty of water. Wash with soap and warm water after use. Obtain medical attention if irritation persists. Avoid contamination of food or feedstuffs.

## **ENVIRONMENTAL HAZARDS**

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

## PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

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# CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. 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 ZENECA or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ZENECA and Seller harmless for any claims relating to such factors.

ZENECA 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 ZENECA, and Buyer and User assume the risk of any such use. ZENECA 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 ZENECA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ZENECA 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 ZENECA OR SELLER, THE REPLACEMENT OF THE PRODUCT.

ZENECA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ZENECA.

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#### **DIRECTIONS FOR USE**

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

Read all precautions and use directions completely before use.

## STORAGE AND DISPOSAL

STORAGE: Store in a cool, dry place. Keep container closed.

**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: Do not reuse empty conftainer. Render container unusable. Wrap container in several layers of newspaper and discard in trash.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR INSECT CONTROL OF ILLEGAL FESIDUES

## **GENERAL USE INFORMATION**

For best results, follow directions for specific use areas. Do not use this product in or on electrical equipment due to possibility of shock hazard. Avoid excessive wetting of carpet, draperies and furniture. Always test in a hidden area prior to use as some natural and synthetic fibers may be adversely affected by any liquid product.

The active ingredient in ARCHER insect growth regulator is pyriproxyfen, an insect growth regulator (juvenile hormone mimic). ARCHER insect growth regulator acts similarly to insect growth hormones that occur naturally in insects and acts on the immature life stages of the target insect, preventing the adult from developing. In some species, such as fleas and flies, ARCHER insect growth regulator also has activity on adult insects by affecting the reproductive organs.

ARCHER insect growth regulator will control cockroaches, fleas, ants, litter beetles, crickets, and flying insect pests in and around homes, apartments and non-food storage and preparation areas of agricultural, industrial, institutional and commercial buildings and transport vehicles. ARCHER insect growth regulator may be used to create outside barriers around structures to prevent indoor invasion by listed pest species.

May not be applied directly to raw agriculture food/feed commodities in warehouses or transportation vehicles, but may be applied in storage areas where food items are sealed, such as bottled, boxed or canned items, so that food contact is not anticipated.

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## **GENERAL USE PRECAUTIONS**

- Do not apply to occupied aircraft cabins.
- Do not allow adults, children or pets to contact treated surfaces until area treated has completely dried.

Specific areas where treatments may be made include but are not limited to the areas listed below:

EXAMPLES OF SPECIFIC TREATMENT AREAS INCLUDE: aircraft (cargo areas only), animal quarters, animal research facilities, apartments, attics, barns, bathrooms, basements, bedroms, buses, cabinets, cabins, cargo holds, carpets, livestock housing (unoccupied), closets, commercial buildings, condominiums, crawl spaces, decks, dens, dog houses, dog kennels, dormitories, draperies, factories, floors, funeral parlors, garages, garbage cans, gazebos, homes, hospitals, hotels, industrial plants, institutions, jails, kennels, living rooms, locker rooms, mobile homes, motels, nursing homes, office buildings, outdoor pet or animal runs or enclosures, patios bedding, pet carriers, pet grooming parlors, pet living/sleeping areas, pet stores, porches, poutry houses (unoccupied), prisons, public buildings, railroad cars, recreation vehicles, rugs, schools and child care centers, ships, storage areas, swine facilities (unoccupied), theaters, townhouses, traiers, trains, transport vehicles, upholstered furniture, utility rooms, veterinaries, warehouses and washrooms.

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## APPLICATION RATES FOR ARCHER INSECT GROWTH REGULATOR

ARCHER insect growth regulator should be mixed in water utilizing the market increments on the squeeze-and-pour bottle according to the following rates. For "crack & crevice" and "spot" treatment, follow the rate per gallon of water\*\*. For "area" and "general surface" treatment, follow the rate per unit area\*\*\* to ensure good coverage.

Pest	** Amount of ARCHER per gallon of water	*** Amount of ARCHER per unit area	Comments
Ants	2 fl oz per gallon	2 fl oz per 1000 square feet	Apply to interior nesting and traveled areas.
Cockroaches, crickets	2 fl oz per gallon	2 fl oz per 1000 square feet	Increase carrier (water) volume as necessary for good surface wetting (e.g., in mulch- along exterior walls.
Fleas, ticks, carpet beetles	1 fl oz per gallon	1 fl oz per 1500 square feet	Increase carrier (water) volume as necessary for penetration of dense materials, e.g., thick carpet and vegetation along exterior walls.
Flying insects:  (Flies, gnats, midges, moscuitoes. & moths)	1 fl oz per gallon	1 fl oz per 1500 square feet	Wet surfaces used for resting and breeding.
Litter beetles: (Dermestids, darkling, hide & carrion beetles)	1 fl oz per gallon	1 fl oz per 1500 square feet	Wet surfaces used for resting and breeding. Increase carrier (water) volume as necessary for penetration of litter and bedding materials.

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## **MIXING PROCEDURE:**

ARCHER insect growth regulator is intended to be mixed with water and applied with application equipment such as hand-held, backpack or power spray equipment. Prepare an application dilution by adding 1-2 ounces per gallon of water according to the rate recommendation for the target pest as given above.

- 1. Fill applicator container ½ with water.
- 2. Add the amount of ARCHER insect growth regulator to container as recommended in the rate table.
- 3. Shake, stir, or agitate.
- 4. Fill applicator tank with water to final volume recommended in rate table.
- 5. Shake, stir or agitate again.
- 6. To assure the highest quality control, prepared dilutions should be used within 24 hours and should be shaken, stirred or agitated again if diluted material is not used for several hours.

#### Treatments in Combination with an Adulticide:

ARCHER insect growth regulator may be combined with other insecticides to enhance control of adult insects, such as DEMAND® CS, PRELUDE®, DEMAND® PESTAB™ or DEMON® WP insecticides. The combination provides for immediate control of adult fleas, cockroaches, crickets and flying insects, while inhibiting the development of the immature stages of the pest insect. This application should conform to use precautions and use directions for both products.

## CONTROL OF FLEAS, TICKS AND CARPET BEETLES

ARCHER insect growth regulator acts on immature stages of fleas, ticks and beetles to prevent the development of adults. ARCHER insect growth regulator causes a gradual reduction and ultimate elimination of the pest population by breaking the reproductive cycle by stopping the development of immature pest stages. ARCHER insect growth regulator prevents the laying of viable eggs, affects the molting of flea larvae, and prevents normal pupae development into adult fleas. ARCHER insect growth regulator can sterilize adult female fleas, and can control adults by disruption of the reproductive organs.

If a high population of adult fleas, ticks or carpet beetles is present, the use of an adulticide may be necessary for immediate control. ARCHER insect growth regulator may be combined with a flea adulticides such as PRELUDE insecticide indoors, or DEMAND CS, DEMAND PESTABTOT.

DEMON WP insecticide products outdoors. ARCHER insect growth regulator complements the rapid activity of an adulticide by providing long term control of pre-adult fleas for up to 7 months before they develop into biting adults. This application should conform to use precautions and directions for both products.



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Flea and tick control on pets is important in the prevention of the introduction of adult fleas. Pets should be treated with an EPA-registered on-animal insecticide such as DEFEND®, or an effective flea powder, spray, dip, shampoo or systemic (oral) product as part of a complete flea control program in conjunction with the application of ARCHER insect growth regulator or ARCHER/adulticide combinations.

ARCHER insect growth regulator can be used prior to the flea and tick season. Application of ARCHER insect growth regulator in areas where pets and other animals are known to frequent and where previous infestations have been known to occur, will prevent the emergence of adult ticks and fleas by affecting immature stages. This early usage could reduce the need for conventional insecticides when used alone as directed. Treatment of these areas before the fleas become biting and reproductive adults will aid in reducing developing populations.

## Treatments to Interior Areas and Surfaces:

Apply dilution of ARCHER insect growth regulator at the rate of 1 gallot per 1,500 square feet of surface area, or in sufficient volume to achieve adequate coverage. Treat all areas that may harbor fleas, ticks or carpet beetles, including carpets, furniture, pet sleeping areas and throw rugs. Treat under cushions of upholstered furniture and where pets may rest.

- Prior to treatment, carpets, draperies, upholstered furniture, pet bedding or resting areas and closets should be vacuumed thoroughly and the vacuum cleaner bad disposed of in an outdoor fresh receptacle.
- If needed, repeat treatments with ARCHER insect growth regulator may be made 21 days after previous treatment.

## Treatments to Perimeter Areas and Surfaces:

To help control interior flea and tick infestations, make an outdoor perimeter treatment in a band 6-10 feet wide adjacent to the foundation wall of residential and non-residential buildings, animal runs and areas where the animals rest. Applications to those areas that are most frequented by pets will be most successful. Apply ARCHER insect growth regulator inside and within a 2-4 feet banded area next to kennels and doghouses. Treatment of these areas will control the development of ticks and pre-adult fleas from becoming biting and reproductive adult fleas. Apply at the recommended rate to 1500 square feet in sufficient water to obtain good coverage. Apply directly to building, resting areas, walls, floor, animal bedding and run areas.

- If needed, repeat treatments with ARCHER insect growth regulator may be made 14 days after last treatment, or if heavy rainfall occurs, repeat as necessars.
- Remove animals before applying and do not return animals to treated areas until area treated has completely dried.

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## CONTROL OF COCKROACHES (German, Asian, and Brown Banded) AND CRICKETS

ARCHER insect growth regulator acts on the nymph stages of cockroaches and crickets, preventing them from developing into adults. Repeated (weekly, monthly or quarterly) applications of ARCHER insect growth regulator or ARCHER/adulticide combination will result in the development of cockroaches with twisted wings due to the IGR effects of ARCHER insect growth regulator -- these cockroaches are unable to reproduce. The unique properties of ARCHER insect growth regulator can break the breeding cycle of the cockroach population, when used as directed.

If a high population of adult cockroaches is present, the use of an adulticide insecticide such as DEMAND CS or DEMAND PESTAB, or DEMON WP insecticides may be necessary for immediate control. ARCHER insect growth regulator complements the rapid activity of DEMAND CS, DEMAND PESTAB or DEMON WP insecticides by providing long term (up to 6 months) control of cockroach nymphs before they become reproductive adults. Using ARCHER insect growth regulator in combination with cockroach adulticides is also a useful strategy to minimize the development of resistance in the German cockroach. This application should conform to accepted use precautions and directions for both products. Use ARCHER insect growth regulator at application rates specified above.

#### Treatments to Interior Areas and Surfaces:

Apply dilution of ARCHER insect growth regulator at the rate of 1 gallon per 1,000 square feet of surface area as a spot treatment, surface application or crack and crevice application. Special attention should be paid to typical hiding places such as along and behind baseboards, beneath sinks, behind and beneath stoves, refrigerators and cabinets. Apply to cracks and crevices, around garbage cans, cabinets, along the outside of baseboards, door and window sills, door and window frames and floors, around and on drains, pipes, plumbing, behind bookcases, storage and other utility installation areas, storage areas, infested furniture and the inside of cabinets and closets.

- Treat voids where pests can hide and similar areas.
- Repeat every 3 months or more frequently as necessary.

## Treatments to Perimeter Areas and Surfaces:

Apply dilution of ARCHER insect growth regulator in a band 6-10 feet wide adjacent to the foundation wall of the structure and apply to a height of 2-3 feet on the foundation where pests may be active or may find entrance. Apply as a residual application around window frames, doors, garage doors, patios, carports, shutters, around garbage areas and other areas where cockroaches may congregate.

If needed, repeat treatments with ARCHER insect growth regulator may be made 14 days
after previous treatment, or if heavy rainfall occurs repeat as necessary.

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#### Treatments In and Around Warehouses:

ARCHER insect growth regulator may be applied as a general surface, fogger, spot or crack and crevice treatment in nonfood storage warehouses or in warehouses where stored food items are limited solely to sealed, impervious packaging, such as bottled or canned items, so that food contact is not anticipated. Apply to all areas that may harbor pests, including under and between pallets. Warehouses used to store raw or cured tobacco may only be treated when empty and may only be used to store tobacco again when treatments have completely dried.

Treatments in Food Handling Establishments (Places other than private residences in which food is held, processed, prepared or served):

Nonfood Areas: ARCHER insect growth regulator may be used to treat nonfood areas. Nonfood areas include areas such as garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets, and storage (after canning or bottling).

Food Areas: ARCHER insect growth regulator is not approved for application to food areas. Do not use in food areas of foodhandling establishments, restaurants, or other areas where foods are commercially prepared or processed. May only be used in serving areas when facility is not in operation or food is not exposed. Serving areas are areas where prepared foods are served, such as dining rooms, but excluding areas where foods may be prepared or held. In the home, all food-processing surfaces and utensils should be covered during treatment or thoroughly washed before use. Food areas include areas for receiving, storage, packing (canning, bottling, wrapping, boxing), preparing, edible waste storage, and enclosed processing systems (mills, dairies, edible oils, syrups).

# CONTROL OF LITTER BEETLES (Such as Darkling, Hide and Carrion Beetles)

ARCHER insect growth regulator can be applied to litter, such as in poultry houses infested with litter beetles, to break the lifecycle of these insect pests. When used as directed, ARCHER insect growth regulator will not harm beneficial insects in animal litter or bedding, such as predatory wasps. Make uniform application of ARCHER insect growth regulator to litter at the rate of 1 oz of ARCHER insect growth regulator concentrate per 1000 sq ft space in sufficient volume of water to thoroughly we't the litter. For effective prevention of beetle larvae in litter, remove animals from immediate treatment area and old litter. Surface treatment immediately after animals are removed and again just prior to new animal placement are most effective. Adult egg-laying beetles can be killed with fast-acting adulticides such as DEMAND CS or DEMAND PESTAB insecticides. Application of adulticides to walls and floors at cleanout, before reintroduction of animals, will suppress beetles that escaped earlier treatment and will help delay onset of future infestations. Pay attention to areas where beetles frequently occur, such as walls, supports, cages, stalls and around feeders. Do not contaminate food/feed or water.

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Apply ARCHER insect growth regulator uniformly at the rate of 1 oz per 1000 sq ft to floor area and to walls, posts, and cage framing (birds grown in cages only). Application should also be made into cracks and crevices around insulation. Reapply after each growout or sanitization procedure. Indoor control can be enhanced by making perimeter treatments around the outside of building foundations to prevent immigrating adult beetles. Apply ARCHER insect growth regulator or adulticide insecticides, or both, in a uniform band at least one foot up and 1-4 out from foundation. Maintaining a year-round treatment program will prevent background populations from reaching problem levels.

#### **CONTROL OF ANTS**

Apply ARCHER insect growth regulator at the rate of 2 fl oz diluted in water per 1000 sq ft to interior areas where ants are actively foraging, and in a band 6-10 feet wide adjacent to the foundation wall of the building. ARCHER insect growth regulator may be used in alternation or in a tank mix combination with an adulticide insecticide such as DEMAND CS, DEMAND PESTAB, PRELUDE or DEMON WP insecticides.

 If needed, repeat treatments with ARCHER insect growth regulator may be made I4 days after previous treatment, or if heavy rainfall occurs repeat as necessary.

CONTROL OF FLYING INSECT PESTS
(Such as Flies, Moths, Midges, Mosquitoes & Gnats)

## **General Surface Treatments:**

For control of HOUSE FLIES, STABLE FLIES, MOTHS, MOSQUITOES, NUISANCE FLIES (GNATS, MIDGES) and other similar flying pest insects such as those classified as Dipterous or Hymenopterous. ARCHER insect growth regulator is similar to insect growth hormones that occur naturally in flies and other flying insects, having effects on both adult and juvenile stages. In house flies, ARCHER insect growth regulator causes a decrease in the number and hatching of eggs laid by treated adults. Fly larvae (maggots) show physiological and functional defects leading to the inability to develop into normal adults. When used alone, ARCHER insect growth regulator will result in a reduction in adult fly populations after 3-4 weeks when previously hatched adult flies have died naturally.

ARCHER insect growth regulator may be used for control of flying insect pests in those areas in, on and around buildings as previously described under DIRECTIONS FOR USE. These areas include, but are not limited to residential, commercial, public, industrial and agricultural buildings for the

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purposes of controlling general and occasional insect pests. ARCHER insect growth regulator may be used to control nuisance flies, gnats, midges, and mosquitoes by application into moist breeding areas (potted plants, moist debris or litter) or into areas holding standing water such as gutters, drains, pools and fountains.

- Do not apply directly to any natural bodies of water such as ponds, lakes, streams, rivers, marshes, pot holes, and estuaries.
- If needed, repeat treatments with ARCHER insect growth regulator may be made 14 days after previous treatment, or if heavy rainfall occurs repeat as necessary.

## Treatments in Combination with an Adulticide:

For knockdown and more rapid control of adult flying insect pests or to control an influx of flies from untreated areas, use ARCHER insect growth regulator in alternation or in a tank mix combination with an adulticide insecticide such as DEMAND CS, DEMAND PESTAB, or DEMON WP insecticides. As an IPM strategy, combining or alternating ARCHER insect growth regulator with other types of chemicals, such as pyrethroid or organophosphate insecticides, can reduce or prevent the development of genetic resistance to these adulticide insecticides.

## Tank Mixes:

Make applications in accordance with those label instructions that are consistent for each product. Prepare the tank mix using the recommended label rate of adulticide and ARCHER insect growth regulator by adding the adulticide first and making sure it is well mixed and in suspension, then adding the correct amount of ARCHER insect growth regulator according to the label instructions below.

ARCHER insect growth regulator may be combined with an adulticide insecticide such as DEMAND CS registered for the control of flying insects. The combination would provide for immediate control of adult flying insects such as flies on resting surfaces such as walls and overhead areas, while preventing immature insect stages from developing into adults. This combination application should conform to accepted use precautions and directions for both products. Use ARCHER insect growth regulator at application rates specified above and refer to other adulticide labels for specific rates and restrictions.

## Treatments in, on and Around Livestock and Poultry Housing and Pet Kennels:

ARCHER insect growth regulator may be used by pest control operators or livestock producers in livestock housing structures (including poultry houses) and pet kennels to control flying insect pests. Apply as a general surface, fogger/ULV or a crack and crevice application to areas where flying pests collect or breed.

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For surface applications, thoroughly wet floors, walls, ceilings, doors, around windows, garbage and refuse areas. When used as directed, ARCHER insect growth regulator will not harm beneficial insects in animal litter or bedding, such as predatory wasps. Control will be enhanced when facilities are cleaned and interior applications are supplemented with exterior perimeter treatments.

- · Treat bird cages or stock pens only after removal of animals
- Do not make interior applications of ARCHER insect growth regulator in areas of facility where animals are present.
- Allow treated areas to dry before allowing animals back in treated areas of facility.
- Do not contaminate or apply to food or foodstuffs, water or watering equipment.

#### Treatments to Interior Areas and Surfaces:

Use 1 fl oz of ARCHER insect growth regulator per gallon of water and apply to 1500 square feet of surface area, or in sufficient volume to achieve adequate coverage. Treat all areas where flying insects may collect, rest or breed, including vertical walls, ceilings, pipes, conduit, stalls, stanchions, floors, and walkways. When ARCHER insect growth regulator is used alone, treatments can be extended to animal bedding, manure, and other potential areas where flying insects may breed.

#### Treatments to Perimeter Areas and Surfaces:

Use 1 fl oz of ARCHER insect growth regulator per gallon of water and apply to outside surfaces of buildings porches, patios, garages and other areas where these pests have been seen or found. For perimeter control, make a general surface application of 1 ounce of product diluted in water such as to cover 1500 square feet, or in sufficient volume to achieve adequate coverage. To help prevent infestations of buildings by flying insects, treat soil, vegetation or other substrates in a band 6-10 feet wide adjacent to the building foundations, walls, around doors and windows, and overhead areas where these pests are active and may find entrance or harborage.

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PESTAB™ is a trademark of a ZENECA Group Company.