

[Optional text]

RF-9811 EC

[For protection of stored tobacco from damage by Cigarette Beetle and Tobacco Moth]
An Insect Growth Regulator

[to Control Insect Pests in Tobacco Processing and Storage Facilities]

[to Prevent the Emergence of Adult Sciarid Flies In Mushroom Culture]

[To Control Stored Product Insects in Cereal Grains, Grain Sorghum (Milo), Corn (except Sweet
Corn and Popcorn), Birdseed, and Peanuts]

[to Prevent the Emergence of Adult Filter Flies and Non-biting Midges in Waste Water
Treatment Facilities]

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 (300 grams/liter) (S)-methoprene active
ingredient

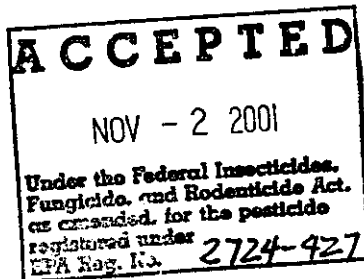
KEEP OUT OF REACH OF CHILDREN

CAUTION

See Back Panel for Additional Precautionary Statements

EPA Reg. No. 2724-427

NET CONTENTS:



EPA Est. No.

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	<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 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.
If swallowed	<ul style="list-style-type: none"> • 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 [phone number] for emergency medical treatment information.	
NOTE TO PHYSICIAN: Contains petroleum distillate – vomiting may cause aspiration pneumonia.	

(Include WPS for APEX Mushroom Use pattern)

[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 category selection chart. Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks, chemical resistant gloves, such as neoprene rubber (≥ 14 mils), nitrile rubber (≥ 14 mils), barrier laminate, or viton (≥ 14 mils). Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.]

[Engineering Controls Statements:

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.]

[IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.]

[User Safety Recommendations:

Users should:

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

[Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.]

[AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves, such as neoprene rubber (≥ 14 mils), nitrile rubber (≥ 14 mils), barrier laminate, or viton (≥ 14 mils)
- Shoes plus socks

Do not apply this product through any type of irrigation system.]

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(Directions for Use for RF-9811 EC [DIANEX]-Stored Tobacco Products)

INTRODUCTION: RF-9811 EC is an emulsifiable formulation of the insect growth regulator, (S)-methoprene. It is designed for use in cold aerosol generators and as a concentrate for an aqueous emulsive spray. (S)-methoprene, unlike traditional pesticides, does not immediately kill insects; instead, it interferes with the normal processes of insect development and prevents adult emergence. RF-9811 EC, when used according to label directions, controls the following insects:

- Almond moth (*Ephestia cautella*)
- Cigarette beetle (*Lasioderma serricorne*)
- Sawtooth grain beetle (*Oryzaephilus surinamensis*)
- Red flour beetle (*Tribolium castaneum*)
- Tobacco moth (*Ephestia elutella*)
- Indian meal moth (*Plodia interpunctella*)
- Lesser grain borer (*Rhyzopertha dominica*)
- Merchant grain beetle (*Oryzaephilus mercator*)
- Confused flour beetle (*Tribolium confusum*)
- Warehouse beetle (*Trogoderma* spp.)

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

Application with Cold Aerosol Generators: Apply RF-9811 EC as a mist or aerosol. Dilute with water as required following the instructions of the spray equipment manufacturer. Apply RF-9811 EC at the rate of 1 ml per 1000 square feet of surface area. Use spray equipment to achieve uniform treatment.

Close room or warehouse and shut off all ventilating systems. Apply the product as a fine mist in the air above the trays, shelves, and in areas where dust may accumulate. Leave the room closed for 30 minutes to allow spray mist to settle. Do not remain in treated areas and ventilate before entry. Repeat application as required.

Application as an Aqueous Spray: Prepare a diluted spray solution by adding 1 ml of RF-9811 EC to 1 gallon of water. Apply at a rate of 1 gallon of diluted solution per 1000 square feet of surface area with any low pressure sprayer typically used for indoor applications. Treat all areas which may harbor insect pests. Repeat application as required.

Mixing Instructions: Partially fill the mixing container with water, add RF-9811 EC, mix and complete filling with quantity of water specified above. Use diluted spray solution within 24 hours of mixing. Agitate before each use.

(Directions for Use for DIACON -Stored Product Insects)

PRODUCT INFORMATION: (S)-methoprene, the active ingredient in DIACON®, protects stored grains from damaging insects by interfering with the normal process of insect development. Unlike traditional pesticides, DIACON is not an adulticide, but its residual activity prevents the development of larvae into adults. DIACON, when used according to the label directions, prevents regeneration of the following insects: almond moth, Indian meal moth, cigarette beetle, lesser grain borer, sawtooth grain beetle, merchant grain beetle, red flour beetle, and confused flour beetle. Treat existing insect populations with an adulticide before applying DIACON for residual protection.

If stored grain insect populations exceed 2 insects per 1 kg sample during storage, fumigate to avoid grain-damage from existing insects. Refer to Federal Grain Inspection Service regulations for stored grain for more information on sampling and insect thresholds.

Stored Grain: For protection of stored food, feed, oil and seed grains against stored grain insects - for optimum results, thoroughly clean and treat grain storage areas prior to storage of grain. DIACON may also be applied as a top-dressing to stored products that have already been placed into bins or storage areas. Use the rate of 2.5 - 5 ppm for this type of application. Do not flood top-dress area.

DIRECTIONS FOR USE

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

GENERAL DIRECTIONS FOR TREATMENT OF GRAIN BEING STORED: Dilute DIACON with water or FDA-approved food grade oils* or soybean oil and apply to the moving grain stream as a coarse spray to give a deposit of 5 ppm of DIACON on the grain. Use a final water solution volume of 5 gallons of liquid per 1000 bushels of grain and 10 gallons of liquid per 1000 bushels of rice. Apply final spray volumes of oil solutions at the oil manufacturer's label application rates. Agitation of water or oil solutions is necessary.

For maximum residual and efficacy, use the rate of 5 ppm. For shorter term residual, lower rates may apply, but do not use rates less than 1 ppm.

DIACON is to be applied in solution in accordance with the general directions to stored products at the following rates per 1000 bushels to provide treatment with 5 ppm concentrations of DIACON. When using lower rates, use the appropriate amount of formulation to achieve the desired application rate:

	5 ppm		2.5 ppm		1 ppm	
	<u>fl oz</u>	<u>ml</u>	<u>fl oz</u>	<u>ml</u>	<u>fl oz</u>	<u>ml</u>
Wheat	7.70	228	4.0	114	1.54	46
Corn	7.10	212	3.5	106	1.42	43
Grain sorghum (Milo)	7.10	212	3.5	106	1.42	43
Barley	6.10	182	3.0	91	1.22	37
Rice	5.70	170	3.0	85	1.10	34
Oats	4.10	121	2.0	61	0.80	25
Peanuts*	3.85	115	2.0	60	0.80	24

*For peanuts, use water solution only

USE PRECAUTIONS:

- Apply DIACON grain protectant only to grain of known treatment history, apply no more than once per crop.
- Check spray equipment calibration regularly to insure proper application rates.
- Add the measured amount of DIACON to a spray tank partially filled with water or mineral oil, mix and complete filling with specified quantity of carrier.
- Use diluted spray solution within 48 hours of mixing. Agitate before each use.
- Do not treat at extremely dusty sites.

DIACON may also be used as a fogging concentrate or surface spray for the treatment of warehouses, silos, storage bins or other stored commodity areas. For application of DIACON as a fogging or space spray, use the following directions.

Application with Cold Aerosol Generators: Apply DIACON as a mist or aerosol. Dilute with water or oil as required following the instructions of the spray equipment manufacturer. Apply DIACON at the rate of 1 ml per 1000 square feet of surface area or 1 ml per 10 cu ft. Use spray equipment to achieve uniform treatment.

Close room or warehouse and shut off all ventilating systems. Apply the product as a fine mist in the air above the trays, shelves, and in areas where dust may accumulate. Leave the room closed for 30 minutes to allow spray mist to settle. Do not remain in treated areas and ventilate before entry. Repeat application as required.

Application as an Aqueous Spray: Prepare a diluted spray solution by adding 1 ml of DIACON to 1 gallon of water. Apply at a rate of 1 gallon of diluted solution per 1000 square feet of surface area with any low pressure sprayer typically used for indoor applications. Treat all areas which may harbor insect pests. Repeat application as required.

Mixing Instructions: Partially fill the mixing container with water, add DIACON, mix and complete filling with quantity of water specified above. Use diluted spray solution within 24 hours of mixing. Agitate before each use.

(Directions for Use for APEX – Mushrooms)

(S)-methoprene, the active ingredient in APEX® insect growth regulator (IGR) is a chemical analog of a natural insect hormone. Unlike traditional pesticides, the presence of (S)-methoprene does not result in immediate insect kill, it interferes with the normal process of insect development. APEX will prevent the emergence of adult sciarid flies when incorporated into the mushroom growing medium. Under most conditions, fly control is achieved without adverse effects on mycelium growth or mushroom yield. Pupae and adults present at the time of application will not be affected. If high adult populations are present initially, use of a conventional adulticide will ensure the best overall results. After treatment with APEX, larvae will continue to develop to the pupal stage where they will die. Estimation of adult fly populations should be no earlier than 2 weeks after treatment to assess the full benefit of APEX.

METHOD, RATE, AND TIMING OF APPLICATION: For best results, incorporate APEX in the mushroom growing medium.

Follow either **METHOD A, METHOD B, or METHOD C** Application Instructions.

A. INCORPORATE IN CASING AT TIME OF CASING

Apply APEX at the rate of 5½ fluid ounces per 1000 sq ft (fl oz/1000 sq ft). Make application evenly and mechanically mix into casing material prior to the casing operation, or drench evenly onto the surface of the casing immediately after placement.

B. INCORPORATE IN COMPOST AT TIME OF SPAWNING AND IN CASING AT TIME OF PLACEMENT OF CASING LAYER

In Compost: Apply APEX at the rate of 5½ fl oz/1000 sq ft in adequate water for even distribution. Spray or sprinkle on the surface of compost at the time of spawning and thoroughly incorporate using a spawning machine or other suitable mechanical means.

In Casing: Apply APEX at the rate of 2¼ fl oz/1000 sq ft. Make application evenly and mechanically mix into casing material prior to the casing operation, or drench evenly onto the surface of the casing immediately after setting it in place.

C. COMPOST SURFACE DRENCH BEFORE CASING AND IN CASING AT TIME OF PLACEMENT OF CASING LAYER

For those crops that have a 16-day or longer spawn run, a split application can be used.

First Application, on compost: Apply APEX 12-13 days after spawning. Drench APEX evenly on the surface at the rate of 2¾ fl oz/1000 sq ft in adequate water for even distribution.

Second Application, in casing: Apply APEX at the rate of 2¾ fl oz/1000 sq ft. Make application evenly and mechanically mix into casing material prior to the casing operation, or drench evenly onto the surface of the casing immediately after setting it in place.

MIXING AND HANDLING INSTRUCTIONS

1. Add the measured amount of APEX to a spray tank partially filled with water, mix, and complete filling with specified quantity of water.
2. Use diluted spray solution within 48 hours of mixing. Agitate before each use.

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EFFECT ON MUSHROOMS

In most cases, treatment with APEX has a beneficial effect on mushroom yield through control of damaging sciarid fly larvae. The user can determine if reduced crop yields will occur under his own cultural conditions by conducting test treatments on small plots.

Directions for Use for Non-biting midges/filter flies

10 8 12

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 RF-9811 EC, agitate, and complete filling. Agitate mildly during application. Agitation can be accomplished by use of recirculation pump, mixer, air pump, or other suitable equipment.

USE APPLICATIONS

Waste Water Treatment Facility Pests: Use RF-9811 EC 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, RF-9811 EC must be applied daily for at least 2 weeks. If applications are not made on a continuous basis, erratic results may occur. Following initial applications of RF-9811 EC, 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, a longer period may be necessary for control. Since the mode of action of RF-9811 EC is to prevent adult emergence, existing adults and pupa present at the time of initial application will complete their life cycle.

As adult suppression peaks, use a maintenance rate of RF-9811 EC for continuous protection from population rebound. However, if application of RF-9811 EC 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 RF-9811 EC

Sludge or Solid Waste Applications

For solid waste applications, use the initial high rate. Apply dilution until the drying beds have been filled. Following filling of the drying beds, halt the dilution application. Make applications of the dilution at the influent side as the sludge or solids enter into the drying beds. Application of RF-9811 EC to solids will prevent the emergence of adult insect pests thereby keeping infestations under control.

METHODS OF APPLICATION

Waste Water Treatment Facilities: Dilute RF-9811 EC with water prior to use. Apply RF-9811 EC 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. Depending on the dosage rate, prepare desired volume of dilution to apply over a 24 hour period (day tank), 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 RF-9811 EC over a 24 hour period. Mix sufficient material in advance to provide for applications longer than 24 hours. Metering pumps that are capable of delivering material for more than 24 hours will provide best results.

APPLICATION RATE

Waste Water Treatment Pests:

Initial Application - 2.5 to 3.0 ounces of RF-9811 EC per 1 million gallons of sewage (waste water) in sufficient water to apply uniformly at the influent side over a 24 hour period.

Maintenance Rate - 1.5 to 2.0 ounces RF-9811 EC per 1 million gallons of sewage waste water in sufficient water to apply uniformly at the influent side over a 24 hour period.

To achieve effective results, use initial application rates on a daily basis for 2 weeks, without interruption. Use sufficient water/RF-9811 EC to achieve uniform application to sewage (waste water) over a 24 hour period. Make application of the dilution at the influent side of the particular area to be treated.]

Maintain initial rate of application for 2 weeks and then for continued effectiveness, follow the directions for the maintenance rate.

APPLICATION SITES

Waste Water Treatment Facilities: Make applications of RF-9811 EC 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.

Make RF-9811 EC applications as the sewage enters (influent areas) the targeted processing area. Failure to add the material at the influent side may result in erratic results.

12 8 12

STORAGE and DISPOSAL: Do not contaminate water, food, or feed by storage or disposal. **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 - [Metal Containers]:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in an approved sanitary landfill, or by other procedures approved by state and local authorities. **[Plastic Containers]:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. **[Glass Containers]:** Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.

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. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

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