

#### OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

August 13, 2024

Niamh McMahon Regulatory Product Manager AMVAC Chemical Corporation, 4695 MacArthur Court, Suite 1200 Newport Beach, CA 92660

Subject: Label Amendment – Addition of acephate restrictions per California DPR

Product Name: ORTHENE 97 PELLETS EPA Registration Number: 5481-8978 Application Date: December 17, 2021

Case Number: 605934

#### Dear Niamh McMahon:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or

Page 2 of 2 EPA Reg. No. 5481-8978 Case No. 605934

claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact David Gardner at (202) 566-2677 or at gardner.david@epa.gov.

Sincerely,

Tamica Cain, Product Manager 10 Invertebrate & Vertebrate Branch 2 Registration Division (7505T)

Enclosure

# **{Note to reviewer: Sub Label A – For All Uses Except Commercially Treated Cottonseed,**

Sub Label B – For Commercially Treated Cottonseed and  $\{Text\}$  in braces denotes where in the final label text will appear.

# {Sub Label A}

**ACCEPTED** 08/13/2024

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 5481-8978

ACEPHATE GROUP 1B INSECTICIDE

# ORTHENE® 97 PELLETS

{Alternate Brand Names: Orthene® 97, Orthene® Turf, Tree & Ornamental 97 Spray, Orthene® 97 ST}

# (Soluble Insecticide)

ACTIVE INGREDIENT	By Weight
*Acephate	97.4 %
OTHER INGREDIENTS	2.6 %
Total	100.0 %

<sup>\*</sup>O,S-Dimethyl acetylphosphoramidothioate

U.S. Patent. No. 6,013,272

# KEEP OUT OF REACH OF CHILDREN CAUTION

	FIRST AID				
	Acephate is an organophosphate, cholinesterase inhibitor.				
If swallowed:	Call a poison control center or doctor immediately for treatment advice.				
	Have person sip a glass of water if able to swallow.				
	• Do not induce vomiting unless told to by a poison control center or doctor.				
	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 eye.				
	Call a poison control center or doctor for treatment advice.				
If on skin or	Take off contaminated clothing.				
clothing:	• Rinse skin immediately with plenty of water for 15-20 minutes.				
	Call a poison control center or doctor for treatment advice.				
If inhaled:	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 further treatment advice.				

#### NOTE TO PHYSICIAN

This material contains a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure but decisions regarding treatment will usually need to be made before test results are available. If signs of cholinesterase inhibition appear, atropine sulfate is antidotal. 2-PAM (PROTOPAM) is also antidotal and may be used in conjunction with atropine but should not be used alone.

#### **EMERGENCY INFORMATION**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:

For Medical Emergencies phone: 1-888-681-4261
For Product Use Information phone: AMVAC® 1-888-462-6822

For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC®......1-800-424-9300

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-8978

**Net Contents:** 

EPA Est. No.





]

[Manufactured For:] AMVAC Chemical Corporation 4695 MacArthur Court, Suite 1200 Newport Beach, CA 92660 U.S.A.

#### PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash clothing before reuse.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

## Mixers, Loaders, Applicators and Other Handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

All Mixers and Loaders and all Applicators using low pressure hand wand application equipment must wear: A minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with a HE filter.

All Mixers and Loaders preparing product for aerial application must wear: a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with a HE filter. {NOTE TO REVIEWER: The following referral statement will only be used on commercial labels that contain the Engineering Controls section.} [See Engineering Controls for additional requirements.]

{NOTE TO REVIEWER: This section will only appear on commercial labels containing the agricultural uses for which aerial application is allowed. This section will not appear on commercial labels for which the prohibition "Not for aerial application" appears in the Use Restrictions section.}[Engineering Controls: Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

{NOTE TO REVIEWER: This statement will only appear on commercial labels containing the agricultural uses for which aerial application is allowed. This statement will not appear on commercial labels for which the prohibition "Not for aerial application" appears in the Use Restrictions section.}[The use of human flaggers is prohibited.]

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

#### **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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**

This pesticide is toxic to birds. For terrestrial uses, 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. Cover with soil or soil-incorporate spills.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

This product and its degradate are 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 foraging the treatment area.

## **DIRECTIONS FOR USE**

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

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

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 24 hours.

CALIFORNIA USERS: Fieldworkers performing any type of fieldwork for trellised crops/vines must observe a 10-day reentry interval for these activities for grapes and kiwi fruit.

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 made of any waterproof material
- shoes plus socks.

#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are **NOT** within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Do not enter or allow others to enter until sprays have dried.

#### TANK MIXES

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Read and follow the entire label of each product to be used in the tank mix with this product.

#### **USE RESTRICTIONS**

• Not for indoor residential use.

{NOTE TO REVIEWER: The following restrictions will only appear on commercial labels that contain uses for turf, ant mound and spot treatments, ornamental trees, shrubs and plants for non-agricultural and non-commercial use and commercial greenhouses.}[

- For use on turf, use limited to sod farms and golf courses, except when applying to mound or spot treatment for fire ant and harvester ant control.
- Do not apply with low pressure handwand except for control of fire ants as a mound treatment and when used on ornamental trees, shrubs and floral plants grown for non-agricultural or non-commercial use.
- For greenhouse use, use is limited to commercial greenhouses for use on ornamental, floral and foliage plants and tobacco (floatbed application).
- Do not apply through any type of irrigation equipment.
- Not for aerial application.]

{NOTE TO REVIEWER: The Chemigation box will not appear on commercial labels that contain a prohibition statement against applying through any type of irrigation system.}[

#### **CHEMIGATION**

Apply to cranberries only by sprinkler irrigation systems. Do not apply by chemigation to any other crop or this crop using any other type of irrigation system.

#### MIXING INSTRUCTIONS

Thoroughly clean all sprayer components prior to mixing. Add approximately 1/2 of the required amount of water to the spray tank and begin agitation. Add the required amount of ORTHENE 97 PELLETS insecticide and mix thoroughly. Then add other tank mix partners or foliar feed additives and the remaining water. Maintain agitation during filling and spraying to ensure a uniform spray mixture.

{NOTE TO REVIEWER: This paragraph of the Mixing Instructions Section will not appear on commercial labels with only non-food crop turf, tree and ornamental-type uses.}

[For application equipment which has minimal agitation, such as tobacco transplant water equipment, proper attention to mixing the product should be given. With tobacco transplant water applications, the product should be premixed in water to form a slurry prior to putting the product into the transplant water applicator. If premixing is not done, then adequate time should be allowed for the product to dissolve in the transplant water prior to beginning application.]

{NOTE TO REVIEWER: This paragraph of the Mixing Instructions Section will appear only on commercial labels with non-food crop turf, tree and ornamental-type uses.}

[For application equipment which has minimal agitation, proper attention to mixing the product should be given.]

{NOTE TO REVEIWER: The following Spray Drift Management section will be used on commercial labels that contain crop uses.}

#### **ISPRAY DRIFT MANAGEMENT**

A variety of factors including weather conditions, (e.g., wind directions, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator and grower must evaluate all factors and make appropriate adjustments when applying this product.

- All aerial, ground and air-assisted/airblast application equipment must be properly maintained and calibrated using water as the carrier. {This sentence to be used for products NOT containing "NON-CROP AREAS Wasteland": [Do not apply this product as an ultralow (ULV) spray, or in any carrier other than water.] {This sentence to be used for products containing "NON-CROP AREAS Wasteland:} [Do not apply this product as an ultralow (ULV) spray, or in any carrier other than water, except as specified in the instructions for "NON-CROP AREAS Wasteland".]
- Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure.
- Do not apply at wind speeds greater than 10 mph at the application site.
- Make applications when wind velocity favors on-target product deposition (approximately 3 to 10 mph).
- Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage.
- For aerial applications, do not apply at heights greater than 10 feet (consistent with flight safety).
- For airblast applications, direct spray above foliage and turn off outward pointing nozzles at row ends and outer rows. Apply only when wind speed is 3 to 10 mph at the application site as measured by an anemometer outside of the treated area on the upwind side.
- For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or rotor diameter. The boom width must not exceed 75% of the wing span or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3 to 10 mph as measured by an anemometer. Use medium or coarser spray according to the ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground.
- For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy and when the wind speed is 10 mph or less at the application site as measured by an anemometer. Use medium or coarser spray according to the ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

- Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands or animals.
- The applicator also must use all other measures necessary to control drift.]

{NOTE TO REVIEWER: The following Spray Drift Management section will be used on commercial labels that contain only non-food crop turf, tree and ornamental-type uses.}

### **SPRAY DRIFT MANAGEMENT**

A variety of factors including weather conditions, (e.g., wind directions, wind speed, temperature, relative humidity) and method of application (e.g., ground, airblast) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

- All application equipment must be properly maintained and calibrated using water as the carrier.
- Do not apply this product as an ultralow (ULV) spray or in any carrier other than water.
- Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure.
- Do not apply at wind speeds greater than 10 mph at the application site.
- Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage.
- For airblast applications, direct spray above foliage and turn off outward pointing nozzles at row ends and outer rows. Apply only when wind speed is 3 to 10 mph at the application site as measured by an anemometer outside of the treated area on the upwind side.
- For ground boom applications, apply with nozzle height no more than 4 feet above the ground and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use medium or coarser spray according to the ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.
- Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands or animals.
- The applicator also must use all other measures necessary to control drift.]

#### **Resistance Management**

For resistance management, ORTHENE 97 PELLETS contains acephate, a Group 1 insecticide. Any insect population may contain individuals naturally resistant to ORTHENE 97 PELLETS and other Group 1 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same locations. Appropriate resistance management strategies should be followed.

To delay insecticide resistance, take one or more of the following steps:

- Rotate the use of ORTHENE 97 PELLETS or other Group 1 insecticides within the year with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of the mixture. In addition, consider the following recommendations from the Insect resistance Action Committee (IRAC):
  - o Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - O When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pests.
  - o Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greater if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.

- Adopt an integrated insect management program for insecticide use that includes scouting, uses historical information related to pesticide use record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or pest control advisor for any additional pesticide resistance-management and/or IPM recommendations for specific site and pest problems in your area.

For further information or to report suspected resistance contact AMVAC at (1-888-462-6822). You can also contact your pesticide distributor or university extension specialist to report resistance.

{NOTE TO REVIEWER: The indicated Table Numbers throughout the label may be changed on the commercial labels depending upon which uses are chosen for the commercial labels.}

# BEANS AND LIMA BEANS - Dry Forms only, and Succulent Green Beans Grown Only for Seed.

- **CALIFORNIA USERS:** For ground application apply by ground boom only.
- Do not feed treated vines to livestock.
- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 PELLETS per year.
- For repeat applications use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.Use on succulent green beans as a food crop is prohibited (includes lima beans, string beans, snap beans and wax beans). Succulent green bean use is permitted ONLY if grown for seed.
- Do not apply to succulent green beans grown for fresh market or processing.
- No portion of the succulent green bean plant may be used or distributed for food or feed purposes.
- Do not feed succulent green bean residues to livestock or allow animals to graze treated areas.
- Seeds grown from succulent green beans shall bear a tag or container label which forbids use of the seed for human consumption or animal feed.
- Seed grown from succulent green beans may not be distributed for human consumption or animal feed.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
FOLIAR  By Ground:	Fleahoppers Grasshopper	1/4 to1/2 lb. (4 to 8 oz.)	Apply when eggs or insects first appear.	14
20 to 100 gals./A of spray.  By Air: Minimum of 2 gals./A of spray.	Aphid (excluding Black Bean Aphid) Bean Leaf Beetle Bean Leafroller Cabbage Looper Cutworm Green Cloverworm Leafhoppers Mexican Bean Beetle Plantbugs (Lygus) Soybean Looper Thrips Whitefly (except Sweetpotato or Silverleaf Whitefly) Brown Marmorated Stinkbug (except CA)	1/2 to 1.0 lb. (8 to 16 oz.)	Use higher listed rates for severe insect infestations.	
	Armyworm (excluding Beet Armyworm) Com Earworm European Corn Borer	3/4 to 1.0 lb. (12 to 16 oz.)		

#### **CELERY**

#### **USE RESTRICTIONS**

- CALIFORNIA USERS: For ground application apply by ground boom only.
- All celery must be trimmed (tops removed) before shipment for use.
- Do not use trimmed tops for food or feed.
- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 PELLETS per crop cycle.
- Do not apply more than 4 1/4 lbs./A (4 lbs. ai) ORTHENE PELLETS per year.
- For repeat applications use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
FOLIAR  By Ground: 50 to 100	Green Peach Aphid	1/2 to 1.0 lb. (8 to 16 oz.)	Apply when eggs or insects first appear.	21
gals./A of spray.	Cabbage Looper Fall Armyworm	1.0 lb. (16 oz.)		
<b>By Air:</b> Minimum of 5 gals./A of spray.				

# **COLE CROPS – Brussels Sprouts and Cauliflower**

- CALIFORNIA USERS: For ground application apply by ground boom only.
- Do not apply more than 2 1/8 lbs. ORTHENE 97 PELLETS (2 lbs. ai) /A per crop cycle.
- Do not apply more than 4 1/4 lbs./A (4 lbs. ai) ORTHENE PELLETS per year.
- Do not feed trimmings to livestock or allow animals to graze in treated areas.
- For repeat applications use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
By Ground: 25 to 150 gals./A of spray.  By Air: Minimum	Green Peach Aphid	1/2 to 1.0 lb. (8 to 16 oz.)	Use the higher listed rate when heavy infestations of Aphid are present. Apply when eggs or insects first appear.  Diamondback Moth Larvae: This	14
of 5 gals./A of spray.	Cabbage Looper Diamondback Moth Larvae Imported Cabbage Worm	1.0 lb. (16 oz.)	insect has demonstrated an ability to develop resistance to various classes of insecticides. Consult your local Agricultural Extension Service for current recommended control practices for this insect.	

#### **COTTON**

#### **USE RESTRICTIONS**

- CALIFORNIA USERS: For ground application apply by ground boom only.
- Do not feed treated forage or gin trash to livestock.
- Do not allow animals to graze on treated areas.
- Do not apply more than 4 1/8 lbs. ORTHENE 97 PELLETS (4 lbs. ai) /A per year. This includes the use of ORTHENE 97 PELLETS in commercial seed treatment, in furrow spray and foliar applications.
- For foliar treatment repeat applications, use a minimum spray interval of 7 days.
- For in-furrow treatments, make only one application per year.

## For Aerial Application:

- Do not apply more than 1 lb./A ORTHENE 97 PELLETS per application to cotton grown in AZ and CA.
- Do not apply more than 3/4 lb./A ORTHENE 97 PELLETS per application to cotton grown in all other states except AZ and CA.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATEPER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
IN FURROW  By Ground: 3 to 5 gals./A of spray.	Aphid (excluding Cotton Aphid in AZ & CA) Black (Greasy) Cutworm (except CA) Thrips (including Western Flower Thrips)	1/2 to 1.0 lb. (8 to 16 oz.)  For the Blacklands of Texas use 1.0 lb./A product.	Use flat fan nozzles for in furrow application. Align nozzles to ensure good spray deposition into the seed furrow. Cone type nozzles are not recommended since unacceptable spray deposition may occur.  Securely fasten spray system tubing to furrow opener and check frequently to ensure proper positioning and operation.  Product can be mixed with fungicides that are sprayed in furrow for disease	21
FOLIAR  By Ground: 10 to 25	Thrips (including Western Flower Thrips)	2.5 (5/32 lbs.) to 3.0 oz. (3/16 lbs.)	control.  Apply when eggs or insects first appear.	21
gals./A of spray.  By Air: 3 to 10 gals./A of spray (minimum of 5 gals./A in AZ & CA).	Plantbugs (Lygus)	1/4 to 1.0 lb. (4 to 16 oz.) 3/4 to 1.0 lb. (12 to 16 oz.) (AZ & CA)	Apply when eggs or insects first appear.  Use higher listed rate for Lygus adults that have migrated into cotton.	21

FOLIAR	Fleahopper	1/4 lb. (4 oz.)	Apply when eggs or insects first appear.	21
By Ground: 10 to 25		(4 02.)		
gals./A of spray.  By Air: 3 to 10 gals./A of spray (minimum of 5 gals./A in AZ & CA).	Cotton Aphid (excluding AZ & CA)	1/2 to 1.0 lb. (8 to 16 oz.)	This insect may develop resistance to various classes of insecticides. Consult your local Agricultural Extension Service for current control recommendations.	21
	Whitefly (excluding Sweetpotato Whitefly/Silverleaf Whitefly)	1/2 to 1.0 lb. (8 to 16 oz.)		21
	Armyworm (excluding Beet Armyworm) Cabbage Looper	1.0 lb. (16 oz.)	Apply when eggs first appear.	21
	Bollworm Tobacco Budworm Adults Larvae	1/2 to 1.0 lb. (8 to 16 oz.) (East of Rockies) 1.0 lb. (16 oz) (AZ & CA)	Early Season: Use 1/2 lb. product /A for light infestation.  Mid and Late Season: Use 3/4 to 1.0 lbs./A for moderate to severe infestations.  Apply when eggs first appear.  Moths of budworm larvae are controlled by direct contact with spray. Moth kill is most likely to occur when late evening applications are made.	21
	Eggs/DEADHATCH®	1/4 to 1/2 lb. (4 to 8 oz.)	DEADHATCH: Control of emerging larvae by consumption of treated egg casings.	21
	Stinkbugs	3/4 lb. (12 oz.)	Apply when eggs first appear.	21
FOLIAR	Pink Bollworm (AZ & CA)	1.0 lb. (16 oz.)	Apply when insects first appear.	21
By Ground: 10 to 25 gals./A of spray.  By Air: 3 to 10 gals./A of spray (minimum of 5 gals./A in AZ & CA).	Cutworm	3/4 lb. (12 oz.)	Ground application is recommended.  Aerial applications are less effective, but may be used.  Control is most effective when ground application is made in the evenings and sprays are directed toward the base and lower portion of plant.  Apply when insects first appear or damage is first noted.	21

### RESISTANCE MANAGEMENT

Cotton pest control programs should employ a properly designed resistance management strategy. Such resistance management strategies include mixture or rotation of alternative classes of chemistry including organophosphates, carbamates, pyrethroids or insect growth regulators. Consult your state or area agricultural extension service for local resistance management strategies and advice on alternative insecticides.

## COTTON TANK MIXES WITH PYRETHROIDS

- **CALIFORNIA USERS:** For ground application apply by ground boom only.
- Do not feed gin trash or treated forage to livestock.

- Do not allow livestock to graze on treated areas.
- Do not apply more than 4 1/8 lbs. ORTHENE 97 PELLETS (4 lbs. ai) /A per year. This includes the use of ORTHENE in commercial seed treatment, in furrow spray and foliar applications.
- For repeat applications, use a minimum spray interval of 7 days.

# For Aerial Application:

- Do not apply more than 1 lb./A ORTHENE 97 PELLETS per application to cotton grown in AZ and CA.
- Do not apply more than 3/4 lb./A ORTHENE 97 PELLETS per application to cotton grown in all other states except AZ and CA.

Synthetic Pyrethroids must be used within the guidelines of state and/or regional resistance management programs and recommendations.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

APPLICATION METHOD	PESTS CONTROLLED	PRODUCT AND TANK MIX PARTNER	APPLICATION RATE PER ACRE + TANK MIX PARTNER	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
By Ground: 10 to 25 gals./A spray.  By Air: 3 to 5 gals./A spray (minimum 5 gals./A in CA). See aerial remarks for Cutworm.*	Aphid Bollworm Cabbage Looper Cotton Leaf Perforator Cutworm Fall Armyworm Fleahoppers Pink Bollworm (AZ & CA) Plantbugs Stinkbugs Sweetpotato/ Silverleaf Whitefly Thrips (including Western Flower) Tobacco Budworm Whitefly	Product  +  one of the following: cypermethrin	1/2 to 1.0 lb./A (8 to 16 oz.)  + one of the following:  Refer to approved label(s) for use instructions.	Apply when eggs or insects first appear.  Stinkbugs:     Use 3/4 lb./A of product.  *Cutworm:     Use 3/4 lb./A of product.  By Ground: Ground application is recommended.  Control is most effective when ground application is made in the evenings and sprays are directed toward the base and lower portion of plant.  By Air: 3 to 10 gals./A spray (minimum 5 gals./A in CA)  Aerial applications are less effective, but may be used.  Apply when eggs or insects first appear or damage is first noted.	21
FOLIAR  By Ground: 10 to 25 gals./A spray.		esfenvalerate	Refer to approved label(s) for use instructions.		21
By Air: 3 to 5 gals./A spray (minimum 5 gals./A in CA). See aerial remarks for Cutworm.		cyflutherin	Refer to approved label(s) for use instructions.		21
		lambda- cyhalothrin	Refer to approved label(s) for use instructions.  Refer to approved label(s) for use		21
		(except CA)	instructions.		

#### RESISTANCE MANAGEMENT

Cotton pest control programs, especially those for control of Silverleaf Whitefly populations, should employ a properly designed resistance management strategy. Such resistance management strategies include mixture or rotation of alternative classes of chemistry including organophosphates, carbamates, pyrethroids or insect growth regulators. Consult your state or area agricultural extension service for local resistance management strategies and advice on alternative insecticides.

## **CRANBERRY**

#### **USE RESTRICTIONS**

- Limit to one application per year.
- Do not apply more than 1.0 lb. ORTHENE 97 PELLETS (1.0 lb. ai) per year.
- Do not apply from start of bloom until all berries set.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATEPER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
By Ground or Sprinkler: Sufficient water to give thorough coverage. By Air: Minimum of 2 gals./A of spray.	Cranberry Blossom Worm Cranberry Cutworm Gypsy Moth False Armyworm Fireworm Spanworm Sparganothis	1.0 lb. (16 oz.)	SPRINKLER IRRIGATION APPLICATION TO CRANBERRIES:  This product may only be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, travelers, big gun, solid set or hand move. Do not apply this product through any other type of irrigation system.  Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.  If you have questions about calibration, you	90
			should contact State Extension Service specialists, equipment manufacturers or other experts.	
By Sprinkler: Sufficient water to give thorough coverage.  By Air: Minimum of 2 gals./A of spray.	Cranberry Blossom Worm Cranberry Cutworm Gypsy Moth False Armyworm Fireworm Spanworm Sparganothis	1.0 lb. (16 oz.)	RESTRICTION: For use only in MA, NJ, OR, WA and WI.  SPRINKLER IRRIGATION APPLICATION TO CRANBERRIES:  This product may only be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, travelers, big gun, solid set or hand move. Do not apply this product through any other type of irrigation system.  Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.	75
			If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.	

**Chemigation:** Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

**Solid Set System:** Apply specified dosage for the entire length of the irrigation period, or for a 30 to 60 minute period at the end of a regular irrigation set, or as a 30 to 60 minute injection as a separate application not associated with a regular irrigation. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining pesticide, a dye indicator may be injected into the lines to mark the end of the application period. See **NOTE**.

Center Pivot Systems: Inject the specified dosage per acre continuously for one complete revolution of the system. See NOTE.

**NOTE**: Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Inject the product with a positive displacement pump into the main line ahead of a right turn to ensure adequate mixing.

Application of more than label recommended quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness.

# **HEAD LETTUCE - Crisphead Type Only**

- CALIFORNIA USERS: For ground application apply by ground boom only.
- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 PELLETS per crop cycle.
- Do not apply more than 4 1/4 lbs./A (4 lbs ai) ORTHENE 97 PELLETS per year.
- Do not feed trimmings to livestock or allow animals to graze on treated areas.
- AZ & CA, (desert areas): Do not apply after first head begins to form in crops which germinate from mid-September through November.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb./A.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
FOLIAR  By Ground: 10 to 60	Aster Leafhopper Green Peach Aphid	1/2 to 1.0 lb. (8 to 16 oz.)	Applications may be made in spring, summer and early fall in all areas; winter	21
gals./A of spray broadcast.	Armyworm (excluding Beet Armyworm)	1.0 lb. (16 oz.)	applications may be made in AZ, CA, FL and TX; and late fall applications may	
<b>By Air:</b> Minimum of 5 gals./A of spray.	Cabbage Looper		be made in AZ.	

# **MINT - Peppermint and Spearmint**

#### **USE RESTRICTIONS**

- CALIFORNIA USERS: For ground application apply by ground boom only.
- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 PELLETS per year.
- Maximum number of applications per year is 2.
- The minimum application interval is 7 days.
- For Strawberry Root and Black Vine Weevil: Make one repeat application, at a minimum of a 7 day interval, if necessary to maintain control.
- Do not graze treated areas.
- Do not feed spent mint hay to animals.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
FOLIAR  By Ground: 20 to 100 gals./A of spray.  By Air: 5 to 10 gals./A of spray.	Alfalfa Looper Aphid Cutworm	1.0 lb. (16 oz.)	Apply when eggs or insects first appear.	14
FOLIAR  By Ground: 40 to 100 gals./A of spray.	Strawberry Root Weevil Adult Black Vine Weevil Adult	1.0 lb. (16 oz.)	Strawberry Root and Black Vine Weevil: For control, apply in water in a minimum of 40 gals. spray per acre by ground. Good spray coverage and canopy spray penetration is critical for control. Increase spray volume and pressure with tall or dense mint canopy.  Apply after adult emergence is complete but prior to egg laying. Apply at dusk or during the night on a warm still evening.	14

# NON-BEARING CITRUS - In Agricultural Settings (Newly Planted Groves)

- CALIFORNIA USERS: When airblast applications are being undertaken an enclosed cab is required or chemical resistant full body protection suit over long-sleeved shirt and long pants is required to be worn by the applicator.
- Do not graze treated areas.
- DO NOT HARVEST citrus for one year (365 days) after treatment.
- For repeat foliar applications use a minimum spray interval of 7 days.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS
FOLIAR  By Ground: 100 to 200 gals./A of spray.	Aphid Grasshopper Katydid Mealybug Orangedog Plantbug Thrips Whiteflies (except	1/2 lb. (8 oz.)	
	Sweetpotato/Silverleaf) Citrus Blackfly* Citrus Root Weevil*	1/2 to 3/4 lb. (8 to 12 oz.)	Apply when eggs or insects first appear.  Use the higher listed rate when a heavy infestation is present.
Sprav individual juvenile or non-b	Ants (excluding Fire, Harvester, Carpenter and Pharaoh Ants) earing trees for coverage with total	3/4 lb. (12 oz.)	fied rate in lbs. per acre. Length of
	spray coverage and the amount of	moisture following application.	
SOIL MOUND TREATMENT  DRENCH METHOD	Ants (excluding Carpenter and Pharaoh)*	3/4 oz. (3/64 lbs.) /5 gals.  To make up a spray solution of 1 gallon	Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mound.
		volumetrically use 2 level teaspoons (0.15 oz) of dry material.	For best results apply the material in the early morning or late afternoon when the ants are most active.  Applications made under prolonged hot and dry conditions may be ineffective due to the location of the

<sup>\*</sup> Not registered in CA for control of Citrus Blackfly and Citrus Root Weevil and Harvester Ants.

# NON-CROP AREAS Field Borders, Fencerows, Roadsides, Ditchbanks, Borrow Pits

# USE RESTRICTIONS

• Do not graze or feed vegetation cut from treated areas.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATEPER ACRE	APPLICATION INSTRUCTIONS
FOLIAR	Grasshopper	1/4 lb.	For early to mid-season application.
		(4 oz.)	
By Ground: 10 to 20			Use the higher volumes when spraying
gals./A of spray.			dense foliage.
By Air: 1 to 5 gals./A of			An approved drift retardant may be
spray (minimum of 5			added to aid in controlling drift and
gals./A in CA).			reducing evaporation of aerial sprays.

### **NON-CROP AREAS - Wasteland**

#### **USE RESTRICTIONS**

- Do not make more than one application ORTHENE 97 PELLETS per year.
- Do not graze or feed vegetation cut from treated areas.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS
By Ground: 10 to 20 gals./A of spray.  By Air: 1/2 gal./A of spray (minimum of 5 gals./A in CA).	Black Grass Bugs Grasshopper Mormon Crickets	3/32 to 1/8 lb. (1.5 oz. to 2 oz.)	Use the higher spray volumes when spraying dense foliage.  An approved drift retardant may be added to aid in controlling drift and reducing evaporation of aerial sprays.

## **PEANUTS**

- CALIFORNIA USERS: For ground application apply by ground boom only.
- Do not feed treated forage or hay to livestock.
- Do not allow animals to graze on treated areas.
- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 PELLETS per year. This includes the use of ORTHENE 97 PELLETS on peanuts as a foliar spray in addition to the peanut planterbox seed treatment use.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
FOLIAR	Grasshopper	1/4 to 1/2 lb. (4 to 8 oz.)	Apply when eggs or insects first appear.	14 (of digging)
By Ground: 10 to 50 gals./A of spray.  By Air: 5 to 10 gals./A of spray.			Product can be tank mixed with registered at cracking and early post-emergence peanut herbicides, provided those products do not prohibit tank mixes, provided the most restrictive of label limitations and	
	Thrips	3/8 to 3/4 lb. (6 to 12 oz.)	precautions are observed, and provided no label dosage rates are exceeded.  To determine physical compatibility, pour	
	Com Earworm Fall Armyworm Leafhoppers Loopers Velvetbean Caterpillar	3/4 to 1.0 lb. (12 to 16 oz.)	the recommended proportions of each chemical with the same proportion of water as will be present in the chemical supply tank into a suitable container, mix thoroughly and allow to stand for 5 minutes. If the combination remains mixed, or can be remixed readily, the mixture is considered physically compatible. When mixing wettable powder or dry flowable formulations, add and disperse these first, then add liquid pesticides. Conduct another compatibility test at concentrations, which will be present in the irrigation lines. If there is any separation, which cannot be remixed readily, AMVAC recommends that the combination not be used.	
			Combinations should be kept agitated and should be applied immediately. Do not allow combinations to sit for prolonged periods in the chemical supply tank or irrigation lines.	

# PEPPERS – Bell

- CALIFORNIA USERS: For ground application apply by ground boom only.
- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 PELLETS per crop cycle.
- Do not apply more than 4 1/4 lbs./A (4 lbs. ai) ORTHENE PELLETS per year.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
FOLIAR	Grasshopper	1/4 to 1/2 lb. (4 to 8 oz.)	Apply when eggs or insects first appear.	7
By Ground: 25 to 150 gals./A of spray.  By Air: Minimum of 3 gals./A of spray	Cabbage Looper Green Peach Aphid Tobacco Hornworm Brown Marmorated Stinkbug (except CA)	1/2 to 1.0 lb. (8 to 16 oz.)		
(minimum of 5 gals./A in CA).	European Corn Borer	3/4 to 1.0 lb. (12 to 16 oz.)		

## PEPPERS - Non-Bell

#### FOR USE IN MIDWESTERN, EASTERN STATES AND PUERTO RICO ONLY.

#### **USE RESTRICTIONS**

- Do not apply more than 1 lb./A (1 lb. ai) ORTHENE 97 PELLETS per crop cycle.
- Do not apply more than 2 lbs./A (2 lbs. ai) ORTHENE PELLETS per year.
- For repeat application use a minimum spray interval of 3 days.

1

APPLICATION	PESTS	APPLICATION RATE	APPLICATION	DAYS TO
METHOD	CONTROLLED	PER ACRE	INSTRUCTIONS	HARVEST
FOLIAR	Aphid	1/2 lb.		7
<b>By Ground:</b> 40 to 150 gals./A of spray.		(8 oz.)	See user restrictions.	

#### **SOYBEANS**

- CALIFORNIA USERS: For ground application apply by ground boom only.
- Do not graze or cut vines for hay or forage.
- Do not apply more than 1 1/2 lbs./A (1 1/2lbs. ai/A) of ORTHENE 97 PELLETS per year.
- Do not apply ORTHENE 97 within 14 days of harvest.
- For rates up to 1/2 lb./A, at least 3 days must pass between applications of ORTHENE 97 PELLETS.
- For rates between 1/2 lb. product/A and 1 lb./A, at least 7 days must pass between applications of ORTHENE 97 PELLETS.
- It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

APPLICATION METHOD	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
FOLIAR By Air: 5 to 10	Grasshopper Thrips	1/4 to 1/2 lb. (4 to 8 oz.)	Repeat treatment as necessary to maintain control.	14
gals./A of spray <b>By Ground:</b> 10 to	Potato Leafhopper Stink Bugs	1/4 to 1 lb. (8 to 16 oz.)		
50 gals./A of spray	Armyworms (except Beet) Bean Leaf Beetle Cabbage Looper Green Cloverworm Mexican Bean Beetle Soybean Aphid Threecornered Alfalfa Hopper Velvetbean Caterpillar Kudzu Bug (Megacopta cribraria) (except CA)	3/4 to 1 lb. (12 to 16 oz.)		

# **TOBACCO (Except CA) - Transplant Water Application**

#### **USE RESTRICTIONS**

- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 PELLETS per year. This includes the use of ORTHENE 97 PELLETS in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.
- Do not apply more than 3/4 lb. product per acre as a transplant water application as some phytotoxicity may occur.

CROP	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS
Tobacco	Cutworm Flea Beetle Green Peach Aphid Potato Tuberworm Tobacco Aphid Tobacco Thrips	3/4 lb. (12 oz.)	Provides control of early season flea beetles, green peach Aphid, Tobacco Aphid, and Cutworm for approximately 3 to 4 weeks after transplanting. For later season control of these insects, apply a foliar spray of product.  Apply in a minimum of 100 gals. of transplant water per acre. Product should be pre-mixed in water to form a slurry solution prior to adding to the transplant water tank.  Make transplant water applications using mechanical transplant equipment only. Using such equipment, the insecticide/water mixture is mechanically applied directly into the soil along with the transplanted plants.

# TOBACCO (Except CA) - Foliar Application

- For repeat applications use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.
- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 PELLETS per year. This includes the use of ORTHENE 97 PELLETS in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.

CROP	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
Tobacco (Flue-Cured,	Grasshopper	1/4 to 1/2 lb. (4 to 8 oz.)	Apply in 10 to 50 gals. of water per acre with ground equipment or a	3
Air Cured,	Flea Beetle	1/2 lb.	minimum of 3 gals. per acre by air.	
Dark Fire	Green Peach Aphid	(8 oz.)		
Cured)	Hornworm			
	Tobacco Thrips			
	Stinkbugs	1/2 to 3/4 lb.		
	Tobacco Aphid	(8 to 12 oz.)		
	Vegetable Weevils			
	Budworm	3/4 lb.		
	Cabbage Looper	(12 oz.)		
	Cutworm			
	Japanese Beetle			

## TOBACCO (Except CA) – Plant Bed Application

#### **USE RESTRICTIONS**

- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 PELLETS per year. This includes the use of ORTHENE 97 PELLETS in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.
- For repeat applications use a minimum spray interval of 7 days.

CROP	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS
Tobacco Bed Treatment	Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	3/4 lb. (12 oz.)	Apply to foliage at the equivalent of 3/4 Tbsp. in 1 gal. of water per every 1,000 sq. ft. of bed. Apply evenly to insure thorough coverage.

# **TOBACCO** (Except CA) – Greenhouse Application

#### **USE RESTRICTIONS**

- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 PELLETS per year. This includes the use of ORTHENE 97 PELLETS in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.
- For repeat applications use a minimum spray interval of 7 days.

CROP	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS
Tobacco	Cutworm Flea Beetle Green Peach Aphid	3/4 lb. (12 oz.)	Apply to foliage at the equivalent of 3/4 Tbsp. in 3 gals. water per every 1,000 sq. ft. of bed. Apply evenly to ensure thorough coverage.
	Tobacco Aphid		<b>Note:</b> Floatbed water should be disposed of in the transplanted field in either transplant water or foliar spray.

# TOBACCO (Except CA) - Soil Application

- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 PELLETS per year. This includes the use of ORTHENE 97 PELLETS in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.
- Treat maximum of 13 mounds per acre.
- Do not treat more than once per year.

CROP	PESTS CONTROLLED	APPLICATION RATE	APPLICATION INSTRUCTIONS	DAYS TO HARVEST
Tobacco	Ants (excluding Carpenter, Fire, Harvester and Pharaoh)	Drench Method: Mix3/4 oz. (3/84 lbs.) in 5 gals. of water. Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mound.	For best results apply the material in the early morning or late afternoon when the ants are most active.  Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.	3

{NOTE TO REVIEWER: This Small Volume Spray Equipment section will only appear on commercial labels containing non-food crop turf, tree and ornamental –type uses.}

# SMALL VOLUME SPRAY EQUIPMENT

Preparation of PRODUCT Spray Mix Using a Small Fluid Ounce Measuring Cup			
EQUIVALENT PRODUCT IN 25 GALS. OF WATER			
1 oz.			
2 oz.			
3 oz.			
4 oz.			

#### **NON-BEARING CITRUS**

- CALIFORNIA USERS: When airblast applications are being undertaken an enclosed cab is required or chemical resistant full body protection suit over long-sleeved shirt and long pants is required to be worn by the applicator.
- Do not allow livestock to graze treated areas.
- DO NOT HARVEST citrus for one year (365 days) after treatment (except mound drench treatment).
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.
- Do not apply pelleted product by hand.
- **CALIFORNIA USERS:** For mixer/loaders who will also apply ORTHENE 97 PELLETS with a high pressure sprayer, do not mix and apply more than 250 gallons per day.

PLANTS	PESTS CONTROLLED	AAPPLICATION RATE PER ACRE	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Non-bearing Citrus (including citrus nursery seedlings)	Aphid Grasshopper Katydid Mealybugs Orangedogs Plant Bugs (Lygus) Thrips Whiteflies	1/2 lb. (8 oz.)	Apply as needed for control of existing populations.	Apply product in 100 to 200 gals. of water per acre. Spray individual juvenile or non-bearing trees for coverage with total application not to exceed specified rate in lbs. per acre. Length of residual activity will depend upon spray coverage and the amount of moisture following
	Citrus Blackfly* Citrus Root Weevil*	1/2 to 3/4 lb. (8 to 12 oz.)	The higher listed rate should be used when a heavy infestation of Citrus Blackfly is present. Begin applications when eggs or adults first appear. Apply on a 7 to 10 day interval or as needed to maintain control.	application.
Non-bearing Citrus (including citrus nursery seedlings)	Ants (excluding Carpenter, Fire, Harvester and Pharaoh)*	Foliar Spray 3/4 lb. (12 oz.)	Apply as needed for control of existing populations.	Apply product in 100 to 200 gals. of water per acre. Spray individual juvenile or non-bearing trees for coverage with total application not to exceed specified rate in lbs. per acre. Length of residual activity will depend upon spray coverage and the amount of moisture following application.
		Drench Method: Mix 3/4 oz. (3/64 lbs) in 5 gals.of water. Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.  To make up a spray solution of 1 gallon volumetrically use 2 level teaspoons (0.15 oz.) of dry material.		For best results apply the material in the early morning or late afternoon when the ants are most active.  Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.

<sup>\*</sup> Not registered in CA for control of Citrus Blackfly, Citrus Root Weevil and Harvester Ants.

# **NURSERY STOCK**

# Non-Bearing Deciduous Fruit Trees, Nut Trees and Vines In Nursery Fields or Non-Bearing Orchards

- Do Not Allow Livestock To Graze Treated Areas.
- For application only to non-bearing trees and vines in nursery fields or in non-bearing orchards.
- Do not apply to interplants or single trees in a bearing orchard.
- Do not harvest any fruit from sprayed trees for one year (365 days) after application.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.
- **CALIFORNIA USERS:** Fieldworkers performing any type of fieldwork for trellised crops/vines must observe a 10-day reentry interval for these activities for grapes and kiwi fruit.
- Do not apply pelleted product by hand.

- CALIFORNIA USERS: When airblast applications are being undertaken an enclosed cab is required or chemical resistant full body protection suit over long-sleeved shirt and long pants and face shield is required to be worn by the applicator.
- **CALIFORNIA USERS:** For mixer/loaders who will also apply ORTHENE 97 PELLETS with a high pressure sprayer, do not mix and apply more than 250 gallons per day.

PLANTS	PESTS CONTROLLED	APPLICATION RATE PER ACRE	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Nursery Stock	Aphid	1/2 to 1 lb.	Apply as needed for	Apply product in 50 to 200 gals. of
(Non-bearing	Plant Bugs	(8 to 16 oz.)	control of existing	water per acre by ground.
Deciduous Fruit	(Lygus)		populations.	
Trees, Nut Trees,	Thrips			
Vines)	Bagworm			
Almond	Birch Leafminer			
Apricot	Lace Bug			
Apple	Leafroller			
Cherry	Tent Caterpillar			
Grape	Douglas Fir Tussock			
Kiwi	Moth Larvae			
Pear	Gypsy Moth Larvae			
Pistachio	Webworms			
Plum	Scales (Crawlers)			
Prune	Ponderosa Pine			
Walnut	Needle Miner			
	Grasshopper			
	California Oakworm			
	Cankerworm (Spring			
	and Fall)			
	Nantucket Pine Tip			
	Moth Larvae			
	Root Weevil Adults			
	Box Elder Bug			
	Budworm			
	Leafhopper			
	Sawflies			
	Japanese Beetle			
	Elm Leaf Beetle			
	(larvae)			
	Douglas Fir Needle			
	Midge			
	Douglas Fir Tussock			
	Moth			

# NON-CROP AREAS Field Borders, Fencerows, Roadsides, Ditchbanks, Borrow Pits

- Do not graze or feed vegetation cut from treated areas.
- Do not treat mounds more than once per year.
- Do not use on turf for control of grasshoppers.

CROP	PESTS CONTROLLED	APPLICATION RATE PER ACRE	APPLICATION INSTRUCTIONS
Non-Crop Areas (field borders, fencerows, roadsides, ditchbanks and borrow pits)	Grasshopper	1/4 lb. (4 oz.)	For early to mid-season application to grasshopper in field borders, fencerows, roadsides, ditchbanks and borrow pits. Apply in 10 to 20 gals. of water with ground equipment. Use the higher volumes when spraying heavier foliage.
Non-Crop Areas	Ants (excluding carpenter and pharaoh)	Drench Method: Mix 3/4 oz. (3/64 lbs) in 5 gals. of water. Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mound.  To make up a spray solution of 1 gallon volumetrically use 2 level teaspoons (0.15 oz.) of dry material.	For best results apply the material in the early morning or late afternoon when the ants are most active.  Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.  Grass in treated area may be injured.

#### **CONTAINER GROWN NURSERY STOCK**

#### **USE RESTRICTIONS**

- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.
- Do not apply pelleted product by hand.
- **CALIFORNIA USERS:** For mixer/loaders who will also apply ORTHENE 97 PELLETS, do not mix and apply more than 250 gallons per day.

PLANTS	PESTS CONTROLLED	AMOUNT OF PRODUCT PER 100 GALS.	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Container Grown Nursery Stock (including but not limited to: Arborvitae Azalea Camellia Rhododendron	Black Vine Weevil Strawberry Root Weevil	3/4 lb. (12 oz.)	Application should be made by mid-September for greenhouse stock and by mid-October for outdoor stock. Consult your local county extension agent for information on the identification and control of root weevils on ornamentals.	Apply the specified amount of product per 100 gals. of solution so as to thoroughly drench the root system.  Before treating large plantings, spray only a few plants and observe two weeks for phytotoxicity.
Roses Viburnum Yew)	Ants (excluding Fire, Harvester, Carpenter and Pharaoh Ants)	3/4 lb. (12 oz.)	Apply as needed to control the pest.	

## ORNAMENTAL TREES AND SHRUBS

- Do not exceed 16 oz. of ORTHENE 97 PELLETS per acre per application.
- Do not apply with a low pressure hand wand.
- For foliar treatment repeat applications, use a minimum spray interval of 14 days (except flowering crabapples and Douglas Fir)
- For Douglas Fir do not make more than 1 application per year.
- For flowering crabapples do not apply more often than 3 times in a growing season at a minimum 4 week

interval.

- CALIFORNIA USERS: For crepe myrtle do not mix and apply more than 5 oz of paste per day.
- Do not apply pelleted product by hand.
- CALIFORNIA USERS: When airblast applications are being undertaken an enclosed cab is required or chemical resistant full body protection suit over long-sleeved shirt and long pants and face shield is required to be worn by the applicator.
- **CALIFORNIA USERS:** For mixer/loaders who will also apply ORTHENE 97 PELLETS, do not mix and apply more than 250 gallons per day.

PLANTS	PESTS CONTROLLED	AMOUNT OF PRODUCT PER 100 GALS.	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Trees and Shrubs (except Flowering Crabapple)	Aphid Bagworm Birch Leafminer Lace Bug Leafroller Tent Caterpillar*	1/4 to 1/2 lb. (4 to 8 oz.)	As the insects begin to appear.	Apply the specified amount of product in 100 gals. water with a hydraulic sprayer. The addition of a suitable sticker improves control of Gypsy Moth larvae.
	Douglas Fir Tussock Moth Larvae Gypsy Moth Larvae* Webworms	1/2 lb. (8 oz.)	As the insects begin to appear.	*Mist blower application: Adjust rates to 1 lb. product per 100 gals. of water for Gypsy Moth control and 3/4 lb. product per 100 gals. of water for Tent Caterpillar control.
	Scales (Crawlers)	1/2 lb. (8 oz.)	As crawlers begin to appear. Repeat applications, at a 2 week or more interval, may be necessary where there is continuous crawler production.	AMVAC does not advise application be made to Huckleberry, Balm of Gilead, Cottonwood, Lombardy Poplar and Viburnum suspensum as it may result in phytotoxicity in these plants.  Nursery crops: Before treating large plantings, spray only a few plants and observe two weeks for phytotoxicity.
	Ponderosa Pine Needle Miner	1/2 lb. (8 oz.)	Time of application is important. Consult your Farm Advisor or County Extension Agent.	Apply the specified amount of product in 100 gals. water with a hydraulic sprayer as a full coverage spray.
	Grasshopper	1/2 lb. (8 oz.)	As the grasshoppers begin to appear.	
Trees and Shrubs (except Flowering Crabapple)	California Oakworm Cankerworm (Spring and Fall)	1/4 to 1/2 lb. (4 to 8 oz.)	As the insects begin to appear. Use the higher amount when the larger larvae are present.	Apply the specified amount of product in 100 gals. water with a hydraulic sprayer.
	Nantucket Pine Tip Moth Larvae	3/4 lb. (12 oz.)	Time of application is important. Consult your Farm Advisor or County Extension Agent. Repeat applications will be required for subsequent generations.	
	Root Weevil Adults	3/4 lb. (12 oz.)	Apply when first feeding damage occurs. Repeat applications, at 4 week intervals until the first heavy frost, may be necessary for complete foliage protection.	Apply the specified amount of product in 100 gals. of water with a hydraulic sprayer as a full coverage spray.
	Box Elder Bug Budworm Leafhopper Sawflies	3/4 lb. (12 oz.)	As the insects begin to appear.	

	Japanese Beetle	1 lb. (16 oz.)	As the Japanese Beetles begin to appear. Repeat applications, at 2 week intervals, may be necessary.	Apply the specified amount of product in 100 gals. of water with a hydraulic sprayer as a full coverage spray.
	Elm Leaf Beetle (larvae)	1 lb. (16 oz.)	As the larvae begin to appear. Product will not prevent Elm Leaf Beetle eggs from hatching.	Apply the specified amount of product in 100 gals. of water with a hydraulic sprayer as a full coverage spray.
Douglas Fir	Douglas Fir Needle Midge Douglas Fir Tussock Moth	1/2 lb. (8 oz.) (1/2 lb./A)	Application should be made no more than 2 weeks prior to bud burst. For additional pest management information, consult your County Extension Service.	Apply the specified amount of product in not less than 100 gals. of spray per acre by ground.
Flowering Crabapples	Aphid Leafroller Tent Caterpillar	1/4 lb. (4 oz.)	As the insects begin to appear.	Apply the specified amount of product in 100 gals. of water with a hydraulic sprayer.
				Caution: Phytotoxicity has occurred on the following Crabapple varieties: Hopa, Ichonoski, Malusfloribunda, Pink Perfection, Red Wine and Snow Cloud.
Crepe Myrtle	Aphid	2 to 3 level Tbsp. (0.6 to 0.9 oz.) per 1 Tbsp. of water.	As aphids begin to appear.	Make a paint on slurry by mixing the specified amount of product with 1 Tbsp. of water. Remove the loose bark from the trunk areas to be treated. Completely paint a band around each trunk to a width twice its diameter. Application should be made to trunks within a zone 6 to 12 inches above the ground and below the point where branching begins. For multi-trunk plants be certain to treat all trunks. For either single or multi-trunk plants, application should be made as low as possible within the recommended treatment zone.

## ORNAMENTAL TREES AND SHRUBS - SOIL INJECTION

- Apply the specified amount of ORTHENE 97 PELLETS as a soil injection.
- Do not apply more than 5 lbs. of product per acre (1.84 oz. of product per 1,000 sq. ft. of area under the dripline of the tree or shrub) per application.
- Do not apply more than once per month.
- Do not apply to areas where food crops are grown (i.e., vegetable gardens, fruit trees, berry vines, etc.), children's play areas or animal runs.
- CALIFORNIA USERS: For mixer/loaders who will also apply ORTHENE 97 PELLETS, do not mix and apply more than 250 gallons per day.

	PESTS		
PLANTS	CONTROLLED	AMOUNT OF PRODUCT	APPLICATION INSTRUCTIONS
Alder	Aphids,	1/10 oz. (1/160 lbs) to 1/5	A minimum of two (2) injection sites per inch Diameter
American Elm	Spider mites,	oz. (1/80 lbs.) per inch	at Breast Height (DBH ,4' 6" above the soil line) is
Aspen	Ash Sawfly*	diameter of trunk at breast	required. For multi-stemmed trees and shrubs, use
Ash		height (DBH)	diameter of individual canes at soil line instead of DBH.

Birch	D'I + 0.75 II (12 ) '	Apply one (1) quart of diluted solution per injection site.
Boxwood	Dilute 0.75 lb. (12 oz.) in	Injection sites should be evenly distributed between
Crepe Myrtle	126-252 qts. of water to	base of trunk and dripline of canopy. (Exceptions to this
Dogwood	treat 63-126 inches of trunk	use are listed under "Use Precautions").
Euonymus	diameter.	
Hackberry		Make a minimum of four (4) injections per 25 sq. ft. of
Hawthorn	To make up a solution of 1	area under the dripline of the tree or shrub, using a grid
Honeylocust	quart volumetrically use	pattern. Apply at least six (6) oz. of dilute solution per
Honeysuckle	1.33 (0.1 oz.) to 2.67 (0.2	injection site.
Linden	oz.) level teaspoons of dry	
Maple	material and apply using one	Basal Injection: Space injection holes evenly around the
Oak	qt. of dilution per inch of	base of the trunk no more than 24 inches out from the
Rive	DBH and one injection site	base.
Birch	per inch of DBH.	
Roses	*	
Snowball	OR	
Viburnum		
Spirea	1/10 (1/160 lbs.) to 1/5 oz.	
Spruce	(1/80 lbs.) per 100 sq. ft. of	
Willow	area under the dripline of	
	the tree or shrub	
	Dilute 0.75 lbs. (12 oz.) in	
	189-378 qts. of water to	
	treat 6,336-12,672 sq. ft. of	
	area under the dripline of	
	the tree or shrub.	
	ll the tree of sinuo.	

**USE PRECAUTIONS:** Use injection equipment that can be accurately calibrated. Injections must reach a minimum depth of six (6) inches. For optimal uptake, irrigate the treated area after injecting to promote absorption into the root system. Application to dry soil may decrease performance. Performance will be optimized by thorough and uniform application to the treated root system.

### **GOLF COURSE TURFGRASS**

- Do not allow livestock to graze treated areas.
- Do not feed treated grass to livestock.
- Do not apply to turfgrass by air.
- **CALIFORNIA USERS:** Apply by ground boom only.
- Do not apply more than 4 1/8 lbs. (4.0 lbs. ai/A) of ORTHENE 97 PELLETS to golf courses per single application.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb/A.
- Do not mow turfgrass for at least 24 hours after application for Greenbug or grasshopper control.
- For Sod Webworm, Greenbug and Grasshopper control do not repeat at less than 1 week intervals.
- For Mole Cricket and Spittlebug control do not irrigate after application.

<sup>\*</sup>Not Registered for Use in California

PLANT	PESTS CONTROLLED	APPLICATION RATE PER 1000 SQ. FT.	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Golf Course Turfgrass	Cutworm Fall Armyworm Yellow Striped Armyworm Southern Armyworm	0.4 to 0.9 oz. (equivalent to 1 to 2 1/2 lbs./A)	As the insects appear. A repeat application at 2 week intervals may be necessary.	Apply the specified amount of product per 1,000 sq. ft. Use 1 to 5 gals. water per 1,000 sq. ft. to obtain good coverage.
	Chinch Bug	0.9 to 1.5 oz. (equivalent to 2 1/2 to 4 lbs./A)	Apply as needed for adult population knockdown (10 to 14 days).	Apply the specified amount of product per 1,000 sq. ft. Use 1 to 5 gals. water per 1,000 sq. ft. to obtain
	Sod Webworm	0.4 to 0.8 oz. (equivalent to 1 to 2 lbs./A)	As sod webworms begin to appear. Use the higher listed rate when quick knockdown is needed or with heavy infestations.  Repeat application may be necessary.	good coverage.
	Leafhopper	0.8 oz. (equivalent to 2 lbs./A)	As the leafhoppers begin to appear. A repeat application at 1 week intervals may be necessary.	
Golf Course Turfgrass	Mole Cricket (except CA) Spittlebug (except CA)	0.8 to 1.4 oz. (equivalent to 2 to 3.9 lbs./A)	As mole crickets begin to appear. For knockdown of existing populations, more than one application may be required throughout the growing season. For heavy infestations, use the higher dosage rate.	Apply the specified amount of product per 1,000 sq. ft. Use 1 to 5 gals. of water per 1,000 sq. ft. to obtain good coverage.  Apply during late afternoon or early evening hours and after an irrigation.  The use of a lemon fragrance substance in the spray mix may actas a flushing agent and thus provide increased mole cricket contact with the product. The following lemon scented products have been shown to be effective flushing agents: Lemon® Joy, Lemon Palmolive®, and Mighty Myrt® Products Manufacture Base Pure Lemon Fragrance. The use rate for these lemon-scented products is 2 tsp. per gal. of water for small total mix volumes or 6 fl. oz. per 50 gals. of water for large total mix volumes.
	Greenbug (Schizaphis graminun) Grasshopper	0.4 oz. (equivalent to 1.0 lb./A)	Apply when insects or their damage first appears. Repeat as necessary.	Apply the specified amount of product. Use 1 to 5 gals, of water per 1,000 sq. ft. to obtain good coverage.
	Black Turfgrass Ataenius (except CA)	1.1 to 1.5 oz. (equivalent to 3 to 4 lbs./A)	Apply when insects or their damage first appear.	Apply the specified Amount of product per 1,000 sq. ft. Use 1 to 5 gals. of water per 1,000 sq. ft. Irrigate lightly after application (not more than 1/2 inch). Use the higher listed rate for severe infestations.

#### **SOD FARM TURFGRASS**

#### **USE RESTRICTIONS**

- Do not allow livestock to graze treated areas.
- Do not feed treated grass to livestock.
- Do not apply to turfgrass by air.
- Do not apply more than 3.1 lbs./A (3.0 lbs. ai/A) ORTHENE 97 PELLETS to sod farm turfgrass in a single application.
- User must allow at least 3 days between last application and harvesting of sod.
- For Sod Webworm control do not repeat at less than 1 week intervals.
- **CALIFORNIA USERS:** Apply by ground boom only.

PLANT	PESTS CONTROLLED	APPLICATION RATE PER 1000 SQ. FT.	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Sod Farm Turfgrass	Cutworm Fall Armyworm Grasshopper Greenbug Leafhopper Sod Webworm Southern Armyworm Yellow Striped Armyworm	0.4 to 0.9 oz. (equivalent to 1 to 2 1/2 lbs./A)	As the insects appear. A repeat application at 2 week intervals may be necessary.	Apply the specified amount of product per 1,000 sq. ft. Use 1 to 5 gals. of water per 1,000 sq. ft. to obtain good coverage.
	Chinch Bugs Mole Cricket (except CA) Spittlebug (except CA)	0.9 to 1.1 oz. (equivalent to 2 1/2 to 3 lbs./A)	Apply as needed for adult population knockdown (10 to 14 days).	Apply the specified amount of product per 1,000 sq. ft. Use 1 to 5 gals. of water per 1,000 sq. ft. to obtain good coverage.
	Sod Webworm	0.4 to 0.8 oz. (equivalent to 1 to 2 lbs./A)	As sod webworms begin to appear. Use the higher listed rate when quick knockdown is needed or with heavy infestations.	
			Repeat application may be necessary.	

## MOUND TREATMENT OF FIRE ANTS AND HARVESTER ANTS IN TURFGRASS

- DO NOT ALLOW LIVESTOCK TO GRAZE TREATED AREAS.
- DO NOT FEED TREATED GRASS TO LIVESTOCK.
- PHI for sod farms is 3 days.
- Do not treat mounds more than once per year.

PLANT	PEST CONTROLLED	AMOUNT OF PRODUCT	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Turfgrass  Residential, Recreational, and Commercial Turf	Imported Fire Ants and Harvester Ants	Mound Treatment- Drench Method: Mix 3/4 oz. (3/64 lbs) in 5 gals. of water. Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mound.  To make up a spray solution of 1 gallon volumetrically use 2 level teaspoons (0.15 oz.) of dry material.	For best results apply the material in the early morning or late afternoon when the ants are most active.  Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.	Apply the specified amount of product as directed.  Grass in treated areas may be injured.

# **OUTDOOR AND PERIMETER SPRAY**

- Not for use on residential turf grass. Do not apply with a low pressure hand wand.

LOCATION	PESTS CONTROLLED	AMOUNT OF PRODUCT PER GALLON	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Outdoor and Perimeter Area.	Wasps	1.2 oz. (3/40 lbs.)  To make up a spray solution of 1 gallon volumetrically use 5.33 level tablespoons (1.2 oz) of dry material.	Treat early or late in the day, as wasps are generally less active during these times.	Apply specified amount of product per each gallon of water used. Apply as a spot treatment to the nest, nest entrance, and surrounding areas where the wasps alight.
	Ants (excluding Fire, Harvester, Carpenter and Pharaoh Ants) Cockroaches Crickets Earwigs Pillbugs	1.2 oz.(3/40 lbs)  To make up a spray solution of 1 gallon volumetrically use 5.33 level tablespoons (1.2 oz.) of dry material.	As the insects appear.	Apply specified amount of product per each gallon of water used.  Apply to a band of soil 6 to 10 ft. adjacent to the structure and to a height of 2 to 3 ft. on the foundation where pests may be active or may find entrance. Also apply as a residual spray or with a paint brush to surfaces of buildings, window frames, shutters, entryways, screens, eaves, patios, garages, carports, around garage areas and other areas where these pests congregate.

#### ORNAMENTAL PLANTS GROWN FOR CUT FLOWER PRODUCTION

#### **USE RESTRICTIONS**

- Do not apply more than 1/2 lb./A ORTHENE 97 PELLETS per 100 gals. of water.
- Do not exceed 0.75 lb./A ORTHENE 97 PELLETS for cut flowers.
- Do not exceed 12 ounces of product per acre.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 0.5 lb. ai/A and 7 days for application rates greater than 0.5 lb. ai/A.
- Do not apply pelleted product by hand.
- **CALIFORNIA USERS:** For mixer/loaders who will also apply ORTHENE 97 PELLETS with a high pressure sprayer, do not mix and apply more than 250 gallons per day.

PLANT	PESTS CONTROLLED	AMOUNT OF PROUCT PER 100 GALS.	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Plants including but not limited to: Chrysanthemums Daisies Gladioli Roses	Aphid Lygus Thrips	8 oz. (1/2 lb.)	As insects begin to appear. Repeat applications may be necessary.	Apply the specified amount of product in 100 gals. of water with a hydraulic sprayer as a full coverage spray. Multiple applications may cause slight tip burn or marginal leaf necrosis on some varieties. Test on a few plants to determine varietal susceptibility.

# GREENHOUSE (Commercial only) AND OUTDOOR ORNAMENTAL PLANTS, FLORAL CROPS, GROUND COVERS AND FOLIAGE PLANT CROPS (Plants Not Produced for Cut Flowers)

- Not for residential greenhouse use.
- Do not apply more than 12 oz. (0.75 lb.) of product per 100 gals. of water per acre.
- Do not apply with a low pressure hand wand.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb. product/A and a minimum of 7 days for rates exceeding 1/2 lb. product/A.
- Do not apply more often than once every 28 days to carnations and chrysanthemums.
- Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption.
- This product is sold by weight and package is full when packed and is inclined to settle.
- Do not apply pelleted product by hand.
- **CALIFORNIA USERS:** For mixer/loaders who will also apply ORTHENE 97 PELLETS with a high pressure sprayer, do not mix and apply more than 250 gallons per day.

PLANTS	PESTS CONTROLLED	AMOUNT OF PRODUCT PER 100 GALS.	TIME OF APPLICATION	APPLICATION INSTRUCTIONS
Carnations Chrysanthemums	Aphid Thrips	8 oz. (1/2 lb.)	As aphids begin to appear.  As thrips begin to appear or at the tight flower bud stage. Repeat applications may be necessary.	Apply the specified amount of product in 100 gals. water with a hydraulic sprayer as a full coverage spray.  Caution: Phytotoxicity has occurred on the following Chrysanthemum varieties: Albatross, Bonnie Jean, Dixie, Garland, Gem, Iceberg, Pride, Showoff, Statesman, Tally Ho, Westward Ho and Wild Honey.  Before treating large Chrysanthemum plantings, spray only a few plants and observe two weeks for varietal phytoxicity. Application to Chrysanthemums in flower may result in flower damage.
Floral Crops including but not limited to:	Aphid	8 oz. (1/2 lb)	As aphids begin to appear	Apply the specified amount of product in 100 gals. water with a hydraulic sprayer as a full coverage spray. The addition of a
Dahlias Daisies Easter Lily Gladioli Gypsophila Pachysandra Pansy Peony Sedum Statice Strawflower Yarrow Zinnia Foliage Plants including but not limited to: Anthuriums Cacti Orchids Poinsettia	Mealybug Thrips Whitefly	8 oz. (1/2 lb.)	As the insects begin to appear. A repeat application, at a 2 week interval, may be necessary for control of mealybugs and whiteflies.	wetting agent may be required on difficult to wet foliage.  Caution: Phytotoxicity has occurred on the following foliage plants: Bletchum gibbum, Cissus antarctica, Ficus triangularis, Fittonia verchaffeltii, Maranta leuconeura kerchoveana, Pachystachya lutea, Plectranthus australis, Polypodium aureus, Polystichum, Pteris ensiformis, Tolmiea menziesii. Before treating large plantings spray only a few plants and observe 2 weeks for varietal phytotoxicity. Application of product on Poinsettias after bract formation may result in phtotoxicity on certain varieties.  For sweetpotato whitefly control, apply the specified amount of product plus fenpropathrin as a tank mix at a volume necessary to obtain good coverage. Follow the appropriate fenpropathrin label(s) for specific instructions on the alternation of fenpropathrin plus acephate and fenpropathrin alone and the rotation instructions to avoid potential resistance.
	Scales (Crawlers)	8 oz. (1/2lb.)	As crawlers begin to appear. Repeat applications, at a 2 week or more interval, may be necessary where there is continuous crawler production.	
	Sweetpotato Whitefly (except CA)	4 oz. (1/4 lb.) + (0.2 lb. ai) fenpropathrin	Apply when insects first appear. If a population is well established, make one application of the tank mix and follow 5 to 7 days later with fenpropathrin alone. See fenpropathrin label(s) for instructions.	
Roses	Aphid Leafroller Thrip	8 to 12 oz. (1/2 to 3/4 lb.)	As leaf rollers begin to appear. Use the higher amount when the large larvae are present.	Apply the specified amount of product in 100 gals. water with a hydraulic sprayer as a full coverage spray.  Application to Roses in flower may result in flower damage.

# STORAGE AND DISPOSAL

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

# PESTICIDE STORAGE

Keep pesticide in original container.

Do not put concentrate or dilute into food or drink containers.

Store in a cool, dry place. Protect from excessive heat.

Do not contaminate food or foodstuffs.

Do not store or transport near feed or food.

**PESTICIDE DISPOSAL:** To avoid wastes, use all materials 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 canister into application equipment. Do not reuse container. Dispose of empty canister in a sanitary landfill, by incineration or by other procedures approved by state and local authorities. Offer for recycling if available.

For help with any spill, leak, fire or exposure involving this material, call day or night 1-888-462-6822.

#### LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

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

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

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

© 2024 AMVAC Chemical Corporation is a wholly owned subsidiary of American Vanguard Corporation. All Rights Reserved. AMERICAN VANGUARD, AMVAC and their respective logos are trademarks owned by AMVAC Chemical Corporation.

Orthene is a trademark of OMS Investments, Inc. and is used under license.

Lemon Joy is a trademark of Procter Gamble Co. Palmolive is a trademark of Colgate-Palmolive Co. Mighty Myrt Products is a trademark of Rich Brands, LLC.

CHEMTREC is a service mark of the American Chemistry Council, Inc.

Eggs/DeadHatch is a trademark of Valent U.S.A. Corporation

AMVAC Chemical Corporation

4695 MacArthur Court, Suite 1200 Newport Beach, CA 92660 U.S.A.

**ACEPHATE** 

**GROUP** 

1B

INSECTICIDE

# ORTHENE® 97 PELLETS

{Alternate Brand Names: Orthene® 97, Orthene® Turf, Tree & Ornamental 97 Spray, Orthene® 97 ST}

# (Soluble Insecticide)

ACTIVE INGREDIENT	By Weight
*Acephate	97.4 %
OTHER INGREDIENTS	2.6 %
Total	100.0 %
*O C Dimethyl a actylph amb amanidathia ata	

<sup>\*</sup>O,S-Dimethyl acetylphosphoramidothioate

U.S. Patent. No. 6,013,272

# KEEP OUT OF REACH OF CHILDREN CAUTION

0120 1101 (					
	FIRST AID				
Acephate is an organophosphate, cholinesterase inhibitor.					
If swallowed:	Call a poison control center or doctor immediately for treatment advice.				
	• Have person sip a glass of water if able to swallow.				
	• Do not induce vomiting unless told to by a poison control center or doctor.				
	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 eye.				
	Call a poison control center or doctor for treatment advice.				
If on skin or	Take off contaminated clothing.				
clothing:	• Rinse skin immediately with plenty of water for 15-20 minutes.				
	Call a poison control center or doctor for treatment advice.				
If inhaled:	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 further treatment advice.				
	ELEB CELICITATION AND AND AND AND AND AND AND AND AND AN				

#### **EMERGENCY INFORMATION**

#### NOTE TO PHYSICIAN

This material contains a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure but decisions regarding treatment will usually need to be made before test results are available. If signs of cholinesterase inhibition appear, atropine sulfate is antidotal. 2-PAM (PROTOPAM) is also antidotal and may be used in conjunction with atropine but should not be used alone.

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

FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:

For Product Use Information phone: AMVAC®......1-888-462-6822

For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC®......1-800-424-9300

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

**Net Contents:** Pounds

**EPA Reg. No. 5481-8978** EPA Est. No.



[Manufactured for]
AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660
U.S.A.

#### PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash clothing before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Mixers, Loaders, Applicators and Other Handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

All Mixers and Loaders and all Applicators using low pressure hand wand application equipment must wear: A minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with a HE filter.

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

#### USER SAFETY RECOMMENDATIONS

## **Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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**

This pesticide is toxic to birds. For terrestrial uses, 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. Cover with soil or soil-incorporate spills.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters

unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

This product and its degradate are 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 foraging the treatment area.

# **DIRECTIONS FOR USE**

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

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

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.

- Not for use on agricultural establishments in hopper-box, planter-box, slurry-box or other seed treatment applications at, or immediately before, planting.
- When using formulations that do not contain dye, compliance with 21 CFR Chapter 1, Section 2.5 requires that all seed treated with pesticide must be colored to distinguish from, and prevent subsequent inadvertent use as, food for human, or feed for animals.
- Treated seed must not be used for, or mixed with, food or animal feed, or processed for oil. Seed treated with ORTHENE 97 PELLETS may be considered adulterated under state and federal laws if sold or shipped as food or feedstuffs. Seed commercially treated with ORTHENE 97 PELLETS must be labeled as follows: "TREATED SEED DO NOT USE FOR FOOD, FEED OR OIL."
- Observe all precautions and limitations on labeling of all products used in mixtures.
- Do not apply more than 4.0 lbs. ai/A per year. This includes all uses of acephate in commercial seed treatment, in-furrow spray and foliar applications.
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticide remain in ethanol by-products that are used in agronomic practice.
- Store away from feeds and other foodstuffs.
- Wear long-sleeved shirt, long pants and chemical-resistant gloves when handling treated seed.
- Dispose of seed packaging in accordance with local requirements.
- Exposed treated seed may be hazardous to birds and wildlife. Dispose of all excess treated seed and seed packaging by burial away from bodies of water. Cover or soil-incorporate spilled treated seeds.
- Treated seeds must be planted into the soil at the depth of 1 inch or greater.

#### COMMERCIALLY TREATED COTTONSEED

PESTS CONTROLLED	AMOUNT OF PRODUCT PER 100 LBS. COTTONSEED	EFFICACY	APPLICATION INSTRUCTIONS
Cotton Aphid Thrips (including Western Flower Thrips)	6.4 oz. (0.4 lb.)	Gives effective reduction of Thrips and Cotton Aphid for up to 3 weeks after planting.	Product contains a water-soluble systemic insecticide which helps to reduce injury to cotton seedlings by several insects. Product can be mixed in the slurry tank with most of the
Black (Greasy) Cutworm	6.4 oz. (0.4 lb.)	Gives effective reduction of Black (Greasy) Cutworm from planting through the 3 <sup>rd</sup> to 4 <sup>th</sup> leaf stage of development. When planting into fields where large Cutworms are present (5 <sup>th</sup> instar and larger) economic damage may occur.	fungicide seed treatments in common use. Product can also be applied as a separate treatment using enough water to give adequate coverage of the seed. Product dissolves quickly in water with minimum of agitation.

#### **Seed Container Label Requirements**

Seed commercially treated with acephate insecticide must be labeled in compliance with all the requirements of the Federal Seed Act. Federal law requires that bags containing treated seeds shall be labeled with the following statements:

- This seed has been treated with acephate insecticide.
- Do not use for food, feed or oil purposes.
- User is responsible for ensuring that the seed container label is in compliance with all of the requirements of the Federal Seed Act.

In addition, the EPA requires all bags containing treated seed must be labeled or tagged with the following information:

• This seed has been treated with ORTHENE 97 PELLETS, which contains x mg\* active ingredient (ai) per seed.

\*to be filled in

- Do not apply more than 4.0 lbs. a.i./A per year. This includes all uses of acephate such as commercial seed treatments, in-furrow spray, and foliar applications.
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticide remain in ethanol by-products that are used in agronomic practice.
- Store away from feeds and other foodstuffs.
- Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seed.
- Dispose of seed packaging in accordance with local requirements.
- Exposed treated seed may be hazardous to birds and wildlife. Dispose of all excess treated seed and seed packaging by burial away from bodies of water. Cover or soil-incorporate spilled treated seeds.
- Treated seeds must be planted into the soil at the depth of 1 inch or greater.

Note to User: One pound of ORTHENE 97 PELLETS contains 441,799 mg AI (acephate). Example for calculating mg of active ingredient (ai) per seed: 6.4 oz. of ORTHENE 97 PELLETS contains 176,719 mg of AI (acephate). To calculate the number of milligrams per seed in the bag, determine the number of seeds per bag and the weight of the seeds: In this example a 50 lb treated bag contains 230,000 seeds, 100 lbs is the equivalent of 460,000 seeds. For each 100 lbs. there is 176,719 mg of acephate from ORTHENE 97 PELLETS (6.4 oz ORTHENE 97 PELLETS/100 lbs of seed). The mg of acephate per seed in this example is 176,719 mg  $\div$  460,000 seeds = 0.384 mg/seed.

#### STORAGE AND DISPOSAL

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

#### PESTICIDE STORAGE

Keep pesticide in original container.

Do not put concentrate or dilute into food or drink containers.

Store in a cool, dry place. Protect from excessive heat.

Do not contaminate food or foodstuffs.

Do not store or transport near feed or food.

**PESTICIDE DISPOSAL:** To avoid wastes, use all materials 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 canister into application equipment. Do not reuse container. Dispose of empty canister in a sanitary landfill, by incineration or by other procedures approved by state and local authorities.

Offer for recycling if available..

For help with any spill, leak, fire or exposure involving this material, call day or night 1-888-462-6822.

#### LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

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

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

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

© 2024 AMVAC Chemical Corporation is a wholly owned subsidiary of American Vanguard Corporation. All Rights Reserved. AMERICAN VANGUARD, AMVAC and their respective logos are trademarks owned by AMVAC Chemical Corporation.

Orthene is a trademark of OMS Investments, Inc. and is used under license.

CHEMTREC is a service mark of the American Chemistry Council, Inc.

AMVAC Chemical Corporation 4695 MacArthur Court, Suite 1200 Newport Beach, CA 92660 U.S.A.

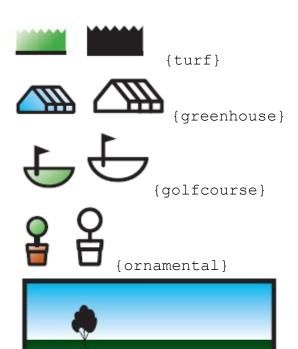
 $\{20240805\_updates from SAL20150608 for DPR and commercial updates\_EPA comments x3\}$ 

{optional marketing statements:} [Kills fire ants]

{Master Label Graphics:}



{product starburst}



{landsape}

```
{ornamental}

{lawn and landscape}

{pest}

{golf}
```