

# ORTHENE® Turf, Tree & Ornamental WSP

Insecticide in a Water-Soluble Packet

Kills fire ants

## ACTIVE INGREDIENT

|                         |           |        |
|-------------------------|-----------|--------|
| *Acephate .....         | By Weight | 75.0%  |
| OTHER INGREDIENTS ..... |           | 25.0%  |
| Total.....              |           | 100.0% |

\*O,S-Dimethyl acetylphosphoramidothioate

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

| <b>FIRST AID</b>   |  |
|--|--|
| <b>Acephate is an organophosphate, cholinesterase inhibitor.</b>   |  |
| <b>If swallowed:</b>   | <ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul> |
| <b>If in eyes:</b>   | <ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>  |
| <b>If on skin or clothing:</b>   | <ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>  |
| <b>If inhaled:</b>   | <ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>  |
| <b>NOTE TO PHYSICIAN</b>   |  |
| <p>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.</p> |  |

| <b>EMERGENCY INFORMATION</b>  |
|---|
| <p><b>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</b></p> <p>FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:</p> <p>For Medical Emergencies phone:.....1-888-681-4261</p> <p>For Product Use Information phone: AMVAC®.....1-888-462-6822</p> |

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. 5481-8971  
EPA Est. No. \_\_\_\_\_

Net Contents:



Manufactured For:  
AMVAC Chemical Corporation  
4695 MacArthur Court, Suite 1200,  
Newport Beach CA 92660  
1-888-462-6822

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## 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.
- Socks plus shoes.

##### In addition, 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.

See Engineering Controls for additional requirements.

#### Engineering Controls:

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard [40 CFR 170.607(d)]. Mixers and loaders handling this product while it is enclosed in intact water soluble packets may elect to wear reduced PPE of long-sleeved shirt, long pants, shoes, socks. When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

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)].

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. As soon as possible, wash thoroughly and change into clean clothing.

The use of human flaggers is prohibited.

### 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 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 actively visiting 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.**

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 or dusts have settled.

## 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.

## WATER SOLUBLE PACKAGING

### Instructions for Using Water Soluble Packages Directly into Spray tanks:

Water Soluble Packages (WSPs) are designed to dissolve in water. Agitation may be used, if necessary, to help dissolve the WSP. Failure to follow handling and mixing instructions can increase your exposure to the pesticide products in WSPs. WSPs, when used properly, qualify as a closed mixing/loading system under the Agricultural Worker Protection Standard [40 CFR 170.607(d)].

### Handling Instructions

Follow these steps when handling pesticide products in WSPs.

1. Mix in spray tank only.
2. Handle WSP(s) in a manner that protects package from breakage and/or unintended release of contents. If package is broken, put on PPE required for clean-up and then continue with mixing instructions.
3. Keep the WSP(s) in outer packaging until just before use.
4. Keep the WSP dry prior to adding to the spray tank.
5. Handle with dry gloves and according to the label instructions for PPE.
6. Keep WSP intact. Do not cut or puncture WSP.
7. Reseal the WSP outer packaging to protect any unused WSP(s).

### Mixing Instructions

Follow the steps below when mixing this product, including if tank mixed with other pesticide products. If being tank mixed, the mixing directions 1 through 9 below take precedence over the mixing directions of the other tank mix products. WSPs may, in some cases, be mixed with other pesticide products so long as the directions for use of all mixed products do not conflict. Do not tank mix this product with products that prohibit tank mixing or have conflicting mixing directions.

1. If a basket or strainer is present in the tank hatch, remove prior to adding the WSP to the tank.
2. Fill tank with water to approximately one-third to one-half of the desired final volume of spray.
3. Stop adding water and stop any agitation.
4. Place intact/unopened WSP(s) into the tank.
5. Do not spray water from a hose or fill pipe to break or dissolve the WSP(s).
6. Start mechanical and recirculation agitation from the bottom of tank without using any overhead recirculation, if possible. If overhead recirculation cannot be turned off, close the hatch before starting agitation.
7. Dissolving the WSP(s) may take up to 5 minutes or longer, depending on water temperature, water hardness and intensity of agitation.
8. Stop agitation before tank lid is opened.
9. Open the lid to the tank, exercising caution to avoid contact with dusts or spray mix, to verify that the WSPs have fully dissolved and the contents have been thoroughly mixed into the solution.
10. Do not add other allowed products or complete filling the tank until the bags have fully dissolved and pesticide is thoroughly mixed.
11. Once the WSP have fully dissolved and any other products have been added to the tank, resume filling the tank with water to the desired level, close the tank lid, and resume agitation.
12. Use the spray solution when mixing is complete.
13. Maintain agitation of the diluted pesticide mix during transport and application.
14. It is unlawful to use any registered pesticide, including WSPs, in a manner inconsistent with its label.

### **MULTIPLE PACKAGING**

This bag contains multiple water soluble packets of Orthene Turf, Tree & Ornamental WSP. Do not handle the packets with wet gloves or allow the packets to become wet prior to addition to spray tank. Do not break open packets. Refer to the Tables of Equivalents to calculate the number of packets to use. If all packets are not used, close and reseal outer container to protect remaining packet(s).

## TABLES OF EQUIVALENTS

|                         |           |            |         |          |         |         |          |
|-------------------------|-----------|------------|---------|----------|---------|---------|----------|
| Amount of Product       | 2 2/3 lb. | 1 1/3 lbs. | 1 lb.   | 2/3 lb.  | 1/3 lb. | 1/4 lb. | 1/8 lb.  |
| Amount of Product       | 42.6 oz.  | 21.3 oz.   | 16 oz.  | 10.6 oz. | 5.3 oz. | 4 oz.   | 2 oz.    |
| Amount Active Contained | 2 lb.     | 1 lb.      | 3/4 lb. | 1/2 lb.  | 1/4 lb. | 1/5 lb. | 1/10 lb. |

**Table of Equivalents for 1/3 lb. Packet**

| Product Rate per Acre | Acres Treated by a 1/3 lb. Packet |
|-----------------------|-----------------------------------|
| 1/4 lb. (4 oz.)       | 1.33                              |
| 1/3 lb. (5.3 oz.)     | 1.00                              |
| 2/3 lb. (10.6 oz.)    | 0.50                              |
| 1 lb. (16 oz.)        | 0.33                              |
| 1 1/3 lbs. (21.3 oz.) | 0.25                              |
| 2 2/3 lbs. (42.6 oz.) | 0.13                              |

| Product Rate per 100 Gals. of Water | Number of 1/3 lb. Packets per 100 Gals. of Water |
|-------------------------------------|--|
| 1/3 lb. (5.3 oz.)                   | 1  |
| 2/3 lb. (10.6 oz.)                  | 2  |
| 1 lb. (16 oz.)                      | 3  |
| 1 1/3 lbs. (21.3 oz.)               | 4  |

| Product Rate          |                   | Treatment Area per 1/3 lb. Packets |         |
|-----------------------|-------------------|------------------------------------|---------|
| Per Acre              | Per 1,000 sq. ft. | Acres                              | sq. ft. |
| 1 1/3 lbs. (21.3 oz.) | 0.5 oz.           | 0.25                               | 11,000  |
| 2 2/3 lbs. (42.6 oz.) | 1.0 oz.           | 0.12                               | 5,400   |

## PRODUCT INFORMATION

Orthene Turf, Tree & Ornamental WSP is an insecticide for control of pests on selected agricultural crops and in certain non-crop areas. The active ingredient in Orthene Turf, Tree & Ornamental WSP is acephate, a water-soluble insecticide readily absorbed by plant roots and foliage to give systemic control of feeding insects. Insect pests are generally controlled more effectively by Orthene Turf, Tree & Ornamental WSP through ingestion than by contact. Application of Orthene Turf, Tree & Ornamental WSP to maintain control should be repeated only as directed.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY AND/OR ILLEGAL RESIDUES.

### USE RESTRICTIONS

- 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.
- Not for indoor residential use. Not for use in residential greenhouses.
- For greenhouse use, use is limited to commercial greenhouses for use on ornamental plants, floral crops, ground covers and foliage plant crops (plants not produced for cut flower production) and tobacco (floatbed application).

## 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.**

### SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions, (e.g., wind direction, 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. 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.

- All aerial, ground and air-assisted/airblast application equipment must be properly maintained and calibrated using water as carrier. Do not apply this product as an ultralow (ULV) spray, or in any carrier other than water, except as specified in the use 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 wingspan 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 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 wind speed is 10 mph or less at the application site as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. The applicator also must use all other measures necessary to control drift.

### Resistance Management

For resistance management, ORTHENE Turf, Tree & Ornamental WSP contains acephate, a Group 1 insecticide. Any insect population may contain individuals naturally resistant to ORTHENE Turf, Tree & Ornamental WSP 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 Turf, Tree & Ornamental WSP 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):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pests.
  - 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.

## NON-BEARING CITRUS

### USE RESTRICTIONS

- Do not graze treated areas.
- DO NOT HARVEST citrus for one year after treatment.
- **CALIFORNIA USERS:** For mixer/loaders who will also apply Orthene 75 Soluble Powder with a high pressure sprayer, do not mix and apply more than 250 gallons per day.

| APPLICATION METHOD  | PESTS CONTROLLED   | APPLICATION RATE PER ACRE                                 | APPLICATION INSTRUCTIONS   |
|---|--|---|--|
| <b>FOLIAR</b><br><br><b>By Ground:</b> 100 to 200 gals. product/A of spray  | Aphids<br>Grasshoppers<br>Katydid<br>Mealybug<br>Orangedog<br>Plantbug<br>Thrips<br>Whitefly (except Sweetpotato/Silverleaf) | 2/3 lb.   | For repeat applications use a minimum spray interval of 3 days.  |
|   | Citrus Blackfly*<br>Citrus Root Weevil*  | 2/3 to 1 lb.  | Apply when eggs or insects first appear.<br><br>Use the higher listed rate when a heavy infestation is present.<br><br>For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 2/3 lb. product/A, and a minimum of 7 days for rates exceeding 2/3 lb. product/A  |
|   | Ants (excluding Fire, Harvester, Carpenter and Pharaoh Ants)   | 1 lb.   | For repeat applications use a minimum spray interval of 7 days.  |
| 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. |  |   |  |
| <b>SOIL MOUND TREATMENT</b><br><br><b>DRENCH METHOD</b>   | Ants* (excluding Carpenter and Pharaoh Ants)   | Mix one 1/3 lb. water soluble packet in 26.7 gals. water. | Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a 4 ft. diameter circle around the mound.<br><br>For best results apply the material in the early morning or late afternoon when the ants are most active.<br><br>Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest. |

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

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

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### USE RESTRICTIONS

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

| APPLICATION METHOD  | PEST CONTROLLED | APPLICATION RATE PER ACRE | APPLICATION INSTRUCTIONS   |
|---|-----------------|---------------------------|--|
| <b>FOLIAR</b><br><br><b>By Ground:</b> 10 to 20 gals. product/A of spray<br><br><b>By Air:</b> 1 to 5 gals. product/A of spray (minimum of 5 gals. product/A in CA) | Grasshopper     | 1/3 lb.                   | For early to mid-season application.<br><br>Use the higher spray volumes when spraying dense foliage.<br><br>An approved drift retardant may be added to aid in controlling drift and reducing evaporation of aerial sprays. |

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## NON-CROP AREAS – Wasteland

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### USE RESTRICTIONS

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

| APPLICATION METHOD  | PESTS CONTROLLED                                 | APPLICATION RATE PER ACRE       | APPLICATION INSTRUCTIONS   |
|---|--|---------------------------------|--|
| <b>FOLIAR</b><br><br><b>By Ground:</b> 10 to 20 gals. product/A of spray.<br><br><b>By Air:</b> ½ gal. product/A of spray (minimum of 5 gals. product/A in CA). | Black Grass Bug<br>Grasshopper<br>Mormon Cricket | 1/8 to 1/6 lb.<br>(2 - 2.7 oz.) | Use the higher spray volumes when spraying dense foliage.<br><br>An approved drift retardant may be added to aid in controlling drift and reducing evaporation of aerial sprays. |

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## CONTAINER GROWN NURSERY STOCK

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### USE RESTRICTIONS

- This product must be applied as a foliar or soil spray after mixing it with a water volume specified on the label.
- CALIFORNIA USERS:** For mixer/loaders who will also apply Orthene Turf, Tree & Ornamental WSP, 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:<br>Arborvitae<br>Azalea<br>Camellia<br>Rhododendron<br>Roses<br>Viburnum<br>Yew) | Black Vine Weevil<br>Strawberry Root Weevil                  | 1 lb.                           | 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.<br>Before treating large plantings, spray only a few plants and observe two weeks for phytotoxicity. |
|   | Ants (excluding Fire, Harvester, Carpenter and Pharaoh Ants) | 1 lb.                           | Apply as needed to control the pest.   |  |

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## ORNAMENTAL TREES AND SHRUBS

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### USE RESTRICTIONS

- Do not exceed 1 1/3 lbs. of Orthene Turf, Tree & Ornamental WSP per acre per application.
- For foliar applications, do not apply with a low pressure handwand.
- For foliar treatment repeat applications, use a minimum spray interval of 14 days (except flowering crabapples and Douglas Fir)



- For Douglas Fir (Christmas Trees) do not make more than 1 application per year.
- **CALIFORNIA USERS:** Application to Christmas trees by air is restricted to a maximum of 1,000 acres per day.
- For flowering crabapples do not apply more often than 3 times in a growing season at a 4 week interval.
- This product must be applied as a foliar or soil spray after mixing it with a water volume specified on the label.
- **CALIFORNIA USERS:** For mixer/loaders who will also apply Orthene Turf, Tree & Ornamental WSP, 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 and Douglas Fir, see below). | Aphids<br>Bagworms Birch<br>Leafminer Tent<br>Caterpillars* Lace<br>Bugs<br>Leafrollers | 1/3 to 2/3 lb.                 | 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.<br><br>*Mist blower application: Adjust rates to 1 1/3 lbs. per 100 gals. of water for Gypsy Moth control and 1 lb. per 100 gals. water for Tent Caterpillar control. |
|   | Gypsy Moth Larvae*<br>Webworms  | 2/3 lb.                        | As the insects begin to appear.   | AMVAC does not advise application to Huckleberry, Balm of Gilead, Cottonwood, Lombardy Poplar and Viburnum suspensum as it may result in phytotoxicity in these plants.<br><br>Nursery crops: Before treating large plantings, spray only a few plants and observe 2 weeks for phytotoxicity.                                      |
|   | Scales (Crawlers)   | 2/3 lb.                        | As crawlers begin to appear. Repeat applications, at a 2 week or more interval, may be necessary where there is continuous crawler production.                  |  |
|   | Ponderosa Pine<br>Needle Miner  | 2/3 lb.                        | Time of application is important. Consult your Farm Advisor or County Extension Agent.  | Apply the specified amount of product in 100 gals. of water with a hydraulic sprayer as a full coverage spray.   |
|   | Grasshoppers  | 2/3 lb.                        | As the grasshoppers begin to appear.  |  |
|   | California Oakworm<br>Cankerworms (Spring and Fall)                                     | 1/3 to 2/3 lb.                 | As the insects begin to appear. Use the higher listed rate when the larger larvae are present.  | Apply the specified amount of product in 100 gals. of water with a hydraulic sprayer.  |
|   | Nantucket Pine Tip Moth Larvae  | 1 lb.                          | Time of application is important. Consult your Farm Advisor or County Extension Agent. Repeat applications will be required for subsequent generations.         |  |
|   | Root Weevil Adults  | 1 lb.                          | 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 Bugs<br>Sawflies<br>Budworms<br>Leafhoppers                                   | 1 lb.                          | As the insects begin to appear.   |  |
|   | Japanese Beetle   | 1 1/3 lbs.                     | As the Japanese Beetles begin to appear. Repeat applications, at 2 week intervals, may be necessary.  |  |
|   | Elm Leaf Beetle (larvae)  | 1 1/3 lbs.                     | As the larvae begin to appear. Product will not prevent Elm Leaf Beetle eggs from hatching.   |  |
| Douglas Fir (Christmas Trees)   | Douglas Fir Needle Midge<br>Douglas Fir Tussock Moth Larvae                             | 2/3 lb.<br>(2/3 lb. product/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 5 gals. of spray per acre by air or in 100 gals. of spray per acre by ground.   |
| Flowering Crabapples  | Aphids<br>Tent Caterpillars<br>Leafrollers  | 1/3 lb.                        | As the insects begin to appear.   | Apply the specified amount of product in 100 gals. of water with a hydraulic sprayer.<br><br><b>Caution:</b> Phytotoxicity has occurred on the following Crabapple varieties: Hopa, Ichonoski, Malusfloribunda, Pink Perfection, Red Wine and Snow Cloud.  |

## GOLF COURSE 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.
- When application is for mole cricket and spittlebug control do not irrigate after application.
- When application is for greenbug or grasshopper control do not mow turfgrass for at least 24 hours after application.
- For Sod Webworm, Greenbug and Grasshopper control do not repeat at less than 1 week intervals.
- **CALIFORNIA USERS:** Apply by ground boom only.
- Do not apply more than 5 1/3 lbs. Orthene Turf, Tree & Ornamental WSP (4.0 lbs. a.i.)/A per single application to golf courses.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 2/3 lb. product/A and a minimum of 7 days for rates exceeding 2/3 lb. product/A.

| PLANT                 | PESTS CONTROLLED   | APPLICATION RATE PER 1,000 SQ. FT.                                | TIME OF APPLICATION   | APPLICATION INSTRUCTIONS   |
|-----------------------|--|---|---|--|
| Golf Course Turfgrass | Cutworm<br>Fall Armyworm<br>Yellow Striped Armyworm<br>Southern Armyworm | 1/2 to 1 1/5 oz.<br>(equivalent to 1 1/3 to 3 1/3 lbs. product/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  | 1 1/5 to 2 oz.<br>(equivalent to 3 1/3 to 5 1/3 lbs. product/A)   | Apply as needed for adult population knockdown (10 to 14 days).   |  |
|                       | Sod Webworm  | 1/2 to 1 oz.<br>(equivalent to 1 1/3 to 2 2/3 lbs. product/A)     | As sod webworms begin to appear. Use the higher listed rate when quick knockdown is needed or with heavy infestations.<br><br>Repeat application may be necessary.                                    |  |
|                       | Leafhopper   | 1 oz.<br>(equivalent to 2 2/3 lbs. product/A)                     | As the leafhoppers begin to appear. A repeat application at 1 week intervals may be necessary.  |  |
|                       | Mole Crickets (except CA)<br>Spittlebug (except CA)                      | 1 to 2 oz.<br>(equivalent to 2 2/3 to 5 1/3 lbs. product/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 listed rate. | <p>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.</p> <p>Apply during late afternoon or early evening hours and after an irrigation.</p> <p>The use of a lemon fragrance substance in the spray mix may act as a flushing agent and thus provide increased Mole Cricket contact with the Orthene Turf, Tree &amp; Ornamental WSP. 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 tsps. per gal water for small total mix volumes or 6 fl. oz. per 50 gals. water for large total mix volumes.</p> |

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|  | Greenbug<br>(Schizaphis graminum)<br>Grasshoppers | 1/2 oz.<br>(equivalent to<br>1 1/3 lbs. product/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<br>Ataenius<br>(except CA)        | 1 1/2 to 2 oz.<br>(equivalent to<br>4 to 5 1/3 lbs.<br>product/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 1000 sq. ft. Irrigate lightly after application (not more than 1/2 inch). Use the higher 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 4 lbs. Orthene Turf, Tree & Ornamental WSP (3 lbs a.i.)/A per single application to sod farms.
- Allow at least 3 days between last application and harvesting of sod.
- CALIFORNIA USERS:** Apply by ground boom only.
- For Sod webworm control do not repeat at less than 1 week intervals.

| PLANT                 | PESTS CONTROLLED   | APPLICATION RATE PER 1,000 SQ. FT.                                      | TIME OF APPLICATION  | APPLICATION INSTRUCTIONS   |
|-----------------------|--|---|--|--|
| Sod Farm<br>Turfgrass | Cutworm<br>Fall Armyworm<br>Grasshopper<br>Greenbug<br>Leafhopper<br>Sod Webworm<br>Southern<br>Armyworm<br>Yellow Striped<br>Armyworm | 1/2 to 1 1/3 oz.<br>(equivalent to<br>1 1/3 to 3 1/3 lbs.<br>product/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<br>Mole Cricket<br>(except CA)<br>Spittlebug<br>(except CA)  | 1 1/3 to 1 1/2 oz.<br>(equivalent to<br>3 1/3 to 4 lbs.<br>product/A)   | Apply as needed for adult population knockdown (10 to 14 days).  |  |
|                       | Sod Webworm  | 1/2 to 1 oz.<br>(equivalent to<br>1 1/3 to 2 2/3 lbs.<br>product/A)     | As sod webworms begin to appear. Use the higher listed rate when quick knockdown is needed or with heavy infestations.<br><br>Repeat application may be necessary. |  |

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

### USE RESTRICTIONS

- Do not treat mound more than once per year.

| PLANT   | PESTS CONTROLLED                            | AMOUNT OF PRODUCT   | TIME OF APPLICATION  | APPLICATION INSTRUCTIONS   |
|---|---|---|--|--|
| Turfgrass<br><br>Residential, Recreational<br>and Commercial Turf | Imported Fire<br>Ants and<br>Harvester Ants | <b>Drench Method:</b><br>Mix 1/3 lb. in 26.6<br>gals. water.<br><br>Apply 1 gal. of mix to<br>each mound area by<br>sprinkling the mound<br>until it is wet and<br>treat a 4 ft. diameter | For best results apply the material in the early morning or late afternoon when the ants are most active.<br><br>Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within | Apply the specified amount of product as directed.<br><br>Grass in treated areas may be injured. |

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|  |  | circle around the mound. | the nest. |  |
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## OUTDOOR AND PERIMETER SPRAY

### USE RESTRICTIONS

- Do not apply with a low pressure handwand.
- Do not use on residential turfgrass.

| LOCATION                   | PESTS CONTROLLED  | AMOUNT OF PRODUCT              | TIME OF APPLICATION   | APPLICATION INSTRUCTIONS  |
|----------------------------|---|--------------------------------|---|---|
| Outdoor and Perimeter Area | Wasps   | Mix 1/3 lb. in 3.3 gals. water | Treat early or late in the day, as wasp are generally less active during these times. | Apply as a spot treatment to the nest, nest entrance, and surrounding areas where the wasps alight.   |
|                            | Ants (excluding Fire Ants, Harvester Ants, Carpenter Ants and Pharaoh Ants)<br>Cockroaches<br>Crickets<br>Earwigs<br>Pillbugs | Mix 1/3 lb. in 3.3 gals. water | As the insects appear.  | 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 lb. Orthene Turf, Tree & Ornamental WSP /A per 100 gals water.
- Do not exceed 1 lb. product/A for cut flowers.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 0.5 lb. product/A and 7 days for application rates greater than 0.5 lb. product/A.
- This product must be applied as a foliar or soil spray after mixing it with a water volume specified on the label.
- CALIFORNIA USERS:** For mixer/loaders who will also apply Orthene Turf, Tree & Ornamental WSP 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   |
|--|---------------------------|--------------------------------|---|--|
| Plants including but not limited to:<br>Chrysanthemums<br>Daisies<br>Gladioli<br>Roses | Aphids<br>Lygus<br>Thrips | 2/3 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 Flower Production

### USE RESTRICTIONS

- Not for residential greenhouse use.
- Do not apply more than 1 1/3 lbs. Orthene Turf, Tree & Ornamental WSP /A per 100 gals. water.
- Do not apply with low pressure handwand.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 2/3lb. product /A and a minimum of 7 days for rates exceeding 2/3 lb. product /A.
- Do not apply more often than once every 28 days to 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 must be applied as a foliar or soil spray after mixing it with a water volume specified on the label.
- CALIFORNIA USERS:** For mixer/loaders who will also apply Orthene Turf, Tree & Ornamental WSP with a high pressure sprayer, do not mix and apply more than 250 gallons per day.

| PLANTS   | INSECTS CONTROLLED  | AMOUNT OF PRODUCT PER 100 GALS                  | TIME OF APPLICATION  | APPLICATION INSTRUCTIONS   |
|--|---|---|--|--|
| Chrysanthemums   | Aphids<br>Thrips  | 2/3 lb.   | As aphids begin to appear.<br><br>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. of water with a hydraulic sprayer as a full coverage spray.<br><br><b>Caution:</b> 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.<br><br>Before treating large Chrysanthemum plantings, spray only a few plants and observe 2 weeks for varietal phytotoxicity.<br><br>Application to Chrysanthemums in flower may cause flower damage.  |
| Floral Crops including but not limited to:<br>Dahlias<br>Daisies<br>Easter Lily<br>Gladioli<br><i>Gypsophila</i><br>Pachysandra<br>Pansy<br>Peony<br>Sedum<br>Statice<br>Strawflower<br>Yarrow<br>Zinnia<br>Foliage Plants including but not limited to:<br>Anthuriums<br>Cacti<br>Orchids<br>Poinsettia | Aphids<br>Mealybugs<br>Thrips<br>Whiteflies<br>Scales<br>(Crawlers) | 1/3 to 2/3 lb.<br><br>2/3 lb.                   | As aphids begin to appear.<br><br><b>Mealybugs and Whitefly:</b> As the insects begin to appear. A repeat application, at a 2 week interval, may be necessary for control of mealybugs and whiteflies.<br><br><b>Scale:</b> As crawlers begin to appear. Repeat applications, at a 2 week or more interval, may be necessary where there is continuous crawler production. | Apply the specified amount of product in 100 gals. of water with a hydraulic sprayer as a full coverage spray. The addition of a wetting agent may be required on difficult to wet foliage<br><br><b>Caution:</b> Phytotoxicity has occurred on the following foliage plants: <i>Blechnum gibbum</i> , <i>Cissus antarctica</i> , <i>Ficus triangularis</i> , <i>Fittonia verschaffelti</i> , <i>Maranta leuconeura kerchoveana</i> , <i>Pachystachya lutea</i> , <i>Plectranthus australis</i> , <i>Polypodium aureus</i> , <i>Polystichum</i> , <i>Pteris ensiformis</i> , <i>Tolmiea menziesii</i> . Before treating large plantings spray only a few plants and observe 2 weeks for varietal phytotoxicity.<br><br>Application of product on Poinsettias after bract formation may result in phytotoxicity on certain varieties. |
|  | Sweet potato<br>Whiteflies<br>(except CA)                           | 1/3 lb.<br>+<br>fenpropathrin<br>(0.2 lb. a.i.) | Apply when insects first appear. If a population is well established, make 1 application of the tank mix and follow 5 to 7 days later with fenpropathrin alone. See fenpropathrin label(s) for instructions.   |  |
| Roses  | Aphids<br>Leafrollers<br>Thrips                                     | 2/3 to 1 lb.                                    | As leafrollers begin to appear. Use the higher listed rate 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.<br><br>Application to roses in flower may result in flower damage.   |

## NON-CROP AREAS ANT MOUND TREATMENT

### USE RESTRICTIONS

- Do not treat mound more than once per year.

| CROPS          | PESTS CONTROLLED                         | AMOUNT<br>OF PRODUCT   | APPLICATION INSTRUCTIONS   |
|----------------|--|--|--|
| Non-Crop Areas | Imported Fire Ants and<br>Harvester Ants | <b>Mound Treatment –<br/>Drench Method:</b><br>Mix 1 oz. in 5 gals. of water. Apply 1<br>gal. of mix to each mound area by<br>sprinkling the mound until it is wet<br>and treat 4 ft. diameter circle around<br>the mound. | For best results apply the material in the early morning or late<br>afternoon when the ants are most active.<br><br>Applications made under prolonged hot and dry conditions may<br>be ineffective due to the location of the ants deep within the nest.<br><br>Grass in treated areas may be injured. |

### 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:** Outer bag for multiple packaging: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or dispose of the empty outer bag in the trash as long as WSP is unbroken.

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.**

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