



Orthene®

TURF, TREE & ORNAMENTAL SPRAY

**INSECTICIDE
KILLS FIRE ANTS**

Active Ingredient	By Wt.
Acephate (O,S-Dimethyl acetylphos-phoramidothioate) ...	75%
Other Ingredients	25%
Total	100%

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Harmful if swallowed. Causes eye irritation. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist. Wash hands thoroughly after handling. Do not allow children or pets to come into contact with treated areas until sprays have dried.

FIRST AID

Acephate is an organophosphate, cholinesterase inhibitor.	
If swallowed:	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the 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 clothing:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If inhaled:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

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FIRST AID (Continued)

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

NOTES 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 also be used in conjunction with atropine but should not be used alone.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks and chemical-resistant headgear for overhead exposure.

Mixers and Loaders must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and chemical-resistant headgear.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users should:

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Cover or soil-incorporate spills.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are 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.

This document contains language for Orthene Turf, Tree & Ornamental Spray and WSP

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, waterproof gloves, shoes plus socks and chemical-resistant headgear for overhead exposure.

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.

For other uses, including golf courses and other non-agricultural areas, do not enter treated areas without protective clothing until sprays have dried.

**DISCLAIMER, RISKS OF USING THIS PRODUCT,
LIMITED WARRANTY
AND LIMITATION OF LIABILITY**

IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.

RISKS OF USING THIS PRODUCT

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest.

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RISKS OF USING THIS PRODUCT, Continued

If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

LIMITED WARRANTY

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label and subject to the Risks of Using This Product as described above. **EXCEPT AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED.** No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

LIMITATION OF LIABILITY

In no event shall Valent or Seller be liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THIS PRODUCT.

PROMPT NOTICE OF CLAIM

Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

If Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

NO AMENDMENTS

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing **Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability**, which may not be modified by any oral or written agreement.

TANK MIXES

NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor.

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

This document contains language for Orthene Turf, Tree & Ornamental Spray and WSP

DIRECTIONS

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

WATER SOLUBLE PACKAGING (To Be Included on WSP Formulation Only)

PACKAGING

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

PREPARATION OF SPRAY SOLUTION

To prepare spray solution, drop the unopened pouch(es) of Orthene Turf, Tree & Ornamental Spray and WSP into a spray tank containing at least one-half the total quantity of water required. Direct water at the floating pouch(es) and continue to add water with the agitator running until the spray volume is reached. **Do not add any liquid fertilizers, micronutrients or adjuvants to the spray solution until after the pouch(es) and its contents have completely dissolved.** Water soluble pouch(es) should completely dissolve in approximately five minutes. Dissolution rate may be slowed by cold water, lack of agitation, or water containing high concentrations of boron or sulfur.

TABLES OF EQUIVALENTS - Orthene Turf, Tree & Ornamental WSP

Amount of Orthene Turf, Tree & Ornamental WSP	1-1/3 lbs.	1 lb.	2/3 lb.	1/3 lb.
Amount Active Contained	1 lb.	3/4 lb.	1/2 lb.	1/4 lb.

Table of Equivalents for 1/3 lb. Pouch

Rate of Orthene Turf, Tree & Ornamental WSP Per 100 Gallons Water	Number of 1/3 lb. Pouch(es) Per 100 Gallons Water
1/3 lb.	1
2/3 lb.	2
1 lb.	3
1-1/3 lbs.	4

Table of Equivalents for 1/3 lb. Pouch

Rate of Orthene Turf, Tree & Ornamental WSP		Treatment Area Per 1/3 lb. Pouches	
Per Acre	Per 1,000 Sq. Ft.	Acres	Sq. Ft.
1-1/3 lbs.	0.5 oz.	0.25	11,000
2-2/3 lbs.	1.0 oz.	0.12	5,400
6-2/3 lbs.	2.5 oz.	0.05	2,200

TABLES OF EQUIVALENTS - Orthene Turf, Tree & Ornamental Spray

Amount of Orthene Turf, Tree & Ornamental Spray	1-1/3 lbs.	1 lb.	2/3 lb.	1/3 lb.	4 oz.	2 oz.
Amount Active Contained	1 lb.	3/4 lb.	1/2 lb.	1/4 lb.	1/5 lb.	1/10 lb.

SMALL VOLUME SPRAY EQUIPMENT

Preparation of Orthene Turf, Tree & Ornamental Spray Mix Using a Small Fluid Ounce Measuring Cup		
Label Recommendation Orthene Turf, Tree & Ornamental Spray in 100 Gals. Water	Equivalent Orthene Turf, Tree & Ornamental Spray in 20 Gals. Water	Equivalent Orthene Turf, Tree & Ornamental Spray in 1 Gal. Water (Tsp./Gal.)
1/3 lb.	1.1 oz.	1/2 tsp.
2/3 lb.	2.1 oz.	1 tsp.
1 lb.	3.2 oz.	1-1/2 tsp.
1 1/3 lbs.	4.3 oz.	2 tsp.

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SPECIALTY USES CONTAINER-GROWN NURSERY STOCK

Plants	Insects	Amount Orthene Turf, Tree & Ornamental Spray Per 100 Gals.	Time of Application	Recommended Application
Container Grown Nursery Stock (Arborvitae Azalea Camellia Rhododendron Roses Viburnum Yew)	Black Vine Weevil Strawberry Root Weevil	1 lb. (16 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 Orthene Turf, Tree & Ornamental Spray per 100 gals. of solution so as to thoroughly drench the root system.
	Ants (Including Imported Fire Ants and Harvester Ants*)	1 lb. (16 oz.)	Apply as needed to control the pest.	

* Not registered in CA for control of Harvester Ants.

SPECIALTY USE NON-CROP AREAS

Crop	Insects	Amount Orthene Turf, Tree & Ornamental Spray Per Acre	Further Use Instructions
Non-Crop Areas NOT FOR USE WITH WATER SOLUBLE PACKAGING	Ants (Including Imported Fire Ants and Harvester Ants*)	Mound Treatment - Dry Method: Evenly distribute 1 to 2 teaspoons over the mound. Drench Method: Mix 1 oz. 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.	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. Do not treat mound more than once per season.

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SPECIALTY USE NON-CROP AREAS

Crop	Insects	Amount Orthene Turf, Tree & Ornamental WSP Per Acre	Further Use Instructions
Non-Crop Areas FOR USE ONLY WITH WATER SOLUBLE PACKAGING	Ants (Including Imported Fire Ants and Harvester Ants*)	Mound Treatment - Drench Method: Mix 1 oz. 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.	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. Do not treat mound more than once per season.

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TREES AND SHRUBS

Plants	Insects	Amount Orthene Turf, Tree & Ornamental Spray Per 100 Gals.	Time of Application	Recommended Application
Trees and Shrubs (Except Flowering Crabapple, see below)	Aphids Bagworms Birch Leafminer Tent Caterpillar* Lace Bugs Leafrollers	1/3 lb. (5.3 oz.)	As the insects begin to appear.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray in 100 gals. water with a hydraulic sprayer. The addition of a suitable sticker improves control of Gypsy Moth larvae. * Mist blower application: Adjust rates to 1-1/3 lbs. per 100 gals. water for Gypsy Moth control and 1.0 lb. per 100 gals. water for Tent Caterpillar control. Do not apply to Huckleberry, Balm of Gilead, Cottonwood, Lombardy Poplar and Viburnum suspensum. Nursery crops: Before treating large plantings, spray only a few plants and observe two weeks for phytotoxicity.
	Douglas Fir Tussock Moth Larvae Gypsy Moth Larvae* Webworms	2/3 lb. (10.5 oz.)	As the insects begin to appear.	
	Scale (Crawlers)	2/3 lb. (10.5 oz.)	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 Needle Miner	2/3 lb. (10.5 oz.)	Time of application is important. Consult your Farm Advisor or County Extension Agent.	
	Grasshoppers	2/3 lb. (10.5 oz.)	As the grasshoppers begin to appear.	
	California Oakworm Cankerworms (Spring and Fall)	1/3 to 2/3 lb. (5.3 to 10.5 oz.)	As the insects begin to appear. Use the higher amount when the larger larvae are present.	
	Nantucket Pine Tip Moth Larvae	1 lb. (16 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	1 lb. (16 oz.)	Apply when first feeding damage occurs. Repeat applications, at four week intervals until the first heavy frost, may be necessary for complete foliage protection.	
	Box Elder Bugs Sawflies Budworms Leafhoppers	1 lb. (16 oz.)	As the insects begin to appear.	
	Japanese Beetle	1-1/3 lb. (21.3 oz.)	As the Japanese Beetles begin to appear. Repeat applications, at 2 week intervals, may be necessary.	
Elm Leaf Beetle (larvae)	1-1/3 lb. (21.3 oz.)	As the larvae begin to appear. Orthene will not prevent Elm Leaf Beetle eggs from hatching.		
Douglas Fir (Christmas Trees)	Douglas Fir Needle Midge	2/3 lb. (10.5 oz.) (2/3 lb. per acre)	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 Orthene Turf, Tree & Ornamental Spray in not less than 2 gals. of spray per acre by air or in 100 gals. of spray per acre by ground. (Continued)

This document contains language for Orthene Turf, Tree & Ornamental Spray and WSP

TREES AND SHRUBS (Continued)

Plants	Insects	Amount Orthene Turf, Tree & Ornamental Spray Per 100 Gals.	Time of Application	Recommended Application
Flowering Crabapples	Aphids Tent Caterpillars Leafrollers	1/3 lb. (5.3 oz.)	As the insects begin to appear.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray in 100 gals. water with a hydraulic sprayer. Do not apply more often than 3 times in a growing season at a 4 week interval. Caution: Phytotoxicity has occurred on the following Crabapple varieties: Hopa, Ichonoski, Malus floribunda, Pink Perfection, Red Wine and Snow Cloud.
Crape Myrtle NOT FOR USE WITH WATER SOLUBLE PACKAGING	Aphids	3 to 4 level Tbsp. (0.8 to 1.1 oz.) per 1 Tbsp. of water	As aphids begin to appear.	Make a paint-on slurry by mixing the specified amount of Orthene Turf, Tree & Ornamental Spray with 1 tablespoon 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.

GOLF COURSE AND SOD FARM TURFGRASS

DO NOT ALLOW LIVESTOCK TO GRAZE TREATED AREAS. DO NOT FEED TREATED GRASS TO LIVESTOCK.

Plants	Insects	Amount Orthene Turf, Tree & Ornamental Spray Per 1,000 Sq. Ft.	Time of Application	Recommended Application
Golf Course and Sod Farm Turfgrass	Fall Armyworm Yellow Striped Armyworm Southern Armyworm	1/2 to 1.2 oz. (1-1/3 to 3-1/4 lbs. per acre)	As the insects appear. A repeat application at 2 week intervals may be necessary.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray per 1,000 sq. ft. Use a minimum of 5 gals. water per 1,000 sq. ft. to obtain good coverage. Apply the specified amount of Orthene Turf, Tree & Ornamental Spray per 1,000 sq. ft. Use 1 to 15 gals. water per 1,000 sq. ft. to obtain good coverage.
	Cutworm	1.2 to 2.4 oz. (3-1/4 to 6-2/3 lbs. per acre)		
	Chinch Bugs	1.2 to 2.4 oz. (3-1/4 to 6-2/3 lbs. per acre)	Apply as needed for adult population knockdown (10 to 14 days).	
	Fleas	1.2 to 2.4 oz. (3-1/4 to 6-2/3 lbs. per acre)	Apply as needed for knockdown (7 to 10 days) only of existing adult populations.	
	Sod Webworms (<i>Crambus</i> spp.)	1/2 to 1 oz. (1-1/3 to 2-3/4 lbs. per acre)	As sod webworms begin to appear. Use the higher amount when quick knockdown is needed or with heavy infestations. Repeat application may be necessary. Do not repeat at more than 1 week intervals.	
	Leafhopper	1 oz. (2-3/4 lbs. per acre)	As the leafhoppers begin to appear. A repeat application at 1 week intervals may be necessary.	

(Continued)

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GOLF COURSE AND SOD FARM TURFGRASS (Continued)

DO NOT ALLOW LIVESTOCK TO GRAZE TREATED AREAS. DO NOT FEED TREATED GRASS TO LIVESTOCK.

Plants	Insects	Amount Orthene Turf, Tree & Ornamental Spray Per 1,000 Sq. Ft.	Time of Application	Recommended Application
Golf Course and Sod Farm Turfgrass, Continued	Mole Crickets (Except CA) Spittlebug (Except CA)	1.0 - 1.9 oz. (2.66 - 5.2 lbs. per acre)	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 Orthene Turf, Tree & Ornamental Spray per 1,000 sq. ft. Use 1 to 15 gals. water per 1,000 sq. ft. to obtain good coverage. Apply during late afternoon or early evening hours and after an irrigation. Do not irrigate after application. The use of a lemon fragrance substance in the spray mix may enhance control by acting as a flushing agent and thus provide increased mole cricket contact with the Orthene Turf, Tree & Ornamental Spray. 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 teaspoons per gallon of water for small total mix volumes or 6 fl. oz. per 50 gals. water for large total mix volumes.
	Greenbug (<i>Schizaphis graminum</i>) Grasshoppers	1/2 oz. (1-1/3 lbs. per acre)	Apply when insects or their damage first appear. Repeat as necessary. Application is not be repeated at more than 1 week intervals.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray. Use 4 gals. of water per 1,000 sq. ft. to obtain good coverage. Do not mow turfgrass for at least 24 hours after application.
	Black Turfgrass Ataenius (Except CA)	1.5 to 1.9 oz. (4.1 to 5.2 lbs. per acre)	Apply when insects or their damage first appear.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray per 1,000 sq. ft. Use a minimum of 5 gals. water per 1,000 sq. ft. Irrigate lightly after application (not more than 1/2 inch). Use the higher rate for severe infestations.
Dichondra (Plant Site for Golf Course and Sod Farm Turfgrass)	Cutworm Flea Beetle Southern Armyworm Yellow Striped Armyworm	1.0 to 1.9 oz. (2.7 to 5.2 lbs. per acre)	As the insects appear. Repeat at 2 week intervals as necessary.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray per 1,000 sq. ft. Use a minimum of 15 gals. of water per 1,000 sq. ft. to obtain good coverage.

MOUND TREATMENT OF FIRE ANTS AND HARVESTER ANTS IN TURFGRASS

Plant	Insects	Amount Orthene Turf, Tree & Ornamental Spray	Time of Application	Recommended Application
Turfgrass Residential, Recreational and Commercial Turf NOT FOR USE WITH WATER SOLUBLE PACKAGING	Imported Fire Ants and Harvester Ants*	Mound Treatment - Dry Method: Evenly distribute 1 to 2 teaspoons over the mound. Drench Method: Mix 1 oz. 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.	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 Orthene Turf, Tree & Ornamental Spray as directed. Grass in treated areas may be injured. Do not treat mound more than once per season.

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MOUND TREATMENT OF FIRE ANTS AND HARVESTER ANTS IN TURFGRASS

Plant	Insects	Amount Orthene Turf, Tree & Ornamental WSP	Time of Application	Recommended Application
Turfgrass Residential, Recreational and Commercial Turf FOR USE <u>ONLY</u> WITH WATER SOLUBLE PACKAGING	Imported Fire Ants and Harvester Ants*	Mound Treatment - Drench Method: Mix 1/3 lb. in 26.6 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.	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 Orthene Turf, Tree & Ornamental WSP as directed. Grass in treated areas may be injured. Do not treat mound more than once per season.

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OUTDOOR AND PERIMETER SPRAY

Location	Insects	Amount Orthene Turf, Tree & Ornamental Spray or WSP Per Gallon	Time of Application	Recommended Application
Outdoor and Perimeter Area	Wasps	1.6 oz. (0.10 lbs.) For water soluble packaging: Mix 1/3 lb. in 3.3 gals. of water	Treat early or late in the day, as wasps are generally less active during these times.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray per each gallon of water used. Apply as a spot treatment to the nest, nest entrance and surrounding areas where the wasps alight.
	Ants (Including Imported Fire Ants and Harvester Ants*) Crickets Cockroaches Earwigs Pillbugs	1.6 oz. (0.10 lbs.) For water soluble packaging: Mix 1/3 lb. in 3.3 gals. of water	As the insects appear.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray 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 garbage areas and other areas where these pests congregate.

Note: Not for use on residential turfgrass.

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OUTDOOR FLORAL CROPS AND GROUND COVERS

Plants	Insects	Amount Orthene Turf, Tree & Ornamental Spray Per 100 Gals.	Time of Application	Recommended Application
Chrysanthemums Daisies Dahlias Easter Lily Gladioli Gypsophila Pachysandra Pansy Peony Roses Sedum Statice Strawflower Yarrow Zinnia	Aphids Thrips Lygus	2/3 lb. (10.5 oz.)	As insects begin to appear. Repeat applications may be necessary.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray in 100 gals. 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.
Roses Boston Ivy	Japanese Beetle	1-1/3 lbs. (21.3 oz.)	As the Japanese Beetles begin to appear. Repeat applications at 2 week intervals may be necessary.	

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GREENHOUSE FLORAL AND FOLIAGE PLANT CROPS

Plants	Insects	Amount Orthene Turf, Tree & Ornamental Spray Per 100 Gals.	Time of Application	Recommended Application
Roses	Leafrollers	2/3 to 1 lb. (10.5 to 16 oz.)	As leafrollers begin to appear. Use the higher amount when the large larvae are present.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray in 100 gals. water with a hydraulic sprayer as a full coverage spray.
Foliage Plants Anthuriums Cacti Orchids Poinsettia	Aphids	1/3 lb. (5.3 oz.)	As aphids begin to appear.	Apply the specified amount of Orthene Turf, Tree & Ornamental Spray in 100 gals. water with a hydraulic sprayer as a full coverage spray. The addition of a wetting agent may be required on difficult to wet foliage.
	Mealybugs Thrips Whiteflies	2/3 lb. (10.5 oz.)	As the insects begin to appear. A repeat application, at a 2 week interval, may be necessary for control of mealybugs and whiteflies.	Caution: Phytotoxicity has occurred on the following foliage plants: <i>Blechnum gibbum</i> , <i>Cissus antarctica</i> , <i>Ficus triangularis</i> , <i>Fittonia verschaffeltii</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> .
	Scale (Crawlers)	2/3 lb. (10.5 oz.)	As crawlers begin to appear. Repeat applications, at a 2 week or more interval, may be necessary where there is continuous crawler production.	Before treating large plantings spray only a few plants and observe 2 weeks for varietal phytotoxicity. Application of Orthene Turf, Tree & Ornamental Spray on Poinsettias after bract formation may result in phytotoxicity on certain varieties.
	Sweetpotato Whiteflies (Except CA)	1/3 lb. (5.3 oz.) plus Tame® 2.4 EC Spray 10 2/3 fl. oz. (0.2 lb. ai)	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 Tame alone at 16 fl. oz./100 gals. See Tame label for instructions.	For sweetpotato whitefly control, apply the specified amount of Orthene Turf, Tree & Ornamental Spray plus Tame 2.4 EC Spray as a tank mix at a volume necessary to obtain good coverage. Follow the Tame label for specific instructions on the alternation of Tame plus Orthene and Tame alone and the rotation instructions to avoid potential resistance.
Roses Carnations Chrysanthemums	Aphids Thrips	2/3 lb. (10.5 oz.)	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 Orthene Turf, Tree & Ornamental Spray in 100 gals. water with a hydraulic sprayer as a full coverage spray. Do not apply more often than once every 28 days to Carnations and Chrysanthemums. 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 phytotoxicity. Do not apply to Chrysanthemums and Roses with open flowers.

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.

NOTE: This product is sold by weight and package is full when packed, but due to fluffy nature this material is inclined to settle.

STORAGE AND DISPOSAL

PROHIBITIONS

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

Open dumping is prohibited.

STORAGE

- Keep pesticide in original container.
- Do not put concentrate or dilute into food or drink containers.
- Store in cool, dry place.
- Protect from excessive heat.
- Do not contaminate food or foodstuffs.
- Do not store or transport near feed or food.
- For help with any spill, leak, fire or exposure involving this material, call day or night 1-800-892-0099.

This document contains language for Orthene Turf, Tree & Ornamental Spray and WSP

PESTICIDE DISPOSAL

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

CONTAINER DISPOSAL

Completely empty canister into application equipment. Do not reuse container. Dispose of empty canister in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

OR

CONTAINER DISPOSAL FOR WATER SOLUBLE PACKAGING ONLY: Do not reuse the outer bag. Dispose of outer bag in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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Manufactured for:

Valent U.S.A. Corporation

P.O. Box 8025

Walnut Creek, CA 94596-8025

Made in U.S.A.

Forms 20011214, 1083-H, 113-X

EPA Reg. No. 59639-26

Information contained in this booklet is accurate at the time of printing. Since product testing is a continuous process, please read and follow the directions and precautionary statements.

Always check with your state to verify state registration status.

**For state registration and/or supplemental labels, please call or visit us online.
You may also find them at www.greenbook.net (C&P Press) and www.cdms.net.**

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www.valentpro.com**



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