

66330-223

5/4/2011

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

W. A. Hawkins
Arysta LifeScience North America, LLC
15401 Western Parkway, Suite 150
Cary, NC 27513

MAY 04 2011

Dear Dr. Hawkins:

Subject: Response to the Dimethoate Reregistration Eligibility Decision
EPA Reg. No. 66330-223
Submission dated December 31, 2008

The proposed labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable under FIFRA § 3(c)(5) provided that you submit two copies of your final printed label before you release the product for shipment. Products shipped after 12 months from the date of this amendment or the next printing of the label whichever occurs first, must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e).

The basic Confidential Statement of Formula (CSF) dated 11/05/10 is acceptable. All other CSF's including Alternates have been superseded by this new basic. This has been added to your record.

Your product has met and complied with the risk mitigation provisions of the Dimethoate RED and therefore your product is reregistered pursuant to FIFRA § 4(g)(2)(C). But note, EPA is currently reassessing the cumulative impacts of organophosphates and that review may impact your product once complete.

A stamped copy of the labeling is enclosed for your records. If you have any questions, please contact Jennifer Urbanski at 703-347-0156 or urbanski.jennifer@epa.gov.

Regards,

Venus Eagle, PM 01
Insecticide-Rodenticide Branch
Registration Division (7505P)

Enclosure

20832

Restricted Use Pesticide
Due to eye irritation.
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

ACCEPTED
MAY 04 2011

GROUP	1B	INSECTICIDE
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Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under:

DIMETHOATE 4E

**SYSTEMIC INSECTICIDE
ORGANOPHOSPHATE**

EPA Reg. No: 66330-223

ACTIVE INGREDIENT:

Dimethoate (0,0-dimethyl S-(N-methyl-carbamoylmethyl) phosphorodithioate) 43.5%

OTHER INGREDIENTS:

56.5%

TOTAL.....100.0%

1 gallon contains 4 pounds of dimethoate

**KEEP OUT OF REACH OF CHILDREN
DANGER/PELIGRO**

See Additional Precautionary Statements on Label

Si usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID Organophosphate	
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none"> • 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 do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none"> • 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.
HOT LINE	
EMERGENCY TELEPHONE NUMBERS: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact: <ul style="list-style-type: none"> • (800) 424-9300 CHEMTREC (transportation and spills) • (866) 303-6952 PROSAR (human health) • 	
This product contains an organophosphate that inhibits cholinesterase. Probal mucosal damage may contraindicate the use of gastric lavage. Causes irreversible eye damage. NOTE TO PHYSICIAN: This product may cause cholinesterase inhibition. Antidote is atropine.	

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AD 090105

EPA Est. No.

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Manufactured For:
ARYSTA LIFESCIENCE NORTH AMERICA, LLC
15401 Weston Parkway, Suite 150
Cary, NC 27513

Net Contents: _____

PRECAUTIONARY STATEMENTS
Hazards To Humans And Domestic Animals

DANGER

Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray mist or vapor.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of barrier laminate or butyl rubber. If you want more options, follow the instructions for category B on an EPA chemical resistance category selection chart.

Mixers, loaders, applicators, flaggers, and other handlers must wear:

1. Long-sleeved shirt and long pants
2. Shoe plus socks,
3. Chemical-resistant gloves
4. A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N,R,P, or HE filter
5. Chemical-resistant apron when mixing, loading, cleaning up spills, or equipment.

See Engineering Controls for additional requirements and exceptions.

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Engineering Controls:

Mixers and loaders supporting aerial application to alfalfa, cotton, soybeans, corn, safflower, sorghum, and wheat must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. The system must be capable of removing the pesticide from the shipping container and transferring it into mixing tanks and/or application equipment. At any disconnect point, the system must be equipped with a dry disconnect or dry couple shut-off device that is warranted by the manufacturer to minimize drippage to no more than 2 ml per disconnect. In addition, mixers and loaders must:

- Wear the Personal Protective Equipment required on this labeling for mixers/loaders, except no respirator is required;
- Wear protective eyewear, if the system operates under pressure; and
- Be provided and have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown, chemical-resistant footwear and a respirator of the type specified in the PPE section of this labeling.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection

Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Pilots need not wear the PPE required in this labeling for applicators, but must wear at least a long-sleeved shirt, long pants, shoes, and socks.

When handlers use closed systems, or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d) (4-5), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

Do not 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 disposing of equipment washwaters or rinsate.

Dimethoate is known to leach through soil into ground water under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several days after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

A vegetative filter strip constructed and maintained in accordance with the 2000 Natural Resources Conservation Service publication "Conservation Buffers to Reduce Pesticide Losses" (<http://www.nrcs.usda.gov/feature/buffers/>) will significantly reduce the potential for contamination of water from rainfall-runoff.

This product is toxic to wildlife and aquatic invertebrates. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. 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.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or flame. This product is a mild oxidizing agent.

DIRECTIONS FOR USE

Restricted Use Pesticide.

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

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

This product is for use in a commercial setting only. Use in residential settings is prohibited.

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.

RESISTANCE MANAGEMENT

DIMETHOATE 4E contains a Group 1B insecticide. Insect/mite biotypes with acquired resistance to Group 1B may eventually dominate the insect/mite population if Group 1B insecticides/acaricides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by DIMETHOATE 4E or other Group 1B.

To delay insecticide (or acaricide) resistance consider:

- Avoiding the consecutive use of DIMETHOATE 4E or other Group 1B insecticides/acaricides that have a similar target site of action, on the same insect/mite species. Using tank-mixtures or premixes with insecticides/acaricides from a different target site of action Group as long as the involved products are all registered for the same use and have different sites of action.
- Basing insecticide/acaricide use on a comprehensive IPM program.
- Monitoring treated insect/mite populations for loss of field efficacy.

Contacting your local extension specialist, certified crop advisors, and/or manufacturer for insecticide/acaricide resistance management and/or IPM recommendations for the specific site and resistant pest problems.

Requirements for Reducing Spray Drift

Do not apply under circumstances where possible drift to unprotected persons or to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use, or consumption can occur.

1. Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may 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. For groundboom and aerial applications, use medium or coarser spray nozzles according to ASAE 572 definition for standard nozzles or a volume mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles.
2. Make a aerial or ground applications when the wind velocity favors on-target product deposition. Apply only when the wind speed is less than or equal to 10 mph. For all non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.
3. Do not make aerial or ground applications into areas of temperature inversions. Inversions

are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. Where permissible by local regulations, the applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

4. Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures.
5. All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.
6. For groundboom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy.
7. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.
8. For aerial applications, release spray at the lowest height consistent with efficacy and flight safety. If the application includes an aquatic buffer zone, do not release spray at height greater than 10 feet above the ground or crop canopy.
9. For aerial applications, mount the spray boom 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 the wingspan of 90% of rotor blade diameter. Use upwind swath displacement.

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), notification to workers, and restricted-entry intervals. 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). The REI for a specific crop is listed in the directions for use associated with that crop.

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:

1. Coveralls worn over long-sleeve shirt and long pants
2. Chemical-resistant gloves made of any waterproof material
3. Chemical-resistant footwear plus socks
4. Chemical-resistant headgear (if overhead exposure)

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

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DIRECTIONS FOR APPLICATION

ORNAMENTAL PLANTS GROWN IN NURSERIES ONLY

Do not use on ornamental plants grown in greenhouses, Christmas tree and conifer plantations, landscapes, interiorscapes and residential, public, recreational, commercial, industrial and institutional establishments.

This product is intended for use by the commercial grower or commercial applicator in conventional hydraulic sprayers, ground applicators, airplane sprayers, or by chemigation. Do not apply when weather conditions favor drift of spray from areas treated. Repeat applications as necessary unless otherwise specified. Consult your state experiment station or state extension service for proper timing of applications.

Dimethoate 4E has systemic and contact activity against a broad spectrum of piercing, sucking and chewing insects; however, it may not control certain organophosphate resistant species.

For proper mixing, spray tank should be at least three-quarters filled with water before adding Dimethoate 4E. Mechanical agitation or re-circulation through pump bypass to tank is usually sufficient for maintaining a good dispersion.

Apply spray tank mixtures of Dimethoate 4E with alkaline insecticides and fungicides promptly. Consult the tank-mix product label for appropriate application rates and use instructions. Follow the label directions for the most restrictive of label precautions and limitations. Do not tank-mix this product with any product which prohibits such mixing. Tank mixtures are permitted only in those states where the tank mix partner is registered. Add other products in the following order: water-soluble bags, wettable powders, dry flowables, liquid flowables, EC's, and soluble materials such as fertilizers. If tank mixing with soluble fertilizers containing nitrogen or boron, allow water-soluble bags to dissolve first.

AERIAL APPLICATION: Apply at least one gallon of finished spray per acre. Apply at least 5 gallons finished spray per acre in California. Maximum application rates are listed in the crop specific directions for use.

USE AUTOMATIC FLAGGING DEVICES WHENEVER FEASIBLE. IF HUMAN FLAGGERS ARE EMPLOYED THEY MUST WEAR THE PROTECTIVE CLOTHING AND RESPIRATOR SPECIFIED ON THIS LABEL.

GROUND APPLICATION: Use water for dilution and apply at least 5 gallons of finished spray per acre. Maximum application rates are listed in the crop specific directions for use.

High Pressure Handwand Equipment:

When applications are made by high pressure handwand equipment, the maximum application rate for all crops and use-patterns is 0.0025 pounds active ingredient per gallon.

Do not use on crops grown in greenhouses.

When insect pest population is high, use the higher label rate.

NOTE: Pre-Harvest Interval days indicated in () after each use.

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CHEMIGATION INSTRUCTIONS

Apply this product only through one or more of the following types of systems: sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; flood (basin); furrow; border; or drip (trickle) irrigation system(s). Do not apply this product through any other type of irrigation system.

Crop injury or lack of effectiveness can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide 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, must shut the system down and make necessary adjustments should the need arise.

A. Center Pivot, Traveler, Big Gun, Motorized Lateral Move, End Tow, and Side (Wheel) Roll Irrigation Equipment: Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank or injection equipment with water. Operate system for one complete circle for center pivot or one complete run for the other recommended equipment, measuring time required, amount of water injected, and acreage contained in circle or run. Mix recommended amount of product for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run, but continue to operate irrigation system until the product has been cleared from last sprinkler head. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur.

B. Solid Set and Hand Move Irrigation Equipment: Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of product for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that the product will remain in suspension during the injection cycle. This product can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until pesticide is cleared from last sprinkler head.

C. Flood (Basin), Furrow and Border Chemigation (Soil Drench Uses): Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank or injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of product for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that the product will remain in suspension during the injection cycle. This product can be injected at the beginning or end of the irrigation cycle or as a separate application. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops. Systems utilizing a pressurized water and pesticide injection system must meet the requirements listed in the section titled "Safety Devices" below.

D. Drip (Trickle) Chemigation (Soil Drench Uses): Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank or injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of product for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that the product will remain in suspension during the injection cycle. This product can be injected at the beginning or end of the irrigation cycle or as a separate application. Systems must meet the requirements listed in the section titled "Safety Devices" below.

SAFETY DEVICES

(1) The systems designated above 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. (2) All pesticide injection pipelines must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. (3) 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. (4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. (5) 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. (6) 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. (7) Do not apply when wind speed favors drift beyond the area intended for treatment.

SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or, in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

FRUIT TREES

CHERRY , Preharvest (Idaho, Oregon, Utah, Washington, and Montana only)		
PEST	USE RATE	
	Dilute Application*	Concentrate Application*
Aphids, Cherry Fruit Flies, Mites	½ to 1 pt/100 gal water. Apply as a thorough distribution coverage spray.	2 ¾ pt/A
<p>RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not apply when trees or substantial numbers of weeds in the treatment area are in bloom. • Do not graze livestock in treated orchards. • Only a single application may be made. • *Maximum application rate 1.33 lb ai/A (2 ¾ pt (44 oz) of formulation) • *Maximum total rate per year: 1.33 lb ai/A. • Apply a minimum spray volume of 50 gal/A. • Make a single application within 7 days of adult fly emergence in the area. This single application should be made in late May or early June when the fruit are small in size. • Interval between last application and harvest is 28 days. • The REI is 10 days; however, the REI is increased to 14 days in outdoor areas where the average annual rainfall is less than 25 inches per year. <p>Pre-Harvest Interval is 21 days.</p> <p>PRECAUTIONS Concentrate sprays should be used with caution to avoid fruit marking and injury on sensitive varieties (such as Rainier species).</p>		

CHERRY , Postharvest (Idaho, Oregon, Utah, Washington, and Montana only)

PEST	USE RATE	
	Dilute Application*	Concentrate Application*
Aphids, Cherry Fruit Flies, Mites	½ to 1 pt/100 gal water. Apply as a thorough distribution coverage spray.	2 ¾ pt/A

RESTRICTIONS

- Do not apply when trees or substantial numbers of weeds in the treatment area are in bloom.
- Do not graze livestock in treated orchards.
- Only a single application may be made.
- *Maximum application rate 1.33 lb ai/A (2 ¾ pt (44 oz) of formulation).
- *Maximum total rate per year: 1.33 lb ai/A.
- Apply a minimum spray volume of 50 gal/A.
- Make a single application a minimum of 7 days after final harvest or apply in cases where a decision is made not to harvest due to poor fruit quality, a light crop, or unfavorable market conditions.
- The REI is 10 days; however, the REI is increased to 14 days in outdoor areas where the average annual rainfall is less than 25 inches per year.

Pre-Harvest Interval is 21 days.

CITRUS, including Grapefruit, Kumquat, Lemon, Lime, Orange, Pummelo, Tangelo, Tangerine		
PEST	USE RATE	
	Dilute Application	Concentrate Application
Aphids, Mites (except rust mites), Thrips, Whiteflies	½ to 1 pt/100 gal water. Apply as a thorough distribution coverage spray.	1 qt/A in sufficient water to provide full coverage of foliage
RESTRICTIONS <ul style="list-style-type: none"> Do not apply to citrus in Florida. Aerial application to citrus is prohibited. Maximum application rate 1lb ai/A (1 qt (32 oz) of formulation). Maximum total rate per year: 1lb ai/A. The REI is 10 days; however, the REI is increased to 14 days in outdoor areas where the average annual rainfall is less than 25 inches per year. Pre-Harvest Interval is 15 days.		
PRECAUTIONS <ul style="list-style-type: none"> Ground Equipment: for Dilute application use 100 gal of water. Apply as a thorough distribution coverage spray. For concentrate (mist) application, apply 1 qt/A in sufficient water to provide full coverage of foliage. Use higher rate if pest pressure is heavy or if orchard foliage is dense. 		

CITRUS, including Grapefruit, Kumquat, Lemon, Lime, Orange, Pummelo, Tangelo, Tangerine		
PEST	USE RATE	
	Dilute Application	Concentrate Application
Scales (except black or snow)	½ to 1 1/2 pt/100 gal water. Apply as a thorough distribution coverage spray.	1 qt/A in sufficient water to provide full coverage of foliage
RESTRICTIONS <ul style="list-style-type: none"> Do not apply when trees or substantial numbers of weeds in the orchard are in bloom. Do not use on citrus seedlings. Make no more than 2 applications to mature fruit. Do not graze livestock in treated orchards. The REI is 10 days; however, the REI is increased to 14 days in outdoor areas where the average annual rainfall is less than 25 inches per year. PRECAUTIONS <ul style="list-style-type: none"> Ground Equipment for Dilute application use 100 gal of water. Apply as a thorough distribution 		

coverage spray. For concentrate (mist) application, apply 1 qt/A in sufficient water to provide full coverage of foliage.

Pre-Harvest Interval is 45 days when using high rate for scale control. Otherwise the Pre-Harvest Interval is 15 days.

- Use higher rate if pest pressure is heavy or if orchard foliage is dense.

CITRUS including Grapefruit, Kumquat, Lemon, Lime, Orange, Pummelo, Tangelo, Tangerine: (California & Arizona: Nonbearing and nursery stock)

PEST	USE RATE	
	Foliar Spray	Soil Drench (trees 1 to 3 years old)
Aphids, Thrips	1 pt/100 gals water. Apply as a thorough distribution coverage spray.	1 qt/A

RESTRICTIONS

- Foliar Spray Maximum application rate: 1 lb ai/A (32 oz of formulation). Maximum total rate per year: 1 lb ai/A. May be applied in the year trees begin to bear fruit
- Soil Drench: Apply in the furrow or basin around the base of the tree. Do not apply to trees that will bear fruit within one year.
- The REI is 10 days; however, the REI is increased to 14 days in outdoor areas where the average annual rainfall is less than 25 inches per year.

PRECAUTIONS

- Apply when insect injury to new growth appears.

CITRUS, including Grapefruit, Kumquat, Lemon, Lime, Orange, Pummelo, Tangerine, Tangelo (Arizona Only)	
PEST	USE RATE
	Ground
Thrips	1 qt(1lb ai) in not less than 20 gal water/A
<p>RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not enter treated groves within 4 days of last application. • The REI is 10 days; however, the REI is increased to 14 days in outdoor areas where the average annual rainfall is less than 25 inches per year. • Maximum application rate is 1 lb ai/A. • Maximum total rate per year: 1lb ai/A. <p>Preharvest Interval is 15 days.</p> <p>PRECAUTIONS</p> <ul style="list-style-type: none"> • Use specified dosage in the amount of water necessary to achieve adequate coverage of foliage. The type of equipment used will determine the concentration required. 	

Use of dimethoate is prohibited during any time of day in any given orchard from when that orchard has 10% open blooms until such time that there has been at least 75% petal fall on the north side of the trees. Applications of dimethoate shall be limited to that period of time between one (1) hour after sunset to three (3) hours before sunrise when only any one of the conditions prevail: 1) before the onset of petal fall, the orchard to be treated has open blooms present and those open blooms represent less than 10% of the total anticipated blooms in the orchard. 2) After the initiation of petal fall there are less than 25% of open blooms remaining in the orchard to be treated. 3) It is between the calendar dates of February 15 and May 1st.

All applications of dimethoate on citrus must be documented on Form 1080 written either by a pest control advisor, farm owner or farm manager as is normally required for custom applications of pesticides, except that private applicators may omit the "Pesticide Application Report" section. The description of the status of bloom of the orchard to be treated as it was at the time of application shall be indicated in the section for "Label Restrictions/Special Instruction". Both private and custom applicators shall mail the Form to the Agriculture Department's Phoenix office the original of each completed Form 1080 done in accordance with this label. Each form 1080 shall be postmarked not later than Monday following the week in which the application was made, except when holidays intervene.

Pear		
PEST	USE RATE	
	Dilute Application	Concentrate (mist) Application
Aphids, leafhoppers, pear psylla, mites (except rust mites)	½ to 1 pt/100 gal water. Apply as a thorough distribution coverage spray.	1 qt/A in sufficient water to provide full coverage of foliage
RESTRICTIONS <ul style="list-style-type: none"> Do not apply when trees or substantial numbers of weeds in the orchard are in bloom. Do not graze livestock in treated orchards. The REI is 10 days; however, the REI is increased to 14 days in outdoor areas where the average annual rainfall is less than 25 inches per year. Maximum application rate: 1 lb ai/A (32 oz of formulation). Maximum total application rate per year: 1 lb ai/A. <p>Preharvest Interval is 28 days.</p> PRECAUTIONS <ul style="list-style-type: none"> Ground Equipment for Dilute application use 100 gal of water. Apply as a thorough distribution coverage spray. For concentrate (mist) application, apply 1 qt/A in sufficient water to provide full coverage of foliage. Aircraft equipment: 1 qt/A in 5 to 10 gals water. Use higher rate if pest pressure is heavy or if orchard foliage is dense. 		

NUTS

Pecans		
PEST	USE RATE	
	Ground Application	Air Application
Aphids, mites, leafhoppers	11 oz/A	11 oz/A
RESTRICTIONS <ul style="list-style-type: none"> Do not graze livestock in treated groves. Maximum application rate: 0.33 lb ai/A (11 oz of formulation). Maximum total rate per year: 0.33 lb ai/A. Ground Equipment 11 oz/A. Aircraft equipment: 11 oz/A in a minimum of 5 gals of finished spray. The REI is 48 hours. <p>Preharvest Interval is 21 days.</p>		

VEGETABLE CROPS (FOR COMMERCIAL USE ONLY)

Asparagus (EXCEPT ARIZONA AND CALIFORNIA)
PEST
Aphids, Asparagus beetles
RESTRICTIONS
<ul style="list-style-type: none"> • Application rate 1 pt/A • Maximum single application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per season: 1.0 lb ai/A. • The REI is 48 hours.
Preharvest Interval is 180 days.

Beans (Green, Lima, Snap, Dry and excluding cowpeas)
PEST
Aphids, Grasshoppers, Leafhoppers, Leaf Miners, Lygus Bugs, Mites, Bean Leaf Beetle, Mexican Bean Beetle
RESTRICTIONS
<ul style="list-style-type: none"> • Do not feed treated vines. • This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom. • The REI is 48 hours. • Application rate ½ to 1 pt/A. • Maximum single application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per season: 1.0 lb ai/A.
Preharvest Interval is 2 days.

Broccoli, Cauliflower
PEST
Aphids
RESTRICTIONS <ul style="list-style-type: none">• Application rate ½ to 1 pt/A• Maximum single application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation).• Maximum total rate per year: 1.5 lb ai/A.• 7 day retreatment interval.• The REI is 48 hours; however, the REI is increased to 72 hours in outdoor areas where the average annual rainfall is less than 25 inches. <p>Preharvest Interval is 7 days.</p>

Brussels sprouts (For use in California Only)
PEST
Aphids
RESTRICTIONS <ul style="list-style-type: none">• Do not feed or graze livestock in treated fields.• Do not apply by air.• Do not exceed three applications per growing season.• Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation).• Maximum total rate per year: 1.5 lb ai/A.• 7 day retreatment interval.• The REI is 48 hours; however, the REI is increased to 72 hours in outdoor areas where the average annual rainfall is less than 25 inches. <p>Preharvest Interval is 10 days.</p> <p>PRECAUTIONS</p> <ul style="list-style-type: none">• Application rate 1 pt/A in a minimum of 100 gal of water using ground equipment.• Apply when insects first appear.

Celery
PEST
Leaf Miners, Carmine Mite, Two-Spotted Spider Mite
RESTRICTIONS <ul style="list-style-type: none"> • Application rate 1 pt/A. • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per year: 1.5 lb ai/A. • 7 day retreatment interval. • The REI is 48 hours. Preharvest Interval is 7 days.

Garbanzo beans (Chickpeas)
PEST
Aphids, Grasshoppers, Leafhoppers, Leaf Miners, Lygus Bugs, Mites
RESTRICTIONS <ul style="list-style-type: none"> • Do not feed treated vines. • This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom. • Maximum application rate: 0.5 lb ai/A (1pt (16 oz) of formulation). • Maximum total rate per year: 1.0 lb ai/A. • The REI is 48 hours. • Application rate 0.5 to 1 pt/A. Preharvest Interval is 2 days.

LEAF LETTUCE, SWISS CHARD, ENDIVE (ESCAROLE)
PEST
Aphids, leafhoppers, leaf miners
RESTRICTIONS <ul style="list-style-type: none"> • Application rate 1/2 pt /A • Maximum application rate: 0.25 lb ai/A (8 oz of formulation) Maximum total rate per year: 0.75 lb ai/A. • The minimum retreatment interval is 7 days. • The REI is 48 hours. Preharvest Interval is 14 days.

KALE
PEST
Aphids, leafhoppers, leaf miners
RESTRICTIONS <ul style="list-style-type: none"> • Application rate 1/2 pt /A • Maximum application rate: 0.25 lb ai/A (8 oz of formulation) Maximum total rate per year: 0.5 lb ai/A. • The minimum retreatment interval is 15 days. • The REI is 48 hours. Preharvest Interval is 14 days.

TURNIP (GREENS AND ROOTS)
PEST
Aphids, leafhoppers, leaf miners
RESTRICTIONS <ul style="list-style-type: none"> • Application rate 1/2 pt /A • Maximum application rate: 0.25 lb ai/A (8 oz of formulation) Maximum total rate per year: 1.75 lb ai/A. • The minimum retreatment interval is 3 days. • The REI is 48 hours. Preharvest Interval is 14 days.

Mustard Greens
PEST
Aphids, leafhoppers, leaf miners
RESTRICTIONS <ul style="list-style-type: none"> • Application rate 1/2 pt /A • Maximum application rate: 0.25 lb ai/A (8 oz of formulation) Maximum total rate per year: 0.5 lb ai/A. • The minimum retreatment interval is 9 days. • The REI is 48 hours. Preharvest Interval is 14 days.

MELON (EXCEPT WATERMELON)
PEST
Aphids, grasshoppers, leafhoppers, leaf miners, thrips
RESTRICTIONS <ul style="list-style-type: none"> • Application rate 1 pt/A. • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation) Maximum total rate per year: 1 lb ai/A. • The REI is 48 hours. Preharvest Interval is 3 days.

WATERMELON
PEST
Aphids, leaf miners, leafhoppers
RESTRICTIONS <ul style="list-style-type: none"> • Application rate 1/2 to 1 pt /A • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation) Maximum total rate per year: 1 lb ai/A. • 7 day reapplication interval. • The REI is 48 hours. Preharvest Interval is 3 days.

PEAS (NOT FOR USE ON FIELD PEAS)
PEST
Aphids
RESTRICTIONS <ul style="list-style-type: none"> • Application rate: 0.16 lb ai/A (5 oz of formulation). • Maximum total rate per year: 0.16 lb ai/A. • The REI is 48 hours. • Do not make more than one application per season. • Do not feed or graze forage or hay within 21 days after last application when stationary viner is used. Do not feed or graze when a mobile viner is used. • This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom. Note: There are SLN registrations for succulent peas for which the total seasonal rate is not to exceed 0.5 lb ai/A. Preharvest Interval is 2 days.

LENTILS
PEST
Aphids, Lygus bugs
Application rate for Aphids 1/2 to 1 pt /A, Application rate for Lygus bugs 1 pt/A.
RESTRICTIONS
<ul style="list-style-type: none"> • Do not make more than 2 application per season. • Do not feed or graze treated plants. • This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom. • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per year: 1 lb ai/A. • The REI is 48 hours.
Preharvest Interval is 14 days.

PEPPERS
PEST
Aphids, leaf miners, maggots
RESTRICTIONS
<ul style="list-style-type: none"> • Application rate 11 oz/A. • Maximum application rate: 0.33 lb ai/A (11 oz of formulation). • Maximum total rate per year: 1.65 lb ai/A. • 7 day reapplication interval. • The REI is 48 hours.
Preharvest Interval is 2 days.

POTATOES
PEST
Aphids, grasshoppers, leaf miners, leafhoppers
RESTRICTIONS
<ul style="list-style-type: none"> • Application rate 1/2 to 1 pt/A • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per year: 1 lb ai/A. • 7 day reapplication interval. • The REI is 48 hours.
Preharvest Interval is 2 days.

TOMATOES
PEST
Aphids, leaf miners, leafhoppers
RESTRICTIONS <ul style="list-style-type: none"> • Application rate 1/2 to 1 pt/A. • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per year: 1 lb ai/A. • 6 day reapplication interval. • The REI is 48 hours. <p>Where cabbage worms and cabbage loopers are a problem, the above rates of Dimethoate 4E are compatible with Endosulfan or Malathion. Use in accordance with the manufacturers' directions for control of these insects.</p> <p>Preharvest Interval is 7 days.</p>

FIELD CROPS

ALFALFA
PEST
Aphids, grasshoppers, leafhoppers, Lygus bugs, plant bugs, reduction of alfalfa weevil larvae
<ul style="list-style-type: none"> • Application rate for Aphids 1/2 to 1 pt /A, Application rate for Lygus bugs 1 pt/A. RESTRICTIONS <ul style="list-style-type: none"> • Do not apply within 10 days of pasturing. • Make only one application per cutting. Effective only on cutting to which applied. • This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom. • Maximum single application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per crop cycle or cutting: 0.5 lb ai/A. • The REI is 48 hours. <p>Preharvest Interval is 10 days.</p>

FIELD CORN
PEST
Banks grass mites (excluding Trans-Pecos area of Texas), aphids, bean beetle, corn rootworm adult, mites (including two-spotted spider mite), thrips, fleahoppers
<ul style="list-style-type: none"> • Application rate 2/3 to 1 pt /A, Application rate for Grasshoppers 1 pt/A. • Ground Application: Apply above rate in 20 to 40 gal of water per acre. • Aerial Application: Apply above rate in 1 or more gal of water per acre. • Maximum single application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per year: 0.5 lb ai/A. • The REI is 48 hours. <p>Preharvest Interval is 14 days.</p>

COTTON

PEST
Aphids, mites, thrips, fleahoppers, plant bugs, Lygus bugs
<ul style="list-style-type: none"> • Application rate 1/4 to 1/2 pt /A, Application rate for Lygus bugs 1/2 pt/A.
RESTRICTIONS
<ul style="list-style-type: none"> • Maximum single application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per season: 1 lb ai/A. • The REI is 48 hours. • 14 day retreatment interval. • Do not feed treated forage or graze livestock on treated fields. • Make no more than 4 applications per season at the higher 1/2 pt (8 oz) rate.
PRECAUTIONS
<ul style="list-style-type: none"> • Apply at least one quart of finished spray/acre. • Repeat applications should not be made at intervals closer than 14 days. • Pre-Harvest Interval is 40 days if once refined vegetable oil is used for dilution.
Preharvest Interval is 14 days.

COTTON (GROWN IN CALIFORNIA AND ARIZONA)
PEST
Lygus bugs, leafhoppers, black fleahoppers, thrips, plant bugs
<ul style="list-style-type: none"> • Application rate 1/2 to 1 pt /A, Application rate for Grasshoppers 1 pt/A.
RESTRICTIONS
<ul style="list-style-type: none"> • Do not feed or graze livestock on treated fields. • Make only 2 applications per season at the higher rate. • Repeat applications should not be made at intervals closer than 14 days. • Maximum single application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per season: 1 lb ai/A. • The REI is 48 hours.
Preharvest Interval is 14 days.

SAFFLOWER (GROWN IN CALIFORNIA AND ARIZONA)
PEST
Aphids, leafhoppers, Lygus bugs, thrips, plant bugs
<ul style="list-style-type: none"> • Application rate 1/2 to 1 pt /A.
RESTRICTIONS
<ul style="list-style-type: none"> • Make only 2 applications per season at the lower rate. • Repeat applications should not be made at intervals closer than 14 days. • Maximum single application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per crop cycle or cutting: 0.5 lb ai/A. • The REI is 48 hours.
Preharvest Interval is 14 days.

SORGHUM (MILO)	
PEST	APPLICATION RATE
Aphids, mites (including spider mites)	1/2 to 1 pt/A
Banks grass mites (excluding Trans-Pecos area of Texas)	1 pt/A
Grasshoppers	1 pt/A
Sorghum midge	1/4 to 1/2 pt/A
Aerial application: Apply above rates in 1 or more gal of water per acre.	
RESTRICTIONS	
<ul style="list-style-type: none"> • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation) 7 day reapplication interval. • Maximum total application rate per year: 1 lb ai/A. • Do not feed or graze within 28 days of last application. • Make no more than 2 applications at the higher rate per season. • Do not apply after heading. • The REI is 48 hours. 	
Preharvest Interval is 28 days.	

SOYBEANS	
PEST	APPLICATION RATE
Mexican bean beetle, spider mites, bean leaf beetle, leafhoppers, alfalfa loopers, three cornered alfalfa hopper	1 pt/A
Grasshoppers	1 pt/A
Aphids	1 pt/A
Ground application: Apply above rate in 25 to 40 gal of water per acre.	
Aerial application: Apply above rates in 1 or more gal of water per acre.	
RESTRICTIONS	
<ul style="list-style-type: none"> • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation) 7 day reapplication interval. • Maximum total application rate per year: 1 lb ai/A. • Do not feed or graze within 5 days of last application. • The REI is 48 hours. 	
Preharvest Interval is 21 days.	

WHEAT	
PEST	APPLICATION RATE
Aphids (greenbugs), Wheat midge	1/2 to 3/4 pt/A
Brown wheat mite	1/3 to 1/2 pt/A
Grasshoppers	3/4 pt/A
RESTRICTIONS	
<ul style="list-style-type: none"> • Maximum single application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per crop cycle or cutting: 0.5 lb ai/A. • Do not apply within 14 days of grazing immature plant. • Make no more than 2 applications per season at the 1/2 pt rate. • The REI is 48 hours. 	
Preharvest Interval is 35 days.	
NOTE: Pre-Harvest Interval for California is 60 days.	

SEED CROPS

ALFALFA	
PEST	APPLICATION RATE
Aphids, leafhoppers, lygus bugs, grasshoppers, reduction of alfalfa weevil larvae	1/2 to 1 pt/A
RESTRICTIONS <ul style="list-style-type: none"> • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per crop cycle or cutting: 0.5 lb ai/A. • Do not apply if the crop or weeds in the treatment area are in bloom. • Do not feed or graze livestock in treated crops, hay, threshings or stubble within 10 days of application. • The REI is 48 hours. Preharvest Interval is 10 days.	

GRASSES GROWN FOR SEED (Idaho, Oregon and Washington only)	
PEST	APPLICATION RATE
Winter Grain Mites, Aphids, thrips, Plant Bugs	1/2 to 2/3 pt/A
May be applied through ground or aerial application equipment. Apply in a minimum of 2 gallons of water per acre.	
RESTRICTIONS <ul style="list-style-type: none"> • Maximum application rate: 0.5 lb ai/A (1 pt (16 oz) of formulation). • Maximum total rate per year: 1 lb ai/A. • There is a 90 day retreatment interval. • Do not graze or use seed or seed screenings for feed purposes. • The REI is 48 hours. Preharvest Interval is 14 days.	

ATTENTION: DO NOT USE ON SEED ONIONS, SEED CARROTS, OR SEED BERMUDA GRASS.

FORESTRY/ORNAMENTAL TREE USES

When applications are made by high pressure handwand equipment, the maximum application rate for all crops and use patterns is 0.0025 pounds active ingredient per gallon.

COTTONWOOD (POPLAR) (Grown for Pulp)		
PEST	APPLICATION TYPE	APPLICATION RATE
Leaf Beetle	Foliar spray	Use 2/3 to 1 quart of Dimethoate 4E in 10 gallons of water per acre by air, or 2/3 to 1 quart per acre by dripline (see Chemigation section of this label).
RESTRICTIONS <ul style="list-style-type: none"> • Do not apply more than three times per season. • Maximum application rate: 2.0 lb ai/A (64 oz of formulation). • Maximum total rate per year: 6.0 lb ai/A. • 14 day reapplication interval. • The REI is 14 days; however, the REI is increased to 24 days in outdoor areas where the average annual rainfall is less than 25 inches per year. PRECAUTIONS <ul style="list-style-type: none"> • Application may be repeated two more times (total of three applications). • Application should be made after trees leaf out in spring and again 6 to 8 weeks later. 		

SPRUCE TREES and LARCH TREE SEED ORCHARDS		
PEST	APPLICATION TYPE	APPLICATION RATE
Spruce Budworm, Cone Maggot, Cone Midge, Seed Chalcid, Spruce Coneworm, Spruce Seed Moth, Spiral Spruce Cone Maggot, Spruce Cone-Axis Midge	Foliar spray	Apply a 0.5 – 1.0% solution or 10-15 fl oz/A
RESTRICTIONS <ul style="list-style-type: none"> • Maximum application rate: 1.0 lb ai/A (32 oz of formulation). • 14 day reapplication interval. • Maximum total application rate per year: 1.0 lb ai/A/yr. • The REI is 14 days; however, the REI is increased to 24 days in outdoor areas where the average annual rainfall is less than 25 inches per year. • Apply after pollination but before cones become pendent to control cone and seed insects. • To be applied with pump type sprayer to point of runoff. 		

OUTDOOR ORNAMENTAL PLANTS

(GROUND APPLICATION ONLY)

When applications are made by high pressure handwand equipment, the maximum application rate for all crops and use patterns is 0.0025 pounds active ingredient per gallon.

Dimethoate 4E is generally effective in controlling aphids, thrips, leaf miners, scales, leafhoppers and mites. Apply when pests appear or when damage is first observed. For proper timing of treatments for the control of specific pests on ornamental plants, consult your state agricultural experiment station or state agricultural extension service.

Use only on listed ornamental plants. Do not use on any ornamental stock plants grown as a source of propagation material, such as cuttings, layers, root stocks or scions for grafting or budding. Do not use in spray mixtures containing oil. Do not use on plants growing in greenhouses.

For listed ornamental shade and nursery trees to control aphids and elm leaf beetle, apply as a soil injection at the rate of 1/2 teaspoonful of product per inch of tree circumference measured at approximately 4 1/2 to 5 feet above ground level. Apply using a low-pressure injector to a 4 to 6 inch level below ground surface within the dripline of the tree. Water heavily after application. Make application once per growing season (twice per season for elm leaf beetles; once after trees leaf out, and once 6 to 8 weeks later). Some species such as River Birch, Prunus, Ornamental Cherry, Hawthorne, Japanese Lace Maple and Aspens may show phytotoxic effects at label rates.

DO NOT USE ON BEARING FRUIT TREES.

IMPORTANT: When making soil injections, use a low pressure soil injection device. Always wear a full face shield, rubber gloves, long-sleeved shirt and rubber apron. **DO NOT** inject into soil areas where children or pets may dig or exhume treated soil.

RESTRICTIONS:

Herbaceous Ornamentals:

Maximum application rate: 0.25 lb ai/A.

Maximum total rate per year 0.25 lb ai/A.

The REI is 48 hours.

Woody Ornamentals and Christmas Trees Nurseries:

Maximum application rate 1.0 lb ai/A.

14 day re-application interval.

Maximum total rate per year:3.0 lb ai/A.

When applications are made by high pressure hand wand equipment, the maximum application rate for all crops and use patterns is 0.0025 lb ai/gal.

The REI is 10 days; however, the REI is increased to 14 days in outdoor areas where the average annual rainfall is less than 25 inches per year.

Plant	Pest	Rate
ARBORVITAE	Aphids, Bagworm, Mites	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water)
AZALEAS	Lace Bugs, Leaf Miners, Mites, Tea Scale and White Flies	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water)
BIRCH For leafminers, apply when leaves are	Aphids and Leafminers	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal

Plant	Pest	Rate
expanded and repeat in 6 weeks.		water)
BOXWOOD For leafminers, apply in spring when leaf miner flies first appear or in early summer for control of larvae.	Leafminers, Mealy Bugs and Mites	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water)
CAMELLIAS	Aphids, Camellia Scale and Tea Scale, Mites	Foliar Spray: 1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water) Soil Drench: 1/2 Teaspoon in 1 gal water. For plants up to 6' tall. Apply as a soil drench around the base of plants in early spring.
CARNATIONS	Aphids, Thrips and Mites	Soil Drench: 1/2 Teaspoon per 500 sq ft of bed or bench. Apply in sufficient water for even distribution. Water in thoroughly following application.
CEDAR	Mites	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water).
CHRISTMAS TREES	Balsam Twig Aphid, Blue Aphid, Bagworms, European Pine Shoot Moth, Mites, Nantucket Pine Tip Moth, Zimmerman Pine Moths	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water)
CYPRESS	Bactra Moth Larvae	1/2 Teaspoon per gal of water (5 Teaspoons per 10 gal water). Apply as a drenching spray.
DAYLILLIES	Aphids, Thrips	1/2 Teaspoon per gallon of water (5 Teaspoons. per 10 gal water)
DOUGLAS FIR Make thorough coverage application when cones are closed and pendant. Use hydraulic or backpack sprayer.	Fir Cone Midge	1/2 Teaspoon per gallon of water (5 Teaspoons in 10 gal water)
FRASER FIR Use a high pressure hydraulic sprayer with a handheld spray gun to thoroughly wet trunk and limbs on front and back of tree.	Rosette Bud Mite	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal of water)
EUONYMUS	Aphids and Scales	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gals water)
FICUS NITIDA	Thrips	1/2 Teaspoon per gallon of

Plant	Pest	Rate
		water (5 Teaspoons per 10 gal water)
GARDENIAS	Tea Scale and Whitefly	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water)
GERBERAS	Thrips	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water)
GLADIOLUS	Aphids and Thrips	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water)
HACKBERRY	Hackberry Nipplegall Psyllid, Hackberry Budgall Pysllid	1/2 Teaspoon/gal of water (5 Teaspoons per 10 gal water) Soil Injection: Use a 1:3 dilution (1 part Dimethoate 4E to 3 parts water). Apply using a low-pressure injector. Inject 1 fl oz of dilution 6 inches below ground for each 1/2 inch of trunk diameter. Make insertions within dripline of tree.
RESTRICTIONS: Do not apply to plants that have not been established for at least 3 years. Apply prior to bud break.		
HEMLOCKS	Mites and Scales	1/2 Teaspoon per gal of water (5 Teaspoons per 10 gal water)
HOLLY (English & American, not Burford variety) For leafminers, apply in spring when leafminer flies first appear, or in early summer, for control of larvae in infested leaves.	Leafminers, Mites and Soft Scale	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gals. water).
HONEYSUCKLE	Honeysuckle Aphid	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gals. Water) Soil Injection: Use a 1:3 dilution (1 part Dimethoate 4E to 3 parts water). Apply using a low-pressure injector. Inject 1 1/4 fl oz of dilution 6 inches below ground for each 1/2 inch of trunk diameter.
RESTRICTIONS: Do not apply to plants that have not been established for at least 3 years.		
IRIS For borer control, spray when new leaves are 5 to 6 inches tall.	Aphids, Iris Borer, Thrips	1/2 Teaspoons per gallon of water (5 Teaspoons per 10 gal water)
OAK	Golden Oak Scale	1/2 Teaspoons per gallon of

Plant	Pest	Rate
		water (5 Teaspoons per 10 gal water)
PINES, JUNIPER	Mites, Aphids, Bagworms, European Pine Shoot Moth, Zimmerman Pine Moth, Midges	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gals water).
	Nantucket Pine Tip Moth and Loblolly Pine Sawfly	1/2 Teaspoons per gallon of water (5 Teaspoons per 10 gal water)
PINYON PINE Apply spray to egg masses at the base of the trees and to all rough bark and crotches that can be reached from the ground. Make this bark application when crawlers start to emerge from the eggs. Use hydraulic or backpack sprayer. Do not spray leaves or needles since phytotoxicity may result.	Pinyon Needle Scale	1/2 Teaspoons per gallon of water (5 Teaspoons per 10 gal water)
PINYON PINE For Spindle Gall Midge and Tip Moth apply in mid to late spring. For Pinyon Borer make application in early summer.	Pinyon "Pitch Mass" Borer, Pinyon Spindle Gall Midge, Tip Moth	Soil Injection: Use a 1:3 dilution (1 part Dimethoate 4E to 3 parts water). Apply using a low-pressure injector. Inject 1 1/2 floz of dilution 6 inches below ground surface for each 1 inch of trunk diameter. Make insertions within dripline of tree.
POINSETTIA	Mites, Whitefly, Mealybug and Aphids	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water)
ROSES Foliar spray: Apply 2 sprays 6 weeks apart the first year followed by annual applications soon after the first growth begins in the Spring. Soil Drench: Apply as a soil drench around the base of plants in early spring at the rate of 1/2 Teaspoon per gallon of water per plant.	Leafhoppers, Thrips, Aphids, Mites	1/2 Teaspoon per gallon of water (5 Teaspoons per 10 gal water)
TAXUS (upright or spreading Yew)	Fletcher Scale, Mealybug and Mites	1/2 Teaspoons per gallon of water (5 Teaspoons per 10 gal water)

NOTE: DO NOT USE ON JAPANESE MAPLES OR RED LEAF ORNAMENTAL SPECIES.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not store under conditions which might adversely affect the container or its ability to function properly.

PESTICIDE STORAGE: Do not store below temperature of 32° F., as it may tend to crystallize. Avoid storage above 90° F., as prolonged storage above 90° F. may cause some loss in grade. Store in safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Warranty and Disclaimer Statement

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America, LLC ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. To the extent consistent with applicable law all such risks shall be assumed by the user or buyer.

Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

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