

U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (H7505P)
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

EPA Reg.
Number:

82542-25

Date of Issuance:

Term of Issuance: Conditional

Name of Pesticide Product:

Solera Imidacloprid 2F Insecticide

NOTICE OF PESTICIDE:

x Registration

__ Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Mr. Rufus Bastian Source Dynamics LLC 10039 E. Troon North Drive Scotttsdale, AZ 85262

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A). Once a pesticide is registered, however, it is not regarded as permanently acceptable. Registration does not eliminate the need for continual reassessment of pesticides. If the Agency determines that, at any time, additional data are required to maintain in effect an existing registration, the Agency will require submission of such data under FIFRA section (3)(c)(2)(B).

1. Revise the EPA Registration Number to read, EPA Reg. No. "82542-25"

Signature of Approving Official:
5/
37.
Venus Éagle
Product Manager 01
Insecticide-Rodenticide Branch
Registration Division (7505P)

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- 2. Make the red flagged correction on page 3.
- 3. Within eighteen months of the date of this registration, submit to the Agency the required one year storage stability study (830.6317) for the proposed product under warehouse conditions. The corrosion characteristics study (830.6320) may be carried out concurrently. It is recommended that observations be made at 0, 3, 6, 9, and 12 months.
- 4. Submit two copies of your final printed label before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitute acceptance of these conditions.

A stamped copy of the label is enclosed for your records. If you have any questions regarding this notice contact Dani Daniel at 703 305-5409.

Source Dynamics Imidacloprid 2F Insecticide label 090626

Solera Imidacloprid 2F Insecticide

FOR USE IN PEST MANAGEMENT OF LISTED INSECTS

ACTIVE INGREDIENT:	
Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	21.4%
INERT INGREDIENTS:	<u>.78.6%</u>
TOTAL:	100.0%
Contains 2 pounds Imidacloprid per gallon.	

STOP: READ THE LABEL BEFORE USE KEEP OUT OF REACH OF CHILDREN

CAUTION

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

	FIRST AID
If inhaled:	 Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration preferably by mouth-to mouth, if possible. Call a poison control center or doctor for further treatment advice.
If swallowed:	 Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to 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 5minutes, then continue rinsing eye. Calla a poison control center or doctor for treatment advice.
If on skin or clothing:	 Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
	HOT LINE NUMBER
	et container or label with you when calling a poison control center or doctor, or going for treatment. Emergencies Call telephone no. 800-858-7378. For PRODUCT USE Information Call 80-502-9268.
	NOTE TO PHYSICIAN

No specific antidote is available. Treat the patient symptomatically.

EPA Reg. No.: 82542-EL

EPA Est. No.:

Manufactured for:

Source Dynamics LLC 10039 E. Troon North Dr. Scottsdale, AZ 85262 telephone 480-502-9268

ACCEPTED

NET CONTENTS: 1 gai. SHAKE WELL BEFORE EACH USING

Under the Federal Insecticide, Fungicide and Rodenticide Act, As amended, for the pesticide Registered under EPA Reg. No:

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PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handler must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes plus socks

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

ENGINEERING CONTROLS STATEMENT

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

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

Do not 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 washwater.

This product is highly toxic to bees exposed to direct treatment or residues in 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. This product is toxic to wildlife and highly toxicity to aquatic invertebrates.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical is areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

OBSERVE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARCHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

Spray Drift Management

The applicator is responsible for considering the weather related factors and the interaction of application equipment when making application decisions. Avoiding spray drift is the responsibility of the applicator.

Importance of Droplet Size:

An important factor influencing drift is droplet size. Small droplets (<150-200 microns) drift to a greater extent than large droplets. Make applications within typical equipment specifications to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection.

Wind Speed Restrictions:

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph.

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However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Restrictions During Temperature Inversions

Do not make ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain closed to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however if fog is not present, inversions can also be identified by the movement of smoke from a ground source. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

Mixing and Loading Requirements

Use a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading area and potential surface to groundwater conduits such as field sumps, uncased well heads, sink-holes, or filed drains.

No-Spray Zone Requirements for Soil Applications

Do not apply within 25 feet, of lakes; reservoirs; rivers; permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.

Runoff Management

Do not cultivate within 10 feet of the aquatic to allow growth of a vegetative filter strip. Employ best management practices for minimizing runoff. Consult your local Natural Resources Conservation Service for recommendations in your use area.

Endangered Species Notice

Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local country bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

Resistance Management

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product must conform to resistance management strategies established for the use area.

This product contains a Group 4A insecticide. Insect biotypes with acquired or inherent resistance to Group 4A may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species.

The active ingredient in this product belongs to the neonicotinoid chemical class. Insect pests resistant to other chemical classes have not shown cross-resistance to this product. To maintain susceptibility to this class of chemistry in insect species with high resistance development potential, 1) make only a single soil application of this product each crop year, 2) do not make foliar applications of products from this same class following a long residual, soil application of this product or other neonicotinoid products.

Examples of other Group 4A, neonicotinoid products used as foliar treatments include: Actara, Assail, Calypso, Centric, Clutch, Couraze, Gallant, Impulse, Intruder, Leverage, Passada, Provado and Trimax Pro and Venom.

Examples of other Group 4A, neonicotinoid products used as soil treatments include: Admire, Admire Pro, Advise, Alias, Couraze, Cruiser, Gaucho, Macho, Macho, Matho, Platinum, Venom and Widow.

Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management instructions. Also, for more information on Insect Resistance Management (IRM), visit the insecticide Resistance Committee (IRAC) on the web at http://www.irac-obline.org/.

DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR Part 170. This Standard contains requirements for the protection of agricultural worker 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 requirement in this box only applied 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 12 hours.

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

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

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

Keep children and pets off treated area until dry.

APPLICATION INSTRUCTIONS

SHAKE WELL BEFORE USING

Direct the active ingredient applications of this product into the seed or root-zone of the crop. Failure to place this product into root-zone may result in loss of control or delay in onset of activity. This product may be applied with ground or chemigation application. Do not apply with aerial application equipment. Broadcast, foliar applications are only recommended to seedling flats or trays, or where product is intended to be washed from foliage to soil prior to drying in foliage.

Optimum activity results from applications to the root-zone of plants to be protected. The earlier this product is available to a developing plant, the earlier the protection begins. This product is continuously taken into the roots over a long period of time and the systemic nature of this product allows movement from roots through the xylem tissue to all vegetative parts of the plant. This results in extended residual activity, the control of insects and the prevention and/or reduction of virus transmission or symptom expression, and plant health benefits. The rate applied affects the length of the plant protection period. Higher rates are recommended when infestations occur later in crop development, or where pest pressure is continuous. This product will generally not control insects infesting flowers, blooms or fruit. Additional crop protection may be required for insects feeding in, or on these plant parts and for insects not listed in the crop-specific, pests controlled sections of this label.

Suppression, or less than complete control of certain diseases and insect pests including reduced feeding may also result from applications of this product. Complete control of these pests/diseases may require

supplemental control measures.

Solera Imidacloprid 2F use on crops grown for production of true seed intended for private or commercial planting is generally not recommended but may be allowed under State specific, supplemental labeling. As with any insecticide, care should be taken to minimize exposure of the product to honey bees and other pollinators. Additional information on Solera Imidacloprid 2F uses for these crops and other questions. May be obtained from the Cooperative Extension Service, PCAs, consultants or local Source Dynamics LLC representatives.

Premix the product with water or other appropriate diluent prior to application. Keep this product and water suspension agitated to avoid setting.

Do not apply more than 0.5 lbs active ingredient per acre, per crop season, regardless of formulation or method of application, unless specified within a crop-specific, Application Instructions section for a given crop.

Mixing Instructions

To prepare the application mixture, add a portion of the required amount of water to the tank and with agitation add Solera Imidacloprid 2F. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. This product may also be used with other pesticides and/or fertilizer solutions. Please see Compatibility Note below. When tank mixtures of Solera Imidacloprid 2F and other pesticides are involved, prepare the tank mixture as specified above and follow the Mixing Order below.

Mixing Order

When pesticide mixtures are needed, add wettable powders first, then this product and other flowable (suspension concentrate) products second, and emulsifiable concentrates last. Ensure good agitation as each component is added. Do not add an additional component until the previous is thoroughly mixed. If a fertilizer solution is added, a fertilizer/pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

Compatibility Note

Test compatibility of the intended mixture before adding this product to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Poor mixing or formation of precipitates that do not readily redisperse indicates an incompatible mixture that should not be used. For further information, contact your local Source Dynamics LLC representative.

CHEMIGATION – DIRECTIONS FOR USE

Types of Irrigation Systems

Chemigation applications of Solera Imidacloprid 2F may only be made to crops through chemigation systems as specified in crop-specific Application sections and only through low-pressure systems unless specifically stated for a given crop. Do not apply Solera Imidacloprid 2F through any other type of irrigation system.

Uniform Water Distribution and System Calibration

The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated eater. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Chemigation Monitoring

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

Drift

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

Required System Safety Devices

The system must contain a function check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed,

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solenoid-operated valve located in the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdraw from the supply tank when the irrigation system id either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The Irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Using Water from Public Water Systems

Public water system 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 and average of 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, back flow 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 onto 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 to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must 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 withdraw from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

ROTATIONAL CROPS *

Treated areas may be replanted with any crop specified on an Imidacloprid label, or any crop fro which a tolerance exists for the active ingredient, as soon as practical following the last application. For crops not listed on an Imidacloprid label, or for crops for which no tolerances for the active ingredient have been establishes, a 12-month plant-back interval is required.

IMMEDIATE PLANT-BACK:

All crops on this label plus the following crops not on this label: barely, canola, corn (field, pop & sweet), rapeseed, sorghum, sugar beet and wheat.

30-DAY PLANT-BACK

Cereals (including buckwheat, millet, oats, rice, rye, and triticale), soybeans and safflower

12-MONTH PLANT-BACK

All Other Crops

* Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feet.

FIELD CROPS

Application Rates

COTTON

Pests Controlled	Rate fluid ounces/1,000 row-feet	Rate fluid ounces/Acre
Cotton aphid	1.3	17.0~21.1
Plant bugs		(Depending on row-spacing)
Thrips		
Whitefilies		

Restrictions:

Maximum amount allowed per crop season: 21.1 fluid ounces/Acre (0.33 lb Al/Acre)

Regardless of formulation or method of application, apply no more than 0.5 lb active ingredient per acre per season, including seed treatment as Gaucho®, soil <u>and</u> foliar uses. Do not apply more than a total of 6 applications of the active ingredient per season. Do not graze treated fields after any application of this product. Please see Resistance Management section of this label.

Applications:

Apply specified dosage of Solera Imidacloprid 2F in one of the following methods:

- 1. In-furrow spray during planting directed on or below seed;
- 2. In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting;
- 3. Chemigation into root-zone through low-pressure drip or trickle irrigation.

PEANUT1

Rate
ounces/Acre
6.0~24.0
6.0~24.0
16

Restrictions:

Pre-Harvest Interval (PHI): 14 days

Maximum amount allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Important Note

Increases in Tomato spotted wilt virus (TSWV) incidence have been observed with applications of Solera Imidacloprid 2F on multiple varieties of peanut. This may also be the case with other tospoviruses, or other viruses transmitted by various thrips species or perhaps, other pests. Prior to applying the product to peanuts, Source Dynamics LLC recommends consultation with the State, Cooperative Extension Service, or Source Dynamics LLC's representative for recommendations. Growers are advised to weigh insect control benefits against potential increase in viral disease levels. In areas where TSWV or other tospoviruses are endemic, growers are encouraged to use virus resistant varieties and consult the Georgia, Tomato spotted wilt virus index, before applying this product.

¹ Use not permitted in California unless otherwise directed by supplemental labeling.

POTATO

Pests Controlled	Rate fluid ounces/1,000 row-feet	Rate fluid ounces/Acre
Aphids Colorado potato beetle Flea beetles Leafhoppers	0.9~1.3	13.0~20.0
Potato psyllid Pests / Diseases Suppressed		
Symptoms of: Potato leaf roll virus (PLRV) Potato yellows Net necrosis (PLRV) Wireworms (with in-furrow spray	0.9~1.3	13.0~20.0
at-planting)		-

Restrictions:

Maximum amount allowed per crop season: 20.0 fluid ounces/Acre (0.31 lb Al/Acre)

Applications

Apply specified dosage of Solera Imidacloprid 2F in one of the following methods:

- 1. In-furrow spray during planting directed on seed pieces or seed potatoes;
- 2. Subsurface side-dress on both sides of the row covered with 3 or more inches of soil;
- 3. Narrow band spray at ground cracking directly over the row during hilling covered with 3 or more inches of soil;
- 4. Narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting. For effective pest control or suppression, Solera Imidacloprid 2F must be placed below soil-surface and in contact with seed piece or within root-zone. For potatoes grown on highly permeable soils with shallow water table, at-plant applications of this product may be made in a 2 to 4 inch band (width of planter shoe opening) and completely covered.

POTATO

(Seed Piece Treatment)

Pests Controlled	Rate fluid ounces/1,000 row-feet	Rate fluid ounces/Acre¹
Aphids	0.4~0.8	8.0~16.0
Colorado potato beetle		
Flea beetles		
Leafhoppers		
Patato psyllid		
Wireworms (seed-piece		
protection)		
Pests / Diseases Suppressed		
Symptoms of:	0.8	16.0
Potato leaf roll virus (PLRV)		
Potato yellows]	
Net necrosis (PLRV)		

Restrictions:

Maximum amount allowed per crop season: 20.0 fluid ounces/Acre (0.31 lb Al/Acre)

Do not use treated seed-pieces for food, feed, or fodder. Do not apply any subsequent application of this product (in-furrow), or any other imidacloprid products following a seed-piece treatment of this product.

Applications:

Apply specified dosage as a diluted spray onto seed-pieces using a shielded spray system. Dilute with 3 parts water, or less, to 1 part this product. Agitate or stir spray solution ad needed. Fungicidal or inert absorbent dusts may be applied after this product's application. Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. Plant seed pieces as soon as possible after treating avoiding prolonged exposure of seed pieces treated with this product to sunlight and in accordance with the recommendation of your local Extension specialist.

Consult your local Source Dynamics LLC representative or crop protection product dealer for information relevant to your area.

¹ Based on a seeding rate of 2000 lbs/acre.

TOBACCO

Pests Controlled	Rate fluid ounces/1,000 plants (as seeding tray drench)	Rate fluid ounces/1,000 plants (in-furrow or transplant-water)
Aphids	1.0	1.4
Flea beetles		
Mole crickets	1.4~2.8	1.8~2.8
Whiteflies		
Wireworms		·
Pests / Diseases Suppressed		
Cutworms	1.4~2.8	1.8~2.8
Symptoms of:		
Tomato spotted wilt virus (TSWV)		

Restrictions:

Pre-Harvest Interval (PHI): 14 days

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Applications:

Apply specified dosage in one of the following methods:

- Uniform, broadcast foliar spray to seedlings in trays (tray drench) nor more than 7 days prior to transplanting followed immediately by overhead irrigation to wash this product from foliage into potting media. Failure to wash this product from foliage may result in a reduction in pest control. Transplants should be handled carefully during setting to avoid dislodging treated potting media from roots.
- 2. In-furrow spray or transplant-water drench during setting.
- 3. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

Important Note:

Proper tray drench applications of this product have been shown to be the most efficacious method of application. However, the specified rate of this product may be applied as combination of the tray drench in the planthouse and/or transplant-water drench in field. Adverse growing conditions may cause a delay in uptake of this product into the plant and a delay in control.

VEGETABLE AND SAMLL FRUIT CROPS

Application Rates

CUCURBIT VEGETABLES¹

Crops of Crop Group 9 including: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), Momordica spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of Cucumis melo including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon and Winter melon), Pumpkin, Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, and winter squash types such as acorn squash and spaghetti squash), Watermelon (includes hybrids and/or varieties of Citrullus lanatus)

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Field application rates. See details that follow for additional planthouse use instructions.	
Pests Controlled	Rate
	fluid ounces/Acre
Aphids	16.0~24.0
Cucumber beetles	
Leafhoppers	
Thrips (foliage-feeding thrips only)	
Whiteflies	
Pests / Diseases Suppressed	
Bacterial wilt (as vectored by various cucumber	16.0~24.0
beetles)	
Leaf silvering resulting from whitefly feeding	

Restrictions:

Pre-Harvest Interval (PHI): 21 days

Maximum amount allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equipment;
- 2. In-furrow spray directed on or below seed;
- 3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation with 24 hours of application;
- 4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting'
- 5. Post-seeding drench, transplant-water drench, or hill drench;
- 6. Subsurface side-dress on both side of each row. This product must be incorporated into root-zone.

Planthouse Application Rates	
Pests Controlled	Rate
,	fluid ounces/1,000 plants
Aphids	0.1
Whiteflies	

Restrictions:

Maximum amount applied in the planthouse: 0.1 fluid ounces (0.00156 lb Al) /1,000 plants

Maximum number of applications in planthouse: 1

Applications:

Apply specifies dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners:

- 1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash this product from foliage into potting media without loss if gravitational liquid from the bottom of the tray. Failure to wash this product from foliage may result in reduced pest control;
- 2. Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray.

The application made in the planthouse is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increases number of applications in planthouse may result in significant plant injury. Handle transplants carefully during setting to avoid dislodging treated potting media from roots.

Important Note: Not all varieties of cucurbit vegetables have been tested for tolerance to this product applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

GREENHOUSE VEGETABLES¹

(Mature plants in production greenhouses) Cucumber, Tomato, only

Pests Controlled	Rate fluid ounces/1,000 plants
Aphids	1.4
Whiteflies	
	

Restrictions:

Pre-Harvest Interval (PHI): 0 days

Maximum number allowed per crop season: 1

Applications:

Apply specified dosage in a minimum of 16 gallons of water for tomatoes and 21 gallons of water for cucumbers using soil drenches, micro-irrigation, drip irrigation, or hand-held or motorized calibrated irrigation equipment. Make application only to plants grown in field-type soils, potting media, or mixtures thereof. Do not apply to plants grown in non-soil medias such as perlite, vermiculite, rock wool or other soil-less media, or plants growing hydroponically. Do not apply to immature plants since phytotoxicity may occur.

Make applications when infestation pressure surpasses threshold and beneficials are not able to maintain pest populations below damage thresholds. Repellency of bumble bee pollinators and negative effects on some beneficials (*Orius sp.*) can occur when Solera Imidacloprid 2F is applied.

Many varieties of vegetables have been tested for tolerance to this product and show good safety. However, certain varieties may show more sensitivity to this product. Therefore, treatment of a few plants is recommended before treating the whole greenhouse.

¹ Not for use on crops grown for seed unless allowed by State-specific supplemental labeling.

FRUITING VEGETABLES¹

Crops of Crop Group 8 plus Okra including: Eggplant, Ground cherry, Okra, Pepper (including bell, chill, cooking, pimento and sweet) Tomato, Pepinos, Tomatillo

Field application rates. See details that follow for additional planthouse use instructions.	
Pests Controlled	Rate fluid ounces/Acre
Aphids Colorado potato beetle	Okra and Pepper 16.0~32.0
Flea beetles Leafhoppers Thrips (foliage-feeding thrips only) Whiteflies	Other Crops 16.0~24.0
Pests / Diseases Suppressed	
Symptoms of:	Okra and Pepper
Tomato mottle virus	16.0~32.0
Tomato spotted wilt virus	Other Crops
Tomato yellow leaf curl virus	16.0~24.0

Restrictions:

Pre-Harvest Interval (PHI): 21 days

Maximum amount allowed on pepper and okra crops per applications:

32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Maximum amount allowed on other fruiting vegetable crops per application:

24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equipment;
- 2. In-furrow spray directed on or below seed:
- 3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5"

with sufficient irrigation with 24 hours of application;

- 4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting'
- 5. Post-seeding drench, transplant-water drench, or hill drench;
- 6. Subsurface side-dress on both side of each row. This product must be incorporated into root-zone.

Planthouse Application Rates	
Pests Controlled	Rate
	fluid ounces/1,000 plants
Aphids	0.1
Whiteflies	

Restrictions:

Maximum amount applied in the planthouse: 0.1 fluid ounces (0.00156 lb Al) /1,000 plants

Maximum number of applications in planthouse: 1

Applications:

Apply specifies dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners:

- 1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash this product from foliage into potting media without loss if gravitational liquid from the bottom of the tray. Failure to wash this product from foliage may result in reduced pest control;
- 2. Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray.

The application made in the planthouse is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increases number of applications in planthouse may result in significant plant injury. Handle transplants carefully during setting to avoid dislodging treated potting media from roots.

Important Note: Not all varieties of cucurbit vegetables have been tested for tolerance to this product applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

GLOBE ARTICHOKE

Pests Controlled	Rate
	fluid ounces/Acre
Aphids	16.0~32.0
Leafhoppers	, i

Restrictions:

Pre-Harvest Interval (PHI): 7 days

Maximum amount allowed per season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. In-furrow spray at planting directed on or below seed.
- ¹ Use not permitted in California unless other directed by supplemental labeling.

HERBS1

Crops of Crop Subgroup 19A including: Angelica, Balm (lemon balm), Basil (fresh and dried), Borage, Bumet, Chamomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Cilantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dries), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood.

Pests Controlled	Rate
	fluid ounces/Acre

Aphids	16.0~24.0
Flea Beetles	
Leafhoppers	
Whiteflies	
Pests / Diseases Suppressed	
Thrips (foliage-feeding thrips only)	16.0~24.0

Restrictions:

Pre-Harvest Interval (PHI): 14 days

Maximum amount allowed per season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Applications

Apply specified dosage in one of the following methods:

- 1. In-furrow spray at planting directed on or below seed;
- 2. In-furrow spray or transplant-water drench during setting or transplanting;
- 3. Shanked-into or below eventual seed-line;
- 4. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

Notes: Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, Source Dynamics LLC strongly recommends that only small areas or numbers of plants of each be treated and evaluated prior to commercial use.

BRASSICA (COLE) LEAFY VEGETABLES¹

Crops of Crop Group 5 including: Broccoli, Broccoli raab (*rapini*), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (*gai lon*) broccoli, Chinese (*bok choy*) cabbage, Chinese (*napa*) cabbage, Chinese mustard (*gai choy*) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens

Pests Controlled	Rate fluid ounces/Acre (on 36 inch rows)
Aphids Leafhoppers Thrips (foliage-feeding thrips only) Whiteflies	10.0~24.0

Restrictions:

Pre-Harvest Interval (PHI): 21 days

Maximum amount allowed per season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. In-furrow spray directed on or below seed;
- 3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation with 24 hours of application;
- 4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting'
- 5. Post-seeding drench, transplant-water drench, or hill drench;
- 6. Subsurface side-dress on both side of each row. This product must be incorporated into root-zone.
- 1 Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

LEAFY VEGETABLES¹

Crops of Crop Group 4A including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Roquette), Chervil, Chrysanthemum (edible leaved and garland), Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Raddicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)), Watercress (commercial production only, applications must not be native cress growing in streams or other bodies of water), Watercress (upland)

Pests Controlled	Rate fluid ounces/Acre (on 36 inch rows)	
Aphids Leafhoppers	10.0~24.0	
Thrips (foliage-feeding thrips only) Whiteflies		

Restrictions:

Pre-Harvest Interval (PHI): 21 days

Maximum amount allowed per season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. In-furrow spray directed on or below seed;
- 3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation with 24 hours of application;
- 4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting'
- 5. Post-seeding drench, transplant-water drench, or hill drench;
- 6. Subsurface side-dress on both side of each row. This product must be incorporated into root-zone.
- ¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

LEAFY PETIOLE VEGETABLES¹

Crops of Crop Group 4B including: Cardoon, Celery, Celtuce, Chinese Celery (fresh leaves and stalk only), Florence fennel (including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard

Pests Controlled	Rate	
	fluid ounces/Acre	
Aphids	10.0~24.0	
Leafhoppers		
Thrips (foliage-feeding thrips only)		
Whiteflies		

Restrictions:

Pre-Harvest Interval (PHI): 45 days

Maximum amount allowed per application: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. In-furrow spray directed on or below seed;
- 3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation with 24 hours of application;
- Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting'
- 5. Post-seeding drench, transplant-water drench, or hill drench;
- 6. Subsurface side-dress on both side of each row. This product must be incorporated into root-zone.
- ¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

LEGUME VEGETABLES¹ except soybean, dry

Crops of Crop Group 6 including: Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean. (Lupinus spp., includes grain lupin, sweet lupin, white lupin, and white sweet lupin)

Bean (*Phaseolus spp.*, includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)

Bean (*Vigna spp.*, includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)

Pea (Pisum spp., includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)

Other beans and Peas [Broad bean (fava), Chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean), Lentil, Pigeon pea, Soybean (immature seed), Sword bean]

Pests Controlled	Rate fluid ounces/Acre	
Aphids	16.0~24.0	
Leafhoppers		
Thrips (foliage-feeding thrips only)		
Whiteflies		
Pests / Diseases Suppressed		
Symptoms of:	16.0~24.0	
Bean common mosaic virus (BCMV)		
Bean golden mosaic virus (BGMV)		
Beet curly top hybrigeminivirus (BCTV)		

Restrictions:

Pre-Harvest Interval (PHI): 21 days

Maximum amount allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Applications

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. In-furrow spray at planting directed on or below seed:
- 3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation with 24 hours of application;
- 4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting'
- 5. Post-seeding drench, transplant-water drench, or hill drench;
- ¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

ROOT VEGETABLES¹

Crops of Crop Group 1B except Sugarbeet including: Beet (garden)², Burdock (edible)², Carrot², Celeriac², Chervil (turnip-rooted)², Chicory², Ginseng, Horseradish, Kava², Parsley (turnip-rooted), Parsnip², Radish², Oriental radish (diakon)², Rutabaga², Salsify (oyster plant), Salsify (black)², Salsify (Spanish), Skirret and Turnip².

Pests Controlled	Rate fluid ounces/1,000 row feet	Rate fluid ounces/Acre
Aphids	0.7~1.7	10.0~24.0
Flea beetles		
Leafhoppers		
Thrips (foliage-feeding thrips of	only)	
Whiteflies	**	

Restrictions:

Pre-Harvest Interval (PHI): 21 days

Maximum amount allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Maximum number of applications per crop season:1

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. In-furrow spray (rate specified per 1,000 row-feet) or, shanked-in 1 to 2 inches below seed depth during planting;
- 3. Narrow (2 inches or less): band directly (1 to 2 inches) below the eventual seed row in a bedding operation 14 or fewer days before planting.

Important Note: The rate applied affects the length of the control. Use higher rates where infestations occur later in crop development, or where pest pressure is continuous. Rates of this product less than 0.7 fluid

ounces/1,000 row-feet will not provide adequate residual pest control. Crops treated with this product grown on very high organic matter soils (muck) may also require additional pest management control.

¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

² Tops or greens from these crops <u>may</u> be utilized for food or feed.

TUBEROUS AND CORM VEGETABLES1

Crops of Crop Group 1C including: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Canna (edible, Queensland arrowroot), Cassava (bitter & sweet)², Chayote (root), Chufa, Dasheen (taro)², Ginger, Leren, Sweetpotato, Tanier (cocoyam)², Turmeric, Yam bean (jicama, manioc pea), Yam (true)² (For application instructions on potato see Field Crops section)

Pests Controlled	Rate fluid ounces/1,000 row feet	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Thrips (foliage-feeding thrips only) Whiteflies	0.7~1.7	10.0~24.0

Restrictions:

Pre-Harvest Interval (PHI) from planting applications: 3 days (leaves); 125 days (corms)

Maximum amount allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Maximum number of applications per crop season:1

Applications:

Apply specified dosage in one of the following methods:

- In-furrow spray (rate specified per 1,000 row-feet) over planting material (hulis) or, shanked-in 1 to 2 inches below hulis depth at planting;
- Side-dress not more than 0.6 fluid ounces/1,000 row-feet no later than 45 days after planting. Observe same PHI as above.

Important Note: The rate applied affects the length of the control. Use higher rates where infestations occur later in crop development, or where pest pressure is continuous. Rates of this product less than 0.7 fluid ounces/1,000 row-feet will not provide adequate residual pest control. Crops treated with this product grown on very high organic matter soils (muck) may also require additional pest management control.

- ¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.
- ² Tops or greens from these crops may be utilized for food or feed.

STRAWBERRY1

Annual And Perennial Crops	
Pests Controlled	Rate
	fluid ounces/Acre
Aphids	24.0~32.0
Whiteflies	

Restrictions:

Pre-Harvest Interval (PHI): 14 days

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment after plants are established or on perennial crops in early spring prior to bud opening;
- 2. As a plant material or plant hole treatment just prior to, or during transplanting;
- As a band spray over the row in a minimum of 20 gallons of water per acre, followed immediately by overhead irrigation to incorporate product into root zone. Plastic or other mulch that limit movement of this product into root zone is not recommended.

The rate applied affects the length of control. Use higher rates where infestations may occur later in crop

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development or where pest pressure is continuous.

¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

Post -harvest Use on Perennial Crops

Post -narvest use on Perennial Crops		
Pests Controlled	Rate	
	fluid ounces/Acre	
White grub complex	16.0~24.0	
(grubs of Asiatic garden beetle, European and		
Masked chafer, Japanese beetle, Oriental beetle)		

Restrictions:

Pre-Harvest Interval (PHI): 14 days

Maximum amount allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Applications:

Apply a single application **post harvest to coincide with renovation of strawberry fields** and during active egg-laying period of beetles. Apply specifies dosage of this product in one of the following methods:

- 1. As a ground spray via boom or backpack sprayer in a minimum of 20 gallons of water per acre;
- 2. As a row-band spray using an adjusted amount of product based on the treated row band area in proportion to the amount required per full acre. The bandwidth should be equivalent to the width of the anticipated fruiting bed;
- 3. As a chemigation application with 600 to 1,000 gallons of water followed by 0.10 to 0.25 inches irrigation.

Important Note: All soil-surface applications must be followed by 0.25 inches of rainfall or overhead irrigation water per acre within 2 hours of application. Failure to adequately incorporate this product into egg-deposition zone may result in decreases activity.

¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

SUGARBEET1 (for use only in CA)

Pests Controlled	Rate fluid ounces/Acre
Aphids	6.0~12.0
Leafhoppers	
Whiteflies	
Flea beetles	
Pests / Diseases Suppressed	
Symptoms of:	6.0~12.0
Western yellows /	
Beet curly top hybrigeminivirus (BCTV)	
Destrictions	

Restrictions

Maximum amount allowed per crop season: 12.0 fluid ounces/Acre (0.18 lb Al/Acre)

Do not apply immediately prior to bud opening or during bloom or when bees are actively foraging.

Applications:

Apply specified dosage in one of the following methods:

1. Apply specified dosage in sufficient carrier volume to insure uniform application. Apply directly below each seed furrow either during the bedding operation immediately prior to planting or at the time of planting.

The low rate may be applied to add establishment of stands in whitefly areas, or for early season control of the other pests listed.

¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

Rate fluid ounces/Acre			Rate Based on		ices/1,000 re ow spacing			
	10	15	20	25	30	35	40	45
10	0.1191	.0.29	ر 38:0	0.48	0:57	0:67	0.76	0.86
12	0.23	0.34	0:46	0:57	0.69	0.80	0.92	1.03
14	0.27	0.40	0:54	0.67	0.80	0.94	1.07	1.21
16	01315	0.46	0.61	0.77	0.92	1.07	1.22	1.38
18	0.34	0.52	0.69	0.86	1.03	1.21	1.38	1.55
20	0.38	0.57	0.76	0.96	1.15	1.34	1.53	1.72
22	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89
24	10:46	0:69	0.92	0.15	1.38	1.61	1.84	2.07
26	0:50	0.75	0.99	0.24	1.49	1.74	1.99	2.24
28	0.54	0.80	1.07	0.34	1.61	1.87	2.14	2.41
30	0.57	0.86	1.15	0.43	1.72	2.01	2.29	2.58
32	0.61	0.92	1.22	1.52	1.84	2.14	2.45	2.75

Important Note: Rate of this product applied affects the length of control and to a considerable extent, the degree of control or effect. Row-spacing X rate combinations in shaded blocks may not provide adequate residual pest control and are not recommended for long-term, residual control. Use higher labelled rates where infestations may occur later in crop development or where pest pressure in continuous. Source Dynamics LLC offers no warranty for use of this product at rates below 0.7 fluid ounces/1,000 row-feet.

TREE, BUSH AND VINE CROPS

Application Rates

BANANA AND PLANTAIN

Pests Controlled	Rate fluid ounces/Acre
Aphids	16.0~32.0
Leafhoppers	
Pests / Diseases Suppressed	
Scales	16.0~32.0
Restrictions:	

Pre-Harvest Interval (PHI): 0 day

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Applications:

Apply specified dosage in the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

BUSHBERRY

Crops of Crop Group 13B including: Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, Salal

Pests Controlled	Rate fluid ounces/Acre
Jananasa baatta (adulta faadina on faliasa)	
Japanese beetle (adults, feeding on foliage)	16.0~32.0
White grub complex (grubs of Asiatic garden beetle,	
European and Masked chafer, Japanese beetle and	
Oriental beetle)	
Restrictions:	
Pre-Harvest Interval (PHI): 7 days	
Maximum amount allowed per crop season: 32.0 fluid ounces	/Acre (0.5 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. 18-inch band on each side of the row followed with 0.25 inches of irrigation immediately after application.

For optimal grub control, apply this product to control 1st or 2nd instar larvae. Application may be made post-bloom up to 7 days prior to harvest, or post-harvest until October 1st. For optimum control of Japanese beetle larvae, make applications from June 1st to July 15th. Do not apply during bloom.

Application to grass covered rows, row middles, drive lanes, headlands, and other grassy areas in and around the berry field will control resident grub populations. Applications directed to the root-zone will help protect berry plant roots from grub feeding.

Apply this product to moist soil. If necessary, apply one hour of irrigation water immediately before application. To ensure maximum efficacy, apply 0.5 to 1 inch of irrigation water or rainfall within 24 hours of application of this product to facilitate movement into the soil and into the root-zone.

CANEBERRY

Crops of Crop Group 13A including:

Blackberry (*Rubus eubatus*, including bingleberry, blask satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, himalayaberry, hullberry, lavacaberry, loganberry, lowberry, lucretiaberry, mammoth blackberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, youngberry, and varieties and/or hybrids of these).

Raspberry (black and red, Rubus occidentails, Rubus strigosus, Rubus idaeus).

Pests Controlled	Rate fluid ounces/Acre
Aphids	16.0~32.0
Leafhoppers	
Whiteflies	
Rednecked can borer	24.0~32.0
Pests / Diseases Suppresses	
Thrips (foliage-feeding thrips only)	16.0~32.0
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Restrictions:

Pre-Harvest Interval (PHI): 7 days

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Soil Application:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. Basal, soil drench in a minimum of 500 gallons solution per acre.

CITRUS (Containerized)

Crops of Crop Group 10 including: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquate, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Tangelo, Satsuma mandarin, White sapote (*Casimiroa spp.*), and other cutivars and/or hybrids of these.

Pests Controlled	Rate mL/ft³ container media	
Aphids	0.75	
Asian citrus psyllid		
Black fly		
Citrus leafminer		
Leafhoppers / Sharpshooters		
Mealybugs		
Scales		
Whiteflies		
Citrus root weevil (larval complex)	1.25~2.50	
Pests/ Diseases Suppresses		
Citrus thrips (foliage-feeding thrips only)	2.50	

Applications:

Determine volume of container and calculate dosage necessary to treat container. Apply calculated dosage of this product per container as a soil drench or through low-pressure drip or trickle irrigation water. Use sufficient carrier volume to ensure thorough uniform distribution throughout the media without loss of gravitation water from the container. For optimal results, treatment should be made at planting prior to insect infestation. Retreat if necessary. For control of larvae of the citrus root weevil complex, application should be made prior to neonate larvae entering potting media. Utilize higher dosage for heavy infestations.

CITRUS (Field)

Crops of Crop Group 10 including: calamondin, citrus citron, citrus hybrids (including chironja, tangelo, and tangor), grapefruit, kumquat, lemon, lime, mandarin (tangerine), pummelo, orange (sweet and sour), tangelo, Satsuma mandarin, white sapote (*Casimiroa spp.*), and other cutivars and/or hybrids of these.

Pests Controlled	Rate
	fluid ounces/ Acre
Aphids	16.0~32.0
Asian citrus psyllid	
Black fly	
Citrus leafminer	
Leafhoppers / Sharpshooters	
Mealybugs	
Scales	
Whiteflies	
Pests/ Diseases Suppresses	
Citrus nematode	32.0
Symptoms of:	
Citrus tristeza virus (CTV) through vector control	
Citrus yellows	
Thrips (foliage feeding thrips only)	
Postrictions:	

Restrictions:

Pre-Harvest Interval (PHI): 0 day

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Applications:

Apply specified dosage of this product in one of the following methods:

Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
 For optimum results, apply to newly planted trees or those previously trained to drip, trickle or micro-sprinkler irrigation. Soil should be lightly pre-wetted to break soil surface tension prior to applications of this product. Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move this product into root-zone. Allow 24 hours

before initiating subsequent irrigations;

- Soil surface band spray on both side of the tree. Bands should overlap at the tree base to create a
 continuous band within the drip-line area of the tree, to be followed immediately with light sprinkler
 irrigation sufficient to move the product into the upper portion of the root-zone. This method is suitable
 for very coarse soils with 0.75% organic matter or less;
- 3. Drench to base the tree not exceeding one-quart total solution per tree immediately around trunk of the tree and extending outward covering the entire fibrous root system of the tree. Only recommended for trees up to 8 feet tall;
- 4. For control of existing termite infestations, apply specified dosage in 1 to 4 quarts of total solution volume, depending on size of tree, as a drench application to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk;
- 5. For suppression of citrus nematode, apply specific dosage through low pressure chemigation or soil surface spray only, ensuring complete coverage of the root system and utilizing application directions stated above foe the respective application method. Repeated and regular use of this product over several consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant response.

COFFEE

Pests Controlled	Rate	
	fluid ounces/Acre	
Aphids	16.0~32.0	
Leafhoppers		
Leafminer		
Pests / Diseases Suppressed		
Scales	16.0~32.0	
B		

Restrictions:

Pre-Harvest Interval (PHI): 7 days

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation;
- 3. Basal, soil drench in sufficient water to insure incorporation into the root-zone followed by irrigation.

CRANBERRY

Pests Controlled	Rate fluid ounces/Acre
Rootgrubs (Scarabaeidae)	16.0~32.0
Rootworms (Chrysomelidae)	

Restrictions:

Pre-Harvest Interval (PHI): 30 Days

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Applications:

Apply this product to moist soil. Apply specified dosage in one of the following methods:

- 1. As a soil spray (ground application) directed to the root and crown area using a minimum of 20 gal of water per acre;
- 2. As a chemigation application with 600 to 1,000 gallons water.

Immediately upon application, this product must be incorporated into root-zone by 0.1 to 0.3 inches water/Acre, either with the chemigation application or through irrigation/rainfall if not applied through chemigation. Inadequate incorporation within 24 hours of application may result in reduced control.

Rootgrubs and Rootworms

Best control may be achieved when application is made post-bloom immediately after bees are removed. Applications should target early instar larvae.

This product has not been tested for crop response in tank mixes with other registered fungicides or insecticides. If tank mixing is desired, premix a sample of this product and the desired fungicide or insecticide partner at labeled rates and apply to a small area. Evaluate crop response within 48 hours and for at least two weeks prior to utilizing the tank mix in larger acreage. If crop injury results from the premix test, do not apply the tank mix to larger acreage.

GRAPE

Including: American bunch grape, Muscadine grape and Vinifera grape

Pests Controlled	Rate fluid ounces/Acre
European fruit lecanium Leafhoppers / Sharpshooters Mealybugs Phylloxara ¹ spp.	16.0~32.0
Pests / Diseases Suppressed	
Grapeleaf skeletonizer Nematodes Pierce's disease	24.0~32.0

Restrictions:

Pre-Harvest Interval (PHI): 30 days

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Applications:

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation;
- 3. Hill drench in sufficient water to insure incorporation into the rot-zone followed by irrigation;
- 4. For suppression of nematodes, apply 14 fluid ounces in a single application or two 7 fluid ounces applications on a 30 to 45 days interval. Treatments should be only by 1) chemigation into root-zone through above ground low pressure drip, tickle, micro-sprinkler or equivalent equipment or 2) French plow technique, followed immediately by sufficient irrigation to move the product into the entire root-zone of the plant. Repeated and regular use of this product over several consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant response.

For optimum results, make application between bud-break and the pea-berry stage. A total of 14 fluid ounces/acre is recommended under the following conditions:

- 1. Where vigorous vibe growth is expected
- 2. In warmer growing areas
- 3. Where mealybug and European fruit lecanium populations are expected to be heavy
- 4. Where vine populations exceed 600 per acre, or,
- For suppression of nematodes
- ¹ Repeated and regular use of this product over several, consecutive growing seasons control existing *Phylloxera* infestations over time or prevents *Phylloxera* from becoming established.

HOP

Pests Controlled	Rate fluid ounces/Acre
Aphids	19.2

Restrictions:

Pre-Harvest Interval (PHI): 60 days

Maximum amount allowed per crop season: 19.2 fluid ounces/Acre (0.30 lb Al/Acre)

Applications

Apply specified dosage in one of the following methods:

- 1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation;
- 3. Hill drench in sufficient water to insure incorporation into the rot-zone followed by irrigation;

Higher dosage is recommended where extended residual control is desired or for treating larger vines or vines with dense foliage volume.

POME FRUIT

Crops of Crop Group 11 including: Apple, Crabapple, Loquat, Nayhaw, Pear (including Oriental pear), Quince

Pests Controlled	Rate fluid ounces/Acre
Aphids (including woolly apple aphid) Leafhoppers	16.0~24.0

Restrictions:

Pre-Harvest Interval (PHI): 21 days

Maximum amount allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Applications:

Apply specified dosage in the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

POMEGRANATE

Pests Controlled	Rate fluid ounces/Acre
Leafhoppers / Sharpshooters	
Whiteflies	

Restrictions:

Pre-Harvest Interval (PHI): 0 day

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Applications:

Apply specified dosage in the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

STONE FRUIT

Crops of Crops Group 12 including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried)

In-field, Soit Application	
Pests Controlled	Rate
	fluid ounces/Acre
Aphids (including woolly apple aphid)	16.0~24.0
Leafhoppers	

Restrictions:

Pre-Harvest Interval (PHI): 21 days

Maximum amount allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Applications:

Apply specified dosage in the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

Pre-plant, Root Dip Application	
Pests Controlled	Rate
	fluid ounces/10 gallons root-dip solution
Black peach aphid (infesting roots)	2.0
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Mix this product at a rate of 2.0 fluid ounces per 10 gallons of water. Thoroughly wet bare-root transplant to slightly above the graft union by soaking roots in this product's solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.

TREE NUTS

Crops of Crop Group 14 including: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut (black and English)

Pests Controlled	Rate fluid ounces/Acre
Aphids	16.0~32.0
Leafhoppers /Sharpshooters	
Mealybugs	
Spittlebugs	
Termites	
Whiteflies	
Pests /Diseases Suppressed	
Pecan scab (from reduction in honeydew deposition)	24.0~32.0
Thrips (foliage-feeding thrips only)	32.0

Restrictions:

Pre-Harvest Interval (PHI): 7 days

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Applications:

Apply specified dosage prior to or at onset of pest infestation in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
 Pre-wet soil prior to applications of this product and allow soil to dry following application and prior to subsequent irrigation;
- 2. Emitter or spot applications in a minimum of 4 fluid ounces of mixture per emitter site;
- 3. Shank or subsurface side-dress, injected to a depth just above or just within the root-zone and between the trunk and drip line of the tree canopy. Product should be applied in a minimum of 10 gallons per acre using multiple shanks on both sides of trees. Ensure product placement is below sod or orchard floor debris. Irrigation covering entire treated area should follow within 48 hours to promote uptake by root systems;
- 4. For control termites, apply specified dosage to slightly moist soil as a high-volume drench to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk. Utilize sufficient

carrier volume to penetrate the soil to a depth of 18 to 24 inches to obtain optimum control. Allow soil to dry following treatment and prior to applying any irrigation.

Remarks: Use the higher rates when applied by shank or subsurface side-dress, used on larger trees, soils with high clay content, for high plant populations, and/or where extended control is desired. Under some conditions, control may not occur for 14 or more days or until two (2) irrigations have been made. Applications made later in the season may result in reduced efficacy.

TROPICAL FRUIT

Including: Acerola, Atemoya, Avocado, Birida¹, Black sapote, Canistel, Cherimoya, Custard apple, Feijoa, Jaboticaba, Guava, Llama, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodila, Soursap, Spanish lime, Star apple, Starfruit, Sugar apple, Wax jambu.

Pests Controlled	Rate fluid ounces/Acre
Aphids	24.0~32.0
Avocado lacebug	
Leafhoppers	
Whiteflies	•
Pests/ Diseases Supperssed	
Scales	32.0
Thrips (foliage-feeding thrips only)	
D (''')	

Restrictions:

Pre-Harvest Interval (PHI): 6 days

Maximum amount allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Applications:

Apply specified dosage in the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

CHRISTMAS TREE

Pests Controlled	Rate fluid ounces/Acre
White grub complex (damage from grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and oriental beetle)	16.0~32.0

POPLAR / COTTONWOOD1

(includes members of the genus Populus grown for pulp or timber)

Field Application Rates See details below for Cuttings/Whips Application	ations Instructions
Pests Controlled	Rate fluid ounces/Acre
Aphids Cottonwood leaf beetle	16.0~32.0
Pests / Diseases Suppressed	
Phylloxerina popularia	16.0~32.0

Restrictions:

Maximum amount allowed at-plant per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Applications:

Apply specified dosage in the following methods:

- 1. Chemigation through low-pressure drip irrigation;
- 2. For narrow row, cutting orchards / nurseries used for plant propagation, shank into root zone followed by adequate irrigation to promote uptake. Adequate irrigation depends on soil moisture level at application. Under dry conditions 0.25 inches/acre is recommended.

For Cottonwood leaf beetle, protection against damage will occur when application is made early-season, when beetles first begin feeding. Larger trees may require earlier treatment as a result of slower uptake.

For Phylloxerina, apply early in the year, from break of dormancy through May.

Cutting /Whip Application Instructions
See details above for Field Application Rates

See details above for Freid Applica	non Nates
Pests Controlled	Cutting Whip Soaking Solution
	fluid ounces of this product needed per 100 gallons
Cottonwood leaf beetle	13.3~26.6 (unhydrated cuttings/whips)
	26.6~40.1 (partially hydrated cuttings/whips)
Pests / Diseases Suppressed	
Aphids	13.3~26.6 (unhydrated cuttings/whips)
Phylloxerina popularia	26.6~40.1 (partially hydrated cuttings/whips)

Restrictions:

Maximum amount allowed at-plant per crop season: 32.0 fluid ounces/Acre (0.5 lb Al/Acre)

Applications:

Moisture content of cuttings/whips prior to application, the solution concentration and the length of soaking interval interact to affect the amount of the product absorbed into plant material. For a constant soaking interval of 24 hours, drier cuttings/whips absorb a higher quantity of solution and require a lower concentration. Conversely, more hydrated cuttings/whips absorb less solution and require a higher concentration. Soaking of cuttings/whips should occur in a covered container in absence of UV light. Not all *Populus* sp. clones/varieties/hybrids have been tested for crop safety. Without specific knowledge about a particular *Populus* sp.clone/variety/hybrid, Source Dynamics LLC recommends that small numbers of cuttings/whips of each be treated and evaluated prior to commercial use.

Apply this product in one of the following cuttings/whips soaking methods:

For freshly cut (hydrated) cuttings/whips, soak plant material in specified solution concentration for 24 hours prior to cold storage.

For previously hydrated cuttings/whips removed from cold storage, allow plant material to reach room temperature and soak in specified solution concentration for 24 hours prior to planting.

Proper care should be taken in disposal of any residual soaking solution. Solution may be applied to existing trees or other registered crops as long as all product label precautions and restrictions are observed.

¹ Use not permitted in California unless otherwise directed by supplemental labeling.

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STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If container is leaking, invert to prevent leakage. If the container is leaking or material is spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticide below. In spill or leak incidents, keep unauthorized people away.

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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary 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 STATEMENT: IMPORTANT NOTICE - Seller warrants that this product conforms to the chemical description and is reasonably fit for purposes stated on the label when used in accordance with the directions and instructions under normal conditions of use; but, to the extent consistent with applicable law, neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.