

100-1154

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

MAR 16 2011

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Mr. Pat Dinnen
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, NC 27419

Subject: Removal of Expired Patent Numbers

Dear Mr. Dinnen:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated February 28, & March 3, 2011 for:

EPA Reg. No 100-1154 ✓

EPA Reg. No. 100-1184

**Epi-Mek 0.15EC Miticide/Insecticide
Cruiser XL Insecticide and Fungicide Prepack**

The Registration Division (RD) has conducted a review of this request for applicability under PRN 98-10 and finds that the label change(s) requested falls within the scope of PRN-98-10. The label has been date-stamped "Notification" and will be placed in our records.

If you have any questions, call me at 703 305-5409 or electronically at daniel.dani@epa.gov.

Sincerely,

A handwritten signature, likely of Dani Daniel, is written below the word "Sincerely,".

Dani Daniel
Registration Division (7504P)
Insecticide/Rodenticide Branch

[illegible]

Certification with Respect to Label Integrity

Version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
100-1154	February 27, 2011	000100-01154.20110227.NotifPatent.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

February 27, 2011

Signature

Date _____

Pat Dinnen

Name (typed)

**Staff Label Group Leader
Regulatory Affairs**

Title

[illegible]

NOTIFICATION
JAN 10 2011

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(BOOKLET)

RESTRICTED USE PESTICIDE
TOXIC TO FISH, MAMMALS, AND AQUATIC ORGANISMS
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.

Epi-Mek® 0.15 EC Miticide/Insecticide

Group	6	Insecticide
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Active Ingredient:	
Abamectin ¹	2.0%*
Other Ingredients:	98.0%
Total:	100.0%

¹CAS No. 65195-56-4 and No. 65195-55-3

*1 gal. contains 0.15 lb. abamectin

KEEP OUT OF REACH OF CHILDREN.

WARNING/AVISO

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.)

See additional precautionary statements and directions for use in booklet.

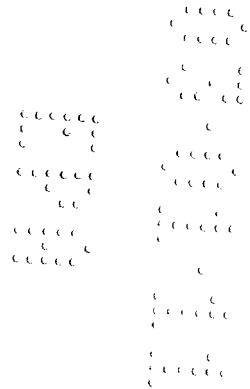
EPA Reg. No. 100-1154

EPA Est. XXXX

Product of xxxxx
Formulated in xxxxx

SCP 1154A-M (notif patent)
0.5 gallon
1 gallon

Net Contents



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FIRST AID	
If swallowed	<ul style="list-style-type: none"> • Call poison control center or doctor immediately for treatment advice. • Do not give any liquid to the person. • 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	<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 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 by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
<p align="center">NOTE TO PHYSICIAN</p> <p>Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Toxicity following accidental ingestion of this product can be minimized by early administration of chemical adsorbents (e.g., activated charcoal).</p> <p>If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements.</p> <p>In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since abamectin is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic abamectin exposure.</p> <p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p align="center">HOT LINE NUMBER</p> <p align="center">For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call 1-800-888-8372</p>	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING/AVISO

May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Harmful if inhaled or absorbed through the skin. Avoid breathing spray mist or contact with skin. Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category B on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant gloves – EPA chemical-resistance category B (e.g., barrier laminate or butyl rubber ≥ 14 mils)
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

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

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

This pesticide is toxic to fish and wildlife.

For terrestrial uses: do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment wash water or rinsate. 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.

Use of this product may pose a risk to threatened and endangered species of fish, amphibians, crustaceans (including fresh water shrimp), and insects. All use of this product in the state of California should comply with the recommendations of the California Endangered Species Project. Before using this product in California, consult with your county agriculture commissioner to determine use limitations that apply in your area.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

ATTENTION

This product contains a chemical (N-methyl pyrrolidone) known to the state of California to cause birth defects or other reproductive harm.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC, or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA 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 referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

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 workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

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

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves – EPA chemical-resistance category B (e.g., barrier laminate or butyl rubber ≥ 14 mils)
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

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

PRODUCT INFORMATION

Epi-Mek 0.15 EC is an emulsifiable concentrate that will control certain pests on the crops listed on this label when the product is applied according to the **Directions for Use**. Thorough coverage of foliage is essential for good mite and insect control.

NOTE:

Phytotoxicity: Epi-Mek 0.15 EC has been tested for phytotoxicity and has a wide margin of safety on a variety of crops. Epi-Mek 0.15 EC has also been shown to be compatible with many commonly used pesticides, crop oils, and nutritional sprays. However, since it is not possible to test a large number of possible mixtures, the user should pre-test any proposed mixtures with Epi-Mek 0.15 EC to ensure the physical compatibility and lack of phytotoxic effects.

New York State Restriction: Do not apply Epi-Mek 0.15 EC with aircraft in New York State.

Chemigation

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

SPRAY DRIFT

Responsibility

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions.

NOTE: When states have more stringent regulations, they must be observed.

Spray Drift Precautions for Application with Aircraft or Ground Application Equipment

- Apply Epi-Mek 0.15 EC only when wind velocity favors on target product deposition (approximately 3 to 10 mph).
- Do not apply with ground application equipment within 25 ft. of or with aircraft within 150 ft. of lakes, reservoirs, rivers, permanent streams, marshes, pot holes, natural ponds, estuaries, or commercial fish farm ponds.
- Do not cultivate within 25 ft. of the aquatic area to allow growth of a vegetative filter strip.

- Do not allow this product to drift onto non-target areas. Drift may result in illegal residues or injury to nontarget species. Risk of exposure to sensitive areas can be reduced by applying this product when the wind direction is away from the sensitive area.
- Do not apply when the weather conditions may cause drift.
- Avoid application when the temperature is high and/or the humidity is low. These conditions increase the evaporation of spray droplets and the likelihood of drift to aquatic areas.
- Do not apply when wind speed or wind gusts are greater than 15 mph.
- Do not apply when wind speed is below 2 mph because wind direction will vary and there is a high potential for inversion.
- Observe the following precautions when using ground application to spray tree crops or hops in the vicinity of aquatic areas such as lakes, reservoirs, permanent streams, marshes, potholes, natural ponds, estuaries, or commercial fish ponds:
 - Do not apply Epi-Mek 0.15 EC when weather conditions favor drift to aquatic areas
 - Do not apply within 110 ft. upwind of aquatic areas or when wind speed is above 8 mph.
 - Spray last 3 rows windward of aquatic areas using nozzles on one side only, with spray directed away from the aquatic areas.
 - Avoid spray going over tops of trees by adjusting or turning off top nozzles. Shut off nozzles on the side away from the grove/orchard when spraying the outside row. Shut off nozzles when turning at ends of row and passing tree gaps in rows.

Spray Drift Precautions for Aerial Application

Drift Management Requirements

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops.

• Outermost Nozzle Distance

The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

- **Nozzle Direction**

Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

- **Maximum Wind Speed**

Do not apply when wind speed is greater than 15 mph.

- **Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity, and Temperature Inversions**).

- **Controlling Droplet Size**

Volume

Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure

Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of Nozzles

Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation

Orienting nozzles so that the spray is released parallel to the air stream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

Nozzle Type

Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

- **Boom Length**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

- **Application Height**

Applications should not be made at a height greater than 10 ft. above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

- **Swath Adjustment**

When applications are made with a cross wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind.

- **Wind**

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential.

NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

- **Temperature and Humidity**

To compensate for evaporation when applying Epi-Mek 0.15 EC in low relative humidity, set up equipment to produce larger droplets. Evaporation of droplets is most severe when conditions are both hot and dry.

- **Temperature Inversions**

Epi-Mek 0.15 EC must not be applied during a temperature inversion because the potential for drift is high. Temperature inversions restrict vertical air mixing, and this causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds that are common during inversions. Temperature inversions are characterized by temperatures that increase with altitude and are common on nights with limited cloud cover and light to no wind. Inversions 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, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversions. 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 air mixing.

Resistance Management

Epi-Mek 0.15 EC is a Group 6 insecticide (contains the active ingredient abamectin). Because of the inherent risks of pests developing resistance to any product, it is strongly advised that Epi-Mek 0.15 EC be used in a sound resistance management program. Treatment may not be effective against labeled pests if insect or mite-tolerant strains develop. When applying Epi-Mek 0.15 EC to plants that are hosts of labeled pests with multiple generations per crop per year, use resistance management practices.

Resistance management practices may include, but are not limited to:

- rotating Epi-Mek 0.15 EC with other products with different modes of action,
- avoiding treatment of successive generations with the Epi-Mek 0.15 EC,
- using labeled rates at the specified spray intervals,
- using non-chemical alternatives such as beneficial arthropods,
- rotating susceptible to non-susceptible plants, and
- using various cultural practices

For additional information regarding the implementation of these or other resistance management practices, consult your local agricultural advisor or company representative.

CROP USE DIRECTIONS

Apples

For control of European red mite, McDaniel spider mite, Tentiform leafminer, Twospotted spider mite, and White apple leafhopper

Epi-Mek 0.15 EC may be applied using conventional dilute or concentrate ground application sprayers calibrated to deliver sufficient water for thorough coverage. Gallons of spray will vary with size and number of trees per acre and density of foliage. In any case, thorough coverage is essential for good spider mite and insect control.

NOTE:

- For best results, apply in combination with horticultural spray oil (not a dormant oil) as directed. Applications without horticultural spray oil may result in reduced efficacy and/or residual control.
- When used alone or when other products are applied sequentially, Epi-Mek 0.15 EC in combination with horticultural spray oil may injure the fruit of certain apple varieties (e.g. russetting on light-skinned varieties such as Golden Delicious).
- When using Epi-Mek 0.15 EC plus horticultural spray oil, carefully follow the **Directions for Use** and **Precautions** on the horticultural spray oil label as well as the precautions in official spray guides or on product labels. For example, applying Epi-Mek 0.15 EC plus horticultural spray oil fewer than 14 days before or after applying Captan® can result in phytotoxicity and crop loss.

Apples

Pest	For Dilute Sprays ^a fl. oz./ 100 gals.	For Concentrate Sprays ^b fl. oz./A	Instructions
European red mite McDaniel spider mite Tentiform leafminer Twospotted spider mite White apple leafhopper	2.5-5.0	10-20	<ul style="list-style-type: none"> • Apply Epi-Mek 0.15 EC when spider mite or insect thresholds are reached. • A second application may be made if needed to maintain control. (See Use Restrictions.)
Horticultural Spray Oil (not a dormant oil)	0.25% or 1 gal./A	Minimum of 1 gal./A	<ul style="list-style-type: none"> • Spider Mites: For best results, apply before a threshold of 5 spider mites per leaf is reached. Residual spider mite control with Epi-Mek 0.15 EC in combination with horticultural spray oil (not a dormant oil) is greater from spray deposits on newer leaves compared to older. Applications of Epi-Mek 0.15 EC for spider mite control should be limited to a period extending from petal fall through 6 weeks following petal fall. • Tentiform Leafminer: For best results, apply against egg (to control new hatch) and early sap feeder stages of first and second-generation tentiform leafminers when locally established thresholds have been reached. Do not apply during bloom. • White Apple Leafhopper (Not for use west of the Rocky Mountains): Application of Epi-Mek 0.15 EC is limited only to first generation white apple leafhoppers. Apply soon after petal fall in combination with horticultural spray oil (not a dormant oil).

^aThe rate of Epi-Mek 0.15 EC per 100 gals. is based on a volume of 400 gals./A dilute spray.

^bTo determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product/A in concentrate sprays as would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10 fl. oz./A on small trees.

Use Restrictions – Apples

- **PHI:** Do not apply within **28 days** of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Amount of Water:** Do not apply in less than 40 gals. of water/A.
- **Maximum Amount per Application:** Do not apply more than 20 fl. oz./A (or 0.023 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** If a second application is necessary, wait at least 21 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per growing season.
- **Maximum Amount per Season:** Do not apply more than 40 fl. oz./A (or 0.047 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product in a growing season.
- **Grazing:** Do not allow livestock to graze in treated orchards.

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Avocados

For control of Avocado thrips

NOTE: Epi-Mek 0.15 EC may be applied using ground application equipment or aircraft. Aerial application is permitted because of its importance to the avocado growing industry. However, aerial application is not the preferred method of application for the best control of thrips. With aerial application, spray coverage and the resulting control of thrips is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of thrips when Epi-Mek 0.15 EC is aerially applied.

Gallons of spray will vary with size and number of trees per acre and density of foliage. In any case, thorough coverage is essential for good mite and insect control.

Avocados

Pest	fl. oz./A	Instructions
Avocado Thrips (<i>Scirtothrips perseae</i>)	10.0 – 20.0 Do not use less than 10 fl. oz. of product/A	<ul style="list-style-type: none"> For best results, apply when immature thrips are first observed but before numbers exceed 5 immature thrips per leaf/fruit. Use 10-15 fl. oz. of product /A for low* to moderate* infestations and 15-20 fl. oz. of product/A for severe* infestations. Add a 1.0% - 4.0% of a horticultural spray oil (not a dormant oil) approved for use on avocados.
Horticultural Oil (not a dormant oil)	Minimum 1 to 4% v/v	<ul style="list-style-type: none"> Make a second application, if needed, to maintain control, but wait at least 30 days after the first application to retreat. (See Use Restrictions.) For Ground Application: If spray volume is greater than 400 gals./A apply Epi-Mek 0.15 EC at a rate of 2.5 fl. oz. per 100 gals. of water plus 1.0% - 4.0% of a horticultural spray oil (not a dormant oil) approved for use on avocados. Note: To prevent crop injury, observe all precautions and restrictions on the oil label. When using oil concentrations above 2.0% treat a small test area before making a large-scale application.

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*Thrips Infestation Level	Number of immature thrips per leaf/fruit
Low	1-2
Moderate	3-4
Severe	More than 5

Use Restrictions - Avocados

- **PHI:** Do not apply within **14 days** of harvest.
- **Application Method:** Ground and aerial application permitted.
- **Amount of Water:** Do not apply in less than 100 gals. of water with ground application equipment or 50 gals. of water with aircraft.
- **Maximum Amount per Application:** Do not apply more than 20 fl. oz./A (or 0.023 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** Wait at least 30 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per season.
- **Maximum Amount per Season:** Do not apply more than 40 fl. oz./A (or 0.047 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per season.
- **Grazing:** Do not allow livestock to graze in treated orchards.

Celeriac (*Apium graveollens*)

For control of Twospotted spider mite

Epi-Mek 0.15 EC may be applied using conventional dilute or concentrate sprayers. Thorough coverage of the crop canopy is essential for optimum results. Inadequate crop coverage may result in reduced control. Calibrate sprayer to deliver sufficient water for thorough coverage of the foliage.

Celeriac

Pest	fl. oz./A	Instructions
Twospotted spider mite	16.0	<ul style="list-style-type: none"> • For best results, use in combination with a non-ionic surfactant. • Apply when mites first appear and repeat as necessary to maintain control. (See Use Restrictions.)

Use Restrictions – Celeriac

- **PHI:** Do not apply within **7 days** of harvest.
- **Application Method:** Apply with ground application equipment only.
- **Amount of Water:** Do not apply in less than 20 gals. of water/A.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of Applications:** Do not make more than 2 sequential applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product.
- **Maximum Amount per Season:** After transplanting the celeriac, do not apply more than 48 fl. oz./A (or 0.056 lb. ai/A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per season.

Citrus Fruit Crop Group (Crop Group 10)

Crops in this group are: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Sour orange, Sweet orange, Pummelo, and Satsuma mandarin.

For control of Asian citrus psyllid, Broad mite, Citrus bud mite, Citrus leafminer, Citrus rust mite, Citrus thrips, and Twospotted spider mite

Thorough spray coverage is essential for good mite and insect control. Spray gallonage may vary depending on size and number of trees per acre as well as density of foliage.

- **Ground Application**

Apply using conventional dilute or concentrate ground application sprayers calibrated to deliver sufficient water for thorough coverage (or outside coverage for Asian citrus psyllid, citrus leafminer, or citrus thrips).

- **Aerial Application**

Aerial application is permitted **only** for control of citrus leafminer. Aerial application to citrus is not approved in California.

Citrus Fruit Crop Group

Pest	For Dilute Sprays ^a fl. oz./100 gals.	For Concentrate Sprays ^b fl. oz./A	Instructions
Asian citrus psyllid	--	10-20 ^c	<ul style="list-style-type: none"> • Apply Epi-Mek 0.15 EC with a minimum of 0.20% horticultural spray oil (not a dormant oil) in the spray mixture or not less than 1.0 gal. of oil/A (except when specified differently below). • Asian Citrus Psyllid: Apply Epi-Mek 0.15 EC to protect newly expanding foliage flush during the spring, summer or fall. Epi-Mek 0.15 EC will only control adults and nymphs present at the time of application. • Mites: Apply when mites first appear during spring, summer, and/or fall. • Citrus Bud Mite: For best results, time the spray at "bud swell." • Citrus Leafminer: Apply to protect new growth during spring, summer, or fall. • Citrus Thrips: Application targeted for citrus thrips will only control the current generation and must be correctly timed. Apply when economic thresholds have been reached (after egg hatch has begun – preferably early to mid-hatch).
Broad mite	1.0-2.0	10-20 ^c	
Citrus bud mite	1.0-2.0	10-20 ^d	
Citrus leafminer	--	5-20 ^c	
Citrus rust mite	0.5-2.0	5-20 ^c	
Citrus thrips	--	10-20 ^e	
Twospotted spider mite	1.0-2.0	10-20	

^aThe rate of Epi-Mek 0.15 EC per 100 gals. is based on a volume of 1,000 gals./A dilute spray.

^bFor concentrate sprays, adjust the dosage to apply an amount/A equal to that used in full cover dilute spray.

^cGround application: For best results, use 150-300 gals./A of spray mix with a minimum of 3 gal./A of horticultural oil (not a dormant oil) and apply at a ground speed of 1 to 1.5 MPH.

^dFor best results, use a minimum of 500 gals./A of spray mix with a minimum of 0.5% horticultural spray oil (not a dormant oil).

^eFor best results, use 100-250 gals./A of spray mix applied to achieve outside coverage.

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Use Restrictions – Citrus Fruit Crop Group

- **PHI:** Do not apply within 7 days of harvest.
- **Application Method:**
 - To control citrus leafminer** - Ground or aerial application is permitted; however, do not apply with aircraft to citrus in California. For aerial application use a minimum of 10 gallons of finished spray volume per acre. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage.
 - All other pests** - Ground application only. Do not apply with aircraft.
- **Prohibited Use:** To manage resistance do not use in citrus nurseries.
- **Application Interval:** Wait at least 30 days before repeating application.
- **Maximum Amount per Season:**
 - Do not apply more than 40 fl. oz./A (or 0.047lb. a.i./A) of Epi-Mek 0.15 EC, or any other foliarly applied abamectin containing product in any growing season.
 - Do not make more than 3 applications in any growing season.
- **Grazing:** Do not allow livestock to graze in treated orchards.

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Cotton

For control of spider mites

Mix with water as indicated below. Thorough coverage of the crop is essential for optimum results. Inadequate coverage may result in reduced control. For best coverage and control apply Epi-Mek 0.15 EC with ground application equipment.

Pest	Fl. oz./A	Instructions
Carmine spider mite Pacific spider mite Strawberry spider mite Twospotted spider mite	4-6 (For early season cotton-See Instructions)	Apply when mites first appear. The use rate depends on the size of the plant and density of the foliage. Repeat application if needed to maintain control. See Use Restrictions .
	8-16	<p>The lower use rates of 4-6 fl. oz./A are only recommended if cotton is early season and under 10 inches in height. Do not use less than 4 fl. oz./A. West of the Rocky Mountains - the lower use rates may only be used on cotton less than 10 inches in height and applied only with ground equipment.</p> <p>Note: Epi-Mek 0.15 EC may be used without a wetting agent. Spreading and penetrating surfactants can improve mite control. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. Do not use binder or sticker-type surfactants.</p>

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Use Restrictions - Cotton

- **PHI:** Do not apply within **20 days** of harvest.
- **Application Method:** Ground or aerial application is permitted.
- **Minimum Amount of Water:** Do not apply in fewer than 5 gallons of water per acre. Use sufficient volume to insure thorough coverage.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./A (or 0.019 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application interval:** Wait at least 21 days before repeating application.
- **Maximum Amount per Season:** Do not apply more than 32 fl. oz./A (or 0.038 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per season.
- **Grazing Restriction:** Do not feed or allow livestock to graze treated cotton.

Cucurbit Vegetables Crop Group (Crop Group 9)

Crops in this group are: Chayote, Chinese waxgourd, Citron Melon, Cucumber, Gherkin, Edible Gourd, (includes hyotan, cucuzza, hechima, Chinese okra); *Momordica* spp., (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of *Cucumis melo*) includes true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon), Pumpkin, Summer Squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Winter Squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

For Control of Leafminers and Spider Mites

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage may result in reduced control.

Note:

- Epi-Mek 0.15 EC may be applied with ground application equipment or aircraft.
- For best control of mites, apply Epi-Mek 0.15 EC with ground application equipment. With aerial application, spray coverage and the resulting control of mites is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of mites when Epi-Mek 0.15 EC is aurally applied.

Cucurbit Vegetables Crop Group

Pest	fl. oz./A	Instructions
Leafminers Spider mites	8.0-16.0	<ul style="list-style-type: none"> • Use 8 -12 fl. oz./A for low to moderate infestations and 16 fl. oz./A for severe infestations. • Apply when adult leafminer flies or spider mites are first observed and repeat application, as needed, to maintain control within constraints of a sound resistance management program. (See Use Restrictions.)

Use Restrictions – Cucurbit Vegetables Crop Group

- **PHI:** Do not apply within 7 days of harvest.
- **Application Method:** Ground or aerial application is permitted; however do not apply with aircraft in New York State.
- **Amount of Water:** Do not apply in less than 20 gals. of water/A with ground application equipment. Do not apply in less than 5 gals. of water/A with aircraft. Under conditions such as high pest populations, dense foliage, or adverse

application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage.

- **Maximum Amount per Application:** Do not apply more than 16 fl oz./A (or 0.019 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of Applications:** Do not make more than 2 sequential applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product.
- **Maximum Amount per Season:** Do not apply more than 48 fl. oz./A (or 0.056 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product in a growing season.

Fruiting Vegetables (except *Cucurbits*) Crop Group (Crop Group 8)

Crops in this group are: Eggplant, Groundcherry, Pepino, Peppers (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, and Tomato

For control of Broad mite, Colorado potato beetle, *Liriomyza* leafminers, Spider mites, *Thrips palmi*, Tomato pinworm, Tomato psyllid, and Tomato russet mite

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage may result in reduced control.

Note:

- Epi-Mek 0.15 EC may be applied with ground application equipment or aircraft.
- For best control of mites, apply Epi-Mek 0.15 EC with ground application equipment. With aerial application, spray coverage and the resulting control of mites is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of mites when Epi-Mek 0.15 EC is aurally applied.

Fruiting Vegetables Crop Group

Pest	fl. oz./A.	Instructions
Broad mite Colorado potato beetle <i>Liriomyza</i> leafminers Spider mites <i>Thrips palmi</i> Tomato psyllid Tomato russet mite	8.0-16.0	<ul style="list-style-type: none"> • Broad, russet, and spider mites: Apply when mites first appear. • <i>Thrips palmi</i>: Apply when thrips are first observed. • Tomato pinworm: Application may be made from the time moth activity is detected up to, but no later than, the time when newly emerged larvae are present.
Tomato pinworm	16.0	<ul style="list-style-type: none"> • Mites, leafminers, <i>Thrips palmi</i>, and Colorado potato beetle: Use 8 fl. oz./A for low to moderate infestations and 16 fl. oz./A for severe infestations. • Repeat application as necessary to maintain control. (See Use Restrictions.) • Note: Epi-Mek 0.15 EC may be used without a wetting agent. Spreading and penetrating surfactants can improve insect control when necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. Do not use binder or sticker-type surfactants.

Use Restrictions – Fruiting Vegetables Crop Group

- **PHI:** Do not apply within **7 days** of harvest.
- **Application Method:** Ground or aerial application permitted; however do not apply with aircraft in New York State.
- **Prohibited Use:** For resistance management, do not use on fruiting vegetables grown for transplanting.
- **Amount of Water:** Do not apply in less than 20 gals. of water/A with ground application equipment. Do not apply in less than 5 gals. of water/A with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./A (or 0.019 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** Wait at least 7 days before repeating application.

- **Number of Applications:** Do not make more than 2 sequential applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product.
- **Maximum Amount per Season:** Do not apply more than 48 fl. oz./A (or 0.056 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product in a growing season.

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Grapes

For control of Pacific spider mite, Twospotted spider mite, Variegated leafhopper, Western grape leafhopper, Western grapeleaf skeletonizer, and Willamette spider mite

Epi-Mek 0.15 EC may be applied using conventional ground sprayers calibrated to deliver sufficient water for thorough coverage. Thorough coverage is essential for good spider mite and insect control. Do not spray alternate rows. Epi-Mek 0.15 EC must be applied to both sides of each row for maximum coverage.

Grapes

Pest	fl. oz./A	Instructions
Pacific spider mite Twospotted spider mite Variegated leafhopper Western grape leafhopper Western grapeleaf skeletonizer Willamette spider mite	8.0-16.0 Plus a nonionic surfactant	<ul style="list-style-type: none"> • Use 8 - 12 fl. oz./A for low to moderate infestations and 16 fl. oz. for severe infestations. • Repeat application, if needed. (See Use Restrictions.) • Note: Epi-Mek 0.15 EC must be applied in combination with a nonionic surfactant to improve wetting of foliage and to smooth out spray deposits. Spreading and penetrating surfactants can improve insect control. Do not use binder or sticker-type surfactants. Although Epi-Mek 0.15 EC has been tested in combination with a nonionic surfactant for safety to grapes, it is impossible to test on all grape varieties under the variety of conditions that may cause crop injury. Therefore, when using Epi-Mek 0.15 EC in combination with a nonionic surfactant, carefully follow the Directions for Use and Precautions on the nonionic surfactant label and in official spray guides. • Spider mites: Apply when mites first appear but before motiles exceed 5 per leaf. • Western grapeleaf skeletonizer: Apply Epi-Mek 0.15 EC plus a nonionic surfactant when larvae are first observed. For optimum control, apply shortly after egg hatch. • Leafhoppers: Apply Epi-Mek 0.15 EC plus a nonionic surfactant using thorough spray coverage for contact knock-down only.

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Use Restrictions – Grapes

- **PHI:** Do not apply within **28 days** of harvest.
- **Application Method:** Ground application only.
- **Amount of Water:** Do not apply in less than 50 gals. of water/A with conventional ground application equipment. When using an electro-static sprayer, less than 50 gals. of water/A may be used , however do not use less than 5 gals. of water/A.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./A (or 0.019 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** If a second application is necessary, wait at least 21 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per growing season.
- **Maximum Amount per Season:** Do not apply more than 32 fl. oz./A (0.038 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product in a growing season.
- **Grazing:** Do not allow livestock to graze in treated vineyards.

Herb Crop Subgroup (Crop Subgroup 19A) (Except Chives)

Crops in this subgroup are: Angelica, Balm, Basil, Borage, Burnet, Camomile, Catnip, Chervil (dried), Clary, Coriander (leaf), Cilantro (leaf), Costmary, Culantro (leaf), Curry (leaf), Dill weed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram (*Origanum* species), Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Summer and Winter savory, Sweet bay, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, and Wormwood.

For control of *Liriomyza* leafminers

Mix with water as indicated below. Apply thoroughly with ground application equipment as a foliar spray and ensure good upper and lower leaf coverage.

Herb Crop Subgroup (Except Chives)

Pest	fl. oz./A.	Instructions
<i>Liriomyza</i> leafminers	8.0-16.0	<ul style="list-style-type: none"> • Use 8 fl. oz./A for low to moderate infestations and 16 fl. oz./A for severe infestations. • Apply when adult flies are first observed and repeat application, as necessary to maintain control. (See Use Restrictions.) • Epi-Mek 0.15 EC may be used without a wetting agent. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. • Note: Although Epi-Mek 0.15 EC has been tested in combination with a nonionic surfactant for safety to herbs, it is impossible to test on all herb types and varieties under the variety of conditions that may cause crop injury. Therefore, when using Epi-Mek 0.15 EC in combination with a nonionic surfactant, carefully follow the Directions for Use and Precautions on the nonionic surfactant label and in official spray guides.

Use Restrictions – Herb Crop Subgroup (Except Chives)

- **PHI:** Do not apply within **14 days** of harvest.
- **Application Method:** Apply with ground application equipment.
- **Amount of Water:** Use a minimum of 30 gals. of water/A.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./A (or 0.019 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.

- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per single cutting (harvest).
- **Maximum Amount per Season:** Do not apply more than 48 fl. oz./A (or 0.056 lb. ai./A). of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per cropping season.

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Hops (Not approved for use in California)

For control of Twospotted spider mite

Mix with water as indicated below. Apply with ground application equipment as a foliar spray and ensure good upper and lower leaf coverage. Gallons of spray may vary with the size of plants and density of foliage. In any case, thorough coverage is essential for good control of Twospotted spider mite. When using concentrate sprays, the amount of water is reduced, but the amount of Epi-Mek 0.15 EC/A should remain the same as for dilute sprays.

Hops

Pest	fl. oz./A	Instructions
Twospotted spider mite	8-16.0	<ul style="list-style-type: none"> • Apply Epi-Mek 0.15 EC when Twospotted spider mites reach treatment thresholds. • For applications at ½ trellis growth (6-8 ft. height) apply 8-16 fl. oz./A in a minimum of 40 gals. of water/A. • For applications beyond ½ trellis growth, do not use less than 16 fl. oz./A in a minimum of 100 gals. of water/A. • Note: Epi-Mek 0.15 EC may be used without a wetting agent. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended.

Use Restrictions – Hops

- **PHI:** Do not apply within **28 days** of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Application Interval:** If a second application is necessary to maintain control, wait at least 21 days before repeating application and repeat application only after an alternative miticide with a different mode of action has been used.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./A (or 0.019 lb ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Maximum Number of Applications:** Do not make more than 2 applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per growing season.
- **Grazing:** Do not allow livestock to graze in treated hops yards.

Leafy Vegetables (except *Brassica* vegetables) Crop Group (Crop Group 4)

Crops in this group are: Amaranth (leafy Amaranth, Chinese spinach, tampala); Arugula (Roquette); Cardoon; Celery; Celtuce; Chervil; Chinese celery; Chrysanthemum, edible leaved and garland; Corn salad; Cress, garden and upland (yellow rocket and winter cress); Dandelion; Dock (Sorrel); Endive (escarole); Florence fennel; Lettuce, head and leaf; New Zealand Spinach; Orach; Parsley; Purslane, garden and winter; Radicchio (red chicory); Rhubarb; Spinach; Vine spinach; and Swiss chard.

For Control of Carmine spider mite, *Liriomyza* leafminers, and Twospotted spider mite

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage may result in reduced control.

Note: Epi-Mek 0.15 EC may be applied with ground application equipment or aircraft. For best control of mites, apply Epi-Mek 0.15 EC with ground application equipment. With aerial application, spray coverage and the resulting control of mites is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of mites when Epi-Mek 0.15 EC is aurally applied.

Leafy Vegetables Crop Group

Pest	fl. oz./A	Instructions
Carmine spider mite <i>Liriomyza</i> leafminers Twospotted spider mite	8.0-16.0 Plus a nonionic surfactant	<ul style="list-style-type: none"> • Use 8 - 12 fl. oz./A for low to moderate infestations and 16 fl. oz./A for severe infestations. • Spider mites: Apply when mites first appear, and repeat as needed to maintain control. (See Use Restrictions.) • Leafminers: Apply when adult flies are first observed and repeat applications as needed to maintain control. (See Use Restrictions.) • Note: Epi-Mek 0.15 EC may be used without a wetting agent. Spreading and penetrating surfactants can improve insect control. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. Do not use binder or sticker-type surfactants.

Use Restrictions – Leafy Vegetables Crop Group

- **PHI:** Do not apply within **7 days** of harvest.
- **Application Method:** Ground or aerial application permitted; however do not apply with aircraft in New York State.
- **Prohibited Use:** For resistance management, do not use on leafy vegetables grown for transplanting.
- **Amount of Water:** Do not apply in less than 20 gals. of water/A. with ground application equipment. Do not apply in less than 5 gals. of water per acre with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./A (or 0.019 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of applications:** Do not make more than 2 sequential applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product.
- **Maximum Amount per Season:** Do not apply more than 48 fl. oz./A (or 0.056 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per growing season.

Mint (peppermint and spearmint)

For control of Twospotted spider mite

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage may result in reduced control.

Mint

Pest	fl. oz./A	Instructions
Twospotted spider mite	8.0-12.0	<ul style="list-style-type: none"> • Treat when mites first appear. • For optimum control, a nonionic surfactant or organosilicone-based surfactant should be used at the manufacturer's recommended rate.

Use Restrictions – Mint

- **PHI:** Do not apply within **28 days** of harvest.
- **Application Method:** Ground or aerial application permitted; however do not apply with aircraft in New York State.
- **Amount of Water:** Do not apply in less than 20 gals. of water/A with ground application equipment. Do not apply in less than 5 gals. of water/A with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions such as high temperatures, use a greater volume of water to insure adequate coverage.
- **Maximum Amount per Application:** Do not apply more than 12 fl. oz./A (or 0.014 lb. ai./A) of Epi-Mek 0.15EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of Applications:** Do not make more than 2 sequential applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product and do not apply more than 3 applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per season.
- **Maximum Amount per Season:** Do not apply more than 36 fl. oz./A (or 0.042 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per crop per season.
- **Grazing:** Do not allow livestock to graze or feed treated foliage to livestock.

Pears (including Oriental pear trees)

For control of European red mite, McDaniel spider mite, Pear psylla, Pear rust mite, Twospotted spider mite, and Yellow mite

Epi-Mek 0.15 EC may be applied using conventional dilute or concentrate ground application sprayers calibrated to deliver sufficient water for thorough coverage. Gallons of spray will vary with size and number of trees per acre and density of foliage. In any case, thorough coverage is essential for good spider mite and insect control.

NOTE:

- For best results, apply in combination with horticultural spray oil (not a dormant oil) as directed. Applications without horticultural spray oil may result in reduced efficacy and/or residual control.
- When using Epi-Mek 0.15 EC plus horticultural spray oil, carefully follow the **Directions for Use** and **Precautions** on the horticultural spray oil label as well as the precautions in official spray guides or on product labels. For example, applying Epi-Mek 0.15 EC plus horticultural spray oil fewer than 14 days before or after applying Captan® can result in phytotoxicity and crop loss.

Pears

Pest	For Dilute Sprays^a fl. oz./ 100 gals.	For Concentrate Sprays^b fl. oz./A	Instructions
European red mite McDaniel spider mite Pear psylla Pear rust mite Twospotted spider mite Yellow mite	2.5-5.0	10-20	<ul style="list-style-type: none"> • Apply Epi-Mek 0.15 EC when spider mite or insect thresholds are reached. • A second application may be made if needed to maintain control. (See Use Restrictions.)
Horticultural Spray Oil (not a dormant oil)	0.25% or 1 gal./A	Minimum of 1 gal./A	

^aThe rate of Epi-Mek 0.15 EC per 100 gals. is based on a volume of 400 gals./A dilute spray.

^bTo determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product/A in concentrate sprays as would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10 fl. oz./A on small trees.

Use Restrictions – Pears

- **PHI:** Do not apply within **28 days** of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Amount of Water:** Do not apply in less than 40 gals. of water/A.
- **Maximum Amount per Application:** Do not apply more than 20 fl. oz./A (or 0.023 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** If a second application is necessary, wait at least 21 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per growing season.
- **Maximum Amount per Season:** Do not apply more than 40 fl. oz./A (or 0.047 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product in a growing season.
- **Grazing:** Do not allow livestock to graze in treated orchards.

Stone Fruit Crop Group (Crop Group 12)

Crops in this group are: apricot; cherry (sweet and tart); nectarine; peach; plum; plum (chickasaw, damson, and Japanese); plumcot, and prune (fresh)

For control of European spider mite, Pacific spider mite, and Twospotted spider mite

Epi-Mek 0.15 EC may be applied using conventional dilute or concentrate sprayers calibrated to deliver sufficient water for thorough coverage. Gallons of spray will vary with size and number of trees per acre and density of foliage. In any case, thorough coverage is essential for good spider mite control.

Stone Fruit Crop Group

Pest	For Dilute Sprays ^a fl.oz./ 100 gals.	For Concentrate Sprays ^b fl. oz./A	Instructions
European red mite Pacific spider mite Twospotted spider mite	2.5-5.0	10-20	<ul style="list-style-type: none"> • Apply when mites first appear. • A second application may be made, if needed, to maintain control. (See Use Restrictions.) • Always apply Epi-Mek 0.15 EC in combination with a nonionic surfactant that spreads on and/or penetrates the leaf cuticle, or apply with horticultural spray oil (not a dormant oil). • NOTE: <ol style="list-style-type: none"> 1) A nonionic surfactant that spreads on and/or penetrates the leaf cuticle can improve insect control. Although Epi-Mek 0.15 EC has been tested in combination with nonionic surfactants for safety to stone fruit, it is impossible to test on all stone fruit varieties under the variety of conditions that may cause crop injury. Therefore, when using Epi-Mek 0.15 EC in combination with a nonionic surfactant, carefully follow the Directions for Use and Precautions on the surfactant label and in official spray guides.

Horticultural Spray Oil (not a dormant oil)	0.25% or 1 gal./A	Minimum of 1 gal./A	2) A horticultural oil (not a dormant oil) may improve efficacy and can be used but it may increase the possibility of phytotoxicity to foliage and fruit.
OR Nonionic Surfactant	Labeled Rate		<ul style="list-style-type: none"> • Use nonionic surfactants at the manufacturer's recommended rate. • Use a minimum of 0.25% horticultural spray oil (not a dormant oil) in the dilute spray mixture and not less than 1.0 gal. of horticultural spray oil per acre in the final finished spray.

^aThe rate of Epi-Mek 0.15 EC per 100 gals. is based on a volume of 400 gals./A dilute spray.

^bTo determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product per acre in concentrate sprays as would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10 fl. oz./A on small trees.

Use Restrictions – Stone Fruit Crop Group

- **PHI:** Do not apply within **21 days** of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Amount of Water:** Do not apply in less than 40 gals. of water/A.
- **Maximum Amount per Application:** Do not apply more than 20 fl. oz./A (or 0.023 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** If a second application is needed, wait at least 21 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per growing season.
- **Maximum Amount per Season:** Do not apply more than 40 fl. oz./A (or 0.047 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product in a growing season.
- **Grazing:** Do not allow livestock to graze in treated orchards.

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Strawberries

For control of Strawberry spider mite and Twospotted spider mite

Mix with water as indicated below. Apply with ground application equipment as a foliar spray and insure thorough coverage on upper and lower leaf surfaces. Adjust spray volume and nozzle placement to insure maximum coverage of tops and undersides of leaves.

Strawberries

Pest	fl. oz./A	Instructions
Strawberry spider mite Twospotted spider mite	16.0	<ul style="list-style-type: none"> • Make 2 applications 7-10 days apart when mites first appear. Repeat this application sequence, if needed, to maintain control. (See Use Restrictions.) • Note: Epi-Mek 0.15 EC may be used without a wetting agent. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended.

Use Restrictions – Strawberries

- **PHI:** Do not apply within **3 days** of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Prohibited Use:** For resistance management purposes, do not use in strawberry nurseries.
- **Amount of Water:** Do not apply in less than 50 gals. of water/A with conventional ground application equipment. When using electro-static sprayers do not apply in less than 10 gallons of water/A.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./A (or 0.019 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Application Interval:** Wait at least 21 days after the second application before repeating application.
- **Maximum Amount per Season:** Do not apply more than 64 fl. oz./A (or 0.075 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product in a growing season.

Tree Nuts Crop Group (Crop Group 14) and Pistachio

Crops in this group are: almond, beech nut, Brazil nut, butternut, cashew, chestnut, chinquapin, filbert (hazlenut), hickory nut, macadamia nut, pecan, and walnuts (black and English)

For control of European red mite, Pacific spider mite, Strawberry spider mite, and Twospotted spider mite

Epi-Mek 0.15 EC may be applied using conventional dilute or concentrate sprayers calibrated to deliver sufficient water for thorough coverage. Gallons of spray will vary with size and number of trees per acre and density of foliage. In any case, thorough coverage is essential for good spider mite and insect control.

Tree Nuts Crop Group and Pistachio

Pest	For Dilute Sprays ^a fl. oz./ 100 gals.	For Concentrate Sprays ^b fl. oz./A	Instructions
European red mite Pacific spider mite Strawberry spider mite Twospotted spider mite	2.5-5.0	10-20	<ul style="list-style-type: none"> Always use Epi-Mek 0.15 EC in combination with a horticultural spray oil (not a dormant oil) approved for use on tree nuts.
Horticultural Spray Oil (not a dormant oil)	0.25% or 1 gal./A	Minimum of 1 gal./A	<ul style="list-style-type: none"> Apply Epi-Mek 0.15 EC when spider mites first appear. Residual spider mite control is greater from spray deposits on newer leaves compared to older leaves. A second application may be made, if needed, to maintain control. (See Use Restrictions.)

^aThe rate of Epi-Mek 0.15 EC per 100 gals. is based on a volume of 400 gals./A dilute spray.

^bTo determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product per acre in concentrate sprays that would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10 fl. oz./A on small trees.

Use Restrictions – Tree Nuts Crop Group and Pistachio

- **PHI:** Do not apply within **21 days** of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Amount of Water:** Do not apply in less than 40 gals. of water/A.
- **Application Interval:** If a second application is necessary, wait at least 21 days before repeating application.
- **Maximum Amount per Application:** Do not apply more than 20 fl. oz./A (or 0.023 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per application.
- **Applications per Season:** Do not make more than 2 applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per growing season.
- **Maximum Amount per Season:** Do not apply more than 40 fl. oz./A (or 0.047 lb. ai./A) of Epi-Mek or any other foliarly applied abamectin containing product in a growing season.
- **Grazing:** Do not allow livestock to graze in treated groves/ orchards.

Tuberous and Corm Vegetables Crop Subgroup (Crop Subgroup 1C)

Crops in this subgroup are: arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava (bitter and sweet); chayote (root); chufa; dasheen; ginger; leren; potato; sweet potato; tanier; turmeric; yam bean; and yam (true).

For control of Colorado potato beetle, *Liriomyza* leafminers, Potato psyllid, and Spider mites

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage may result in reduced control.

Note: Epi-Mek 0.15 EC may be applied using ground application equipment or aircraft. For best control of mites, apply Epi-Mek 0.15 EC with ground application equipment. With aerial application, spray coverage and the resulting control of mites is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of mites when Epi-Mek 0.15 EC is aially applied.

Tuberous and Corm Vegetables Crop Subgroup

Pest	fl. oz./A	Instructions
Colorado potato beetle <i>Liriomyza</i> leafminers Potato psyllid Spider mites	8.0-16.0	<ul style="list-style-type: none"> • Use 8 - 12 fl. oz./A for low to moderate infestations and 16 fl. oz./A for severe infestations. • The addition of a nonionic surfactant or organosilicone-based surfactant, at the manufacturer's recommended rate, is suggested for optimum spider mite and insect control. • Insect and spider mite control may be reduced if Epi-Mek 0.15 EC is used in combination with a sticker or binder type product such as Bravo® Weather Stik®. • Colorado potato beetle: Make the first application after approximately 50% of the egg masses have hatched and larvae are present. If 2 applications are needed, limit them to a single Colorado potato beetle generation per crop. Do not make more than 2 applications per crop. (See Use Restrictions.) • <i>Liriomyza</i> leafminers: Make the first application when adult flies are first observed. Repeat applications as needed to maintain control. (See Use Restrictions.) • Spider mites: Make the first application when mites first appear. Repeat application as needed to maintain control. (See Use Restrictions.)

Use Restrictions – Tuberous and Corm Vegetables Crop Subgroup

- **PHI:** Do not apply within **14 days** of harvest.
- **Application Method:** Ground or aerial application permitted; however do not apply with aircraft in New York State.
- **Amount of Water:** Do not apply in less than 20 gals. of water/A with ground application equipment. Do not apply in less than 5 gals. of water/A with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz. /A (or 0.019 lb. ai./A) per application.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of Applications:** Do not make more than 2 sequential applications of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product.
- **Maximum Amount per Crop:**
 - For spider mite or Colorado potato beetle control, do not apply more than 32 fl. oz./A (or 0.038 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per crop.
 - For leafminer control, do not apply more than 48 fl. oz./A (or 0.056 lb. ai./A) of Epi-Mek 0.15 EC or any other foliarly applied abamectin containing product per crop.
- **Grazing:** Do not allow livestock to graze or feed treated foliage to livestock.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

Pesticide Storage


Store in a tightly closed container in a cool, dry place.

Pesticide Disposal

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

Container Handling

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available 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. 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 $\frac{1}{4}$ 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.

Epi-Mek® Bravo® Weather Stik®, the Syngenta logo, and the CP FRAME  are trademarks of a Syngenta Group Company

Captan® is a trademark of Tomen Agro, Inc.

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For non-emergency (e.g. current product information) call
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, North Carolina 27419-8300

SCP 1154A-M(notif patent)

Epi-Mek 1154A-M(notif patent)clean -lg 2-27-11 000100-01154.20110227.NotifPatent.pdf

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(Nondetachable Container Label)

RESTRICTED USE PESTICIDE

TOXIC TO FISH, MAMMALS, AND AQUATIC ORGANISMS
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.

Epi-Mek® 0.15 EC Miticide/Insecticide

Group	6	Insecticide
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Active Ingredient:

Abamectin¹ 2.0%*

Other Ingredients: 98.0%

Total: 100.0%

¹CAS No. 65195-56-4 and No. 65195-55-3

*1 gal. contains 0.15 lb. abamectin

KEEP OUT OF REACH OF CHILDREN.

WARNING/AVISO

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.)

See additional precautionary statements and directions for use in booklet.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-1154

EPA Est. XXXX

SCP 1154A-M (notif patent)

0.5 gallon

1 gallon

Net Contents

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PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING/AVISO

May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Harmful if inhaled or absorbed through the skin. Avoid breathing spray mist or contact with skin. Prolonged or frequently -repeated exposure may cause allergic skin reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

FIRST AID	
If swallowed	<ul style="list-style-type: none"> • Call poison control center or doctor immediately for treatment advice. • Do not give any liquid to the person. • 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	<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 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 by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN

Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Toxicity following accidental ingestion of this product can be minimized by early administration of chemical adsorbents (e.g., activated charcoal).

If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements.

In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since abamectin is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic abamectin exposure.

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

HOT LINE NUMBER

For 24-Hour Medical Emergency Assistance (Human or Animal)
Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident),
Call
1-800-888-8372

Refer to booklet for PPE.

Environmental Hazards

This pesticide is toxic to fish and wildlife.

For terrestrial uses: do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment wash water or rinsate. 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.

Use of this product may pose a risk to threatened and endangered species of fish, amphibians, crustaceans (including fresh water shrimp), and insects. All use of this product in the state of California should comply with the recommendations of the California Endangered Species Project. Before using this product in California, consult with your county agriculture commissioner to determine use limitations that apply in your area.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

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STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

Pesticide Storage

Store in a tightly closed container in a cool, dry place.

Pesticide Disposal

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

Container Handling

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available 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. 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 $\frac{1}{4}$ 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.

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

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Manufactured for:
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, North Carolina 27419-8300

SCP 1154A-M (notif patent)

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