

73562-2

1-20-2012

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Biopesticides and Pollution Prevention Division  
(7511P)  
1200 Pennsylvania Avenue NW  
Washington, DC 20460

EPA Reg. Number:  
73562-2

Date of Issuance:  
20 Jun 2012

Term of Issuance: Unconditional

NOTICE OF PESTICIDE:

X  Registration      Re-registration  
(under FIFRA, as amended)

Name of Pesticide Product:  
SignaFresh 10EC

Name and Address of Registrant (include ZIP Code):  
DOOSAN Corporation  
c/o Technology Sciences Group (TSG), Inc.  
1150 18th Street, N.W., Suite 1000  
Washington, D.C. 20036

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention 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 registration does not eliminate the need for continual reassessment of the pesticide. If the EPA determines at any time, that additional data are required to maintain in effect an existing registration, the Agency will require submission of such data under section 3(c)(2)(B) of FIFRA.

The product is registered in accordance with FIFRA section 3(c)(5) and is subject to the following terms and conditions:

1. Submit and/or cite all data required for registration of your product under FIFRA section 3(c)(5) and section 4 when the Agency requires all registrants of similar products to submit such data.
2. Make the following label change before you release the product for shipment: Revise the EPA Registration Number to read, "EPA Reg. No. 73562-2."
3. Submit two (2) copies of the revised final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of the final printed label.

A stamped copy of the label is enclosed for your record.

Signature of Approving Official:

Date:

20 Juny 2012

Keith A. Matthews, Director  
Biopesticides and Pollution Prevention Division

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# SignaFresh® 10EC

**Active Ingredient:**

Lysophosphatidylethanolamine (LPE)..... 10.00%

**Other Ingredients:** ..... 90.00%

**Total**..... 100.00%

Contains 0.751 pounds LPE per gallon

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

See (side) (back) panel for first aid and additional precautionary statements.

EPA Reg. No.: (Pending as file symbol 73562-E)

EPA Est. No.: XXXXX-XX-X

Manufactured by: DOOSAN Corporation, Glonet BU  
Biotech Research Institute  
864 B/5F, Aict, 864-1, Iui-dong,  
Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea

Net Contents: XX

Batch/Lot Number: XX

**ACCEPTED**

JAN 20 2012

Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for  
the pesticide registered under  
EPA Reg. No. 73562-2

FIRST AID	
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-222-1222 for emergency medical treatment information.	

*(Precautionary Statements for uses covered by the Worker Protection Standard)*

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):** Applicators and other handlers must wear coveralls worn over short-sleeved shirt and short pants, chemical resistant (such as nitrile or butyl) gloves, and shoes plus socks. Follow manufacturer's instructions for cleaning / maintaining PPE. Keep and wash PPE separately from other laundry.

**User Safety Recommendations:** Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. 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 highwater mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

**Physical or Chemical Hazards: Combustible.** Do not use or store near heat or open flame.

*(Precautionary Statements for uses not covered by the Worker Protection Standard)*

**ACCEPTED  
PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wear chemical resistant (such as nitrile or butyl) gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**Environmental Hazards:** Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

**Physical or Chemical Hazards: Combustible.** Do not use or store near heat or open flame.

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*(Directions for Use for uses covered by the Worker Protection Standard)*

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation. Do not apply this product in a way that will contact workers or other persons, either directly or thorough drift. Only protected handlers may be in the area during application.

**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 intervals (REI). 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 of 4 hours.

PPE requirement for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is coveralls, waterproof gloves and shoes plus socks.

*(Directions for Use for uses not covered by the Worker Protection Standard)*

**DIRECTIONS FOR USE**

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

**Non-Agricultural Use Requirements**

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

Keep unprotected persons out of treated areas until sprays have dried or dusts have settled. For post-harvest treated commodities, unprotected persons should not handle until dip has dried.

**General:**

SignaFresh® 10EC is a growth regulator that enhances fruit quality, ripening and shelf life of select fruits, flowers and vegetables. SignaFresh® 10EC application does not enhance respiration, like other ripening agents. SignaFresh® 10EC is also known to reduce senescence by inhibiting some of enzymes involved in membrane breakdown. For these reasons, SignaFresh® 10EC enhances and promotes shelf life. When applied to physiologically mature fruit (at breaker stage, i.e. early stage of ripening), it stimulates and promotes ripening.

READ ENTIRE LABEL BEFORE USING THIS PRODUCT.

**DIRECTIONS FOR USE: SPECIFIED TREATMENTS**

**Mixing Instructions:**

Shake well (1-3 minutes) before mixing. See Pre Harvest Application table below for the application rate (amount of SignaFresh® 10EC fl. oz./acre) specific to your crop. Dilute product with the amount of

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water necessary to treat the intended area. Add half the water to tank, then add SignaFresh® 10EC. Add remaining water and mix thoroughly.

**Pre-Harvest Application Directions:**

Apply SignaFresh® 10EC in water to wet fruit uniformly, using conventional ground or aerial application equipment. For better coverage, use a sticker deposition agent. Do not use with organo-silicone surfactants and use antifoam agents sparingly.

Apply SignaFresh® 10EC approximately two weeks prior to harvest, unless noted otherwise under "Special Instructions" on the following table.

Follow directions for specific crop listed below:

PRE HARVEST APPLICATION					
Crop		Rate in oz/acre	Use	Special Instructions	
<i>Fruiting Vegetables</i>					
<b>Eggplants</b>		8 - 30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development</li> <li>• Improved fruit quality</li> </ul>		
<b>Tomatoes</b>	Vine Ripe	Field	8 - 30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Uniform color development</li> <li>• Improved fruit firmness</li> </ul>	<ul style="list-style-type: none"> <li>• Apply 10 to 14 days prior to desired use response.</li> <li>• Reapply at 14-day intervals until final harvest.</li> </ul>
<b>Tomatoes</b>	Vine Ripe	Greenhouse	2 - 4		<ul style="list-style-type: none"> <li>• Apply 7 to 10 days prior to desired use response.</li> <li>• Reapply at 7 to 14 day intervals until final harvest.</li> </ul>
<b>Tomatoes</b>		Processing	15 - 45		<ul style="list-style-type: none"> <li>• Apply approximately two weeks prior to harvest.</li> </ul>
<b>Peppers</b>	Red Peppers Hot Peppers		27	<ul style="list-style-type: none"> <li>• Accelerated fruit ripening</li> <li>• Increased early marketable yield</li> <li>• Uniform color development*</li> <li>• Improved fruit quality</li> </ul>	<ul style="list-style-type: none"> <li>• Apply at 10 to 20% color break.</li> </ul>
	Green Peppers		27		<ul style="list-style-type: none"> <li>• Apply two to three weeks before harvest.</li> </ul>

<b>Pimentos</b>	8 – 30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development</li> <li>• Improved fruit quality</li> </ul>	
<b>Cucurbits</b>			
<b>Melons Squash Pumpkins</b>	15 - 45	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Improved fruit quality</li> </ul>	
<b>Berries/Small Fruits</b>			
<b>Raspberries Boysenberries Blackberries Blueberries</b>	8 – 30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development</li> <li>• Improved fruit quality</li> </ul>	
<b>Cranberries</b>	8 – 30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development</li> <li>• Improved fruit quality</li> </ul>	<ul style="list-style-type: none"> <li>• Can be applied through irrigation systems. Consult your Nutra-Park representative for use guidance.</li> </ul>
For tank-mixing with chlorothalonil fungicides	8 – 30	<ul style="list-style-type: none"> <li>• Decrease the phytotoxic effect of chlorothalonil containing fungicides</li> </ul>	<ul style="list-style-type: none"> <li>• Apply in tank mixture with the chlorothalonil fungicide. Consult the fungicide label for appropriate rate and timing of application.</li> </ul>
<b>Currants</b>	8 – 30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development</li> <li>• Improved fruit quality</li> </ul>	
<b>Strawberries</b>	6- 25	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development</li> <li>• Improved fruit quality</li> </ul>	<ul style="list-style-type: none"> <li>• Apply 7 to 10 days prior to desired use response.</li> <li>• Reapply at 7 to 14 day intervals until final harvest.</li> </ul>

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<b>Tree Fruits</b>			
<b>Avocados</b>	8 – 30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development</li> <li>• Improved fruit quality</li> </ul>	
<b>Citrus</b> Grapefruits, Mineolas, Lemons, Limes, Mandarins, Oranges, Pummelos, Tangelos and Tangerines	27	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development</li> <li>• Improved fruit quality</li> </ul>	<ul style="list-style-type: none"> <li>• Apply two to three weeks before to harvest.</li> </ul>
<b>Pome Fruits</b> Apples	27	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development*</li> <li>• Improved fruit quality</li> </ul>	<ul style="list-style-type: none"> <li>• Apply five to six weeks before harvest.</li> </ul>
Crabapples and Pears	27		<ul style="list-style-type: none"> <li>• Apply two weeks before harvest.</li> </ul>
<b>Stone Fruits</b> Apricots and Plums	27	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development*</li> <li>• Improved fruit quality</li> </ul>	<ul style="list-style-type: none"> <li>• Apply three weeks before to harvest.</li> </ul>
Peaches and Nectarines	14		<ul style="list-style-type: none"> <li>• Apply at pit hardening, approximately three weeks before harvest</li> </ul>
Red Cherries	27		<ul style="list-style-type: none"> <li>• Apply three weeks before harvest</li> </ul>
Bi-color Cherries	27		<ul style="list-style-type: none"> <li>• Apply seven to 10 days before harvest</li> </ul>
<b>Tree Nuts</b> Pistachios, Walnuts, Pecans	8 – 30	<ul style="list-style-type: none"> <li>• Accelerated fruit ripening</li> <li>• Improved fruit quality</li> <li>•</li> </ul>	

<b>Vine Fruits</b>			
<b>Grapes</b> Raisin, Wine and Juice, and Table Grapes (such as Flame Seedless, Crimson, Thompson Seedless and Red Globe)	30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development*</li> <li>• Improved fruit quality</li> </ul>	
<b>Kiwi Fruit</b>	8 – 30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Improved fruit quality</li> </ul>	
<b>Other Crops</b>			
<b>Coffee</b> <b>Mangos</b> <b>Pomegranates</b> <b>Pineapples</b>	8 – 30	<ul style="list-style-type: none"> <li>• Increased early marketable yield</li> <li>• Accelerated fruit ripening</li> <li>• Uniform color development</li> <li>• Improved fruit quality</li> </ul>	
<b>Mushrooms</b>	8 – 30	<ul style="list-style-type: none"> <li>• Improved fruit quality</li> <li>• Extended shelf life</li> </ul>	
<b>Cotton</b>	15 - 45	<ul style="list-style-type: none"> <li>• Acceleration of boll opening.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply when there are sufficient unopened mature bolls to produce desired yields.</li> </ul>

\* Not intended for uniform color development use on green peppers, pears, apricots or raisin grapes.

**Post-Harvest Application Directions:**

Apply SignaFresh® 10EC as a washwater dip or as a spray. Prior to sorting and packaging, dip fruit in well-agitated water containing SignaFresh® 10EC for up to 3 minutes or uniformly spray fruit with SignaFresh® 10EC to achieve full coverage.

See Post-Harvest Application Table for the application rate (parts per million) specific to the commodity to be treated and the Dilution Table to determine the amount of SignaFresh® 10EC needed to make solution. For dip applications add SignaFresh® 10EC to washwater, maintain water agitation and submerge fruit in washwater for up to 3 minutes. For use as a spray, dilute SignaFresh® 10EC in water and apply uniformly to cover fruit prior to packing. Maintain chlorine levels and water pH at levels recommended for post-harvest treatments. Allow fruit to dry before packaging. Follow standard handling procedures after treatment.

**Dilution Table**

<b>Parts Per Million (PPM)</b>	<b>Amount of SignaFresh® 10EC to make 100 gallons of spray solution</b>
25	3.5 fl. oz.
50	7 fl. oz.
100	14 fl. oz.
200	28 fl. oz.



Follow directions below for crop specific post harvest applications directions for use.

POST HARVEST APPLICATION		
Crop/Commodity	Rate (ppm) for dip and/or spray	Use
<b>Fruiting Vegetables</b>		
<b>Eggplants</b>	25-100 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Improved fruit quality</li> <li>Extended shelf life</li> </ul>
<b>Tomatoes</b> Fresh Market	50-200 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Improved fruit quality</li> <li>Accelerated natural ripening</li> </ul>
<b>Peppers</b>	50-200 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Improved fruit quality</li> <li>Extended shelf life</li> </ul>
<b>Berries/Small Fruits</b>		
<b>Blueberries</b> <b>Boysenberries</b> <b>Cranberries</b> <b>Currants</b>	25-100 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Improved fruit quality</li> <li>Extended shelf life</li> </ul>
<b>Tree Fruits</b>		
<b>Avocados</b>	50-200 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Improved fruit quality</li> <li>Accelerated natural ripening</li> </ul>
<b>Citrus</b> Grapefruits, Mineolas, Lemons, Limes, Mandarins, Oranges, Pummelos, Tangelos and Tangerines	50-200 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Improved fruit quality</li> <li>Accelerated natural ripening</li> </ul>
<b>Pome Fruits</b> Apple, Crabapple and Pear	50-200 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Improved fruit quality</li> <li>Extended shelf life</li> </ul>
<b>Stone Fruits</b> Peaches, Plums, Cherries, Apricots	50-200 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Improved fruit quality</li> <li>Extended shelf life</li> </ul>
<b>Other Crops</b>		
<b>Bananas</b>	50-200 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Accelerated natural ripening</li> <li>Improved fruit quality</li> <li>Extended shelf life</li> </ul>
<b>Mangos</b> <b>Pomegranates</b> <b>Pineapples</b>	50-200 dip 500-1000 spray	<ul style="list-style-type: none"> <li>Improved fruit quality</li> <li>Extended shelf life</li> </ul>

**Use on Cut Flowers:** Use SignaFresh® 10EC on freshly cut flowers to extend shelf life, improve blossom life and enhance uniform bud opening. Dilute SignaFresh® 10EC in water at a rate of 1-25 ppm and submerge stems of freshly cut flowers in solution. Renew SignaFresh® 10EC solution if water becomes cloudy.

**Chemigation Directions for Use**

**General Requirements:**

- 1) Apply this product only through a sprinkler including a center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set of hand move irrigation and systems. Do not apply this product through any other type of irrigation system.
- 2) Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
- 3) If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- 4) Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

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- 5) 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 any necessary adjustments should the need arise.

**Specific Requirements for Sprinkler Chemigation:**

- 1) The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
- 2) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of liquid back towards the injection pump.
- 3) The pesticide injection pipeline must contain a functional, normally dosed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5) The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6) Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being filled with a system interlock.
- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.

**Application Instructions:**

- 1) Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water. Failure to provide a clean tank, void of scale or residues may cause product to lose effectiveness or strength.
- 2) Determine the treatment rates as indicated in the directions for use and make proper dilutions.
- 3) Prepare a solution in the chemical tank by filling the tank with the required water and then adding product as required. The product will immediately go into suspension without any required agitation.
- 4) The product is to be applied continuously for the duration of the water application.

**STORAGE AND DISPOSAL**

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

**Storage** - Store at room temperature in an area away from direct sunlight until used.

**Pesticide Disposal** - Wastes resulting from use of this product may be disposed of at an approved waste disposal facility.

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

**OPTIONAL LABEL CLAIMS**

- SignaFresh® 10EC is a growth regulator that enhances fruit quality, ripening and shelf life of select fruits, flowers and vegetables.
- With SignaFresh® Technology.
- Fresh Focus™
- MasterFresh™