

71297-3

5/26/2009

1/17

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Ms. Ann Beaulieu  
AgroFresh, Inc. / Rohm and Haas Company  
Philadelphia, PA 19106-2399

**MAY 26 2009**

**Subject:** AgroFresh, Inc., SmartFresh SmartTab  
EPA Registration No. 71297-3  
Amendment to Add Ornamentals and to Create a Master Label  
Application Dated 3/4/09

Dear Ms. MacLean:

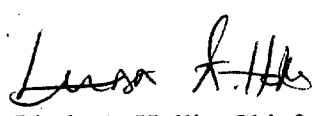
The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(7)(A), is acceptable provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit two (2) copies of your final printed labeling before you release the product for shipment. Final printed labeling means the label or labeling of the product when distributed or sold. Clearly legible reproductions or photo reductions will be accepted for unusual labels, such as those silk-screened directly onto glass or metal containers or large bags or drum labels.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(b). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

If you have any questions contact Chris Pfeifer at 703-308-0031 or by email at: [pfeifer.chris@epa.gov](mailto:pfeifer.chris@epa.gov). A stamped copy of the label is enclosed for your records.

Sincerely,



Linda A. Hollis, Chief  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)

Enclosure

CONCURRENCES							
SYMBOL	▶ 7511P						
SURNAME	▶ PFEIFER						
DATE	▶ 5/21/9						

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**MASTER LABEL**

**SmartFresh™ SmartTabs**

Sublabel A: Commercial Ornamentals (Fresh cut flowers, potted flowers, bedding, nursery and foliage plants)

Sublabel B: Fruit and Vegetables (Non-Agricultural Use)

**ACTIVE INGREDIENT:**

1-Methylcyclopropene: .....0.63%

**OTHER INGREDIENTS:**.....99.37%

**Total:** .....100.0%

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

Manufactured by:

AgroFresh, Inc.

A Subsidiary of Rohm and Haas Company

100 Independence Mall

Philadelphia, PA 19106

1-215-592-3000

**ACCEPTED**

**MAY 26 2009**

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

71297-3

EPA Reg. No. 71297-3

EPA Est. No. 707-WA-001

SUBLABEL A: Commercial Ornamentals (Fresh cut flowers, potted flowers, bedding, nursery and foliage plants)

<b>SmartFresh™ SmartTabs</b>	AgroFresh Inc. A subsidiary of Rohm and Haas Company Philadelphia, PA. 19106 Tel: (215) 592-3000
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Protects ornamentals from the various effects of ethylene.

**Active Ingredient:**

1-Methylcyclopropene.....0.63%

**Other Ingredients:** ..... 99.37%

**Total:** ..... 100.0%

**Keep Out Of Reach Of Children**

**CAUTION**

Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions. If the Conditions of Sale and Warranty are not acceptable, return the product and its generating system unopened and unused within thirty days of purchase to the place of purchase.

<b>FIRST AID</b>	
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<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>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>HOTLINE</b> 1-215-592-3000	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact Rohm and Haas at 215-592-3000 for emergency medical treatment information twenty four (24) hours a day, seven (7) days a week.	

**EPA REGISTRATION NO. 71297-3**

**EPA EST. NO. 707-WA-001**

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**Net Contents:**

Tablets	Ounces	Grams	Tablets	Ounces	Grams	Tablets	Ounces	Grams
1	0.044	1.25	11	0.484	13.75	21	0.924	26.25
2	0.088	2.5	12	0.528	15	22	0.968	27.5
3	0.132	3.75	13	0.572	16.25	23	1.012	28.75
4	0.176	5	14	0.616	17.5	24	1.056	30
5	0.22	6.25	15	0.66	18.75	25	1.1	31.25
6	0.264	7.5	16	0.704	20	26	1.144	32.5
7	0.308	8.75	17	0.748	21.25	27	1.188	33.75
8	0.352	10	18	0.792	22.5	28	1.232	35
9	0.396	11.25	19	0.836	23.75	29	1.276	36.25
10	0.44	12.5	20	0.88	25	30	1.32	37.5

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Causes slight eye irritation. Harmful if absorbed through skin. Harmful if inhaled. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Avoid breathing vapor. 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 before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers of this product must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Safety glasses or goggles

Applicators and other handlers must follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations**

- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact 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 State or Tribal Agency responsible for pesticide regulation. All applicable directions, restrictions, precautions and conditions of sale and warranty are to be followed. This labeling must be in the user's possession 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, 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 the box only apply to uses of this product that are covered by the Worker Protection Standard.

**REI:** Do not enter or allow worker entry into treated areas prior to venting the volatile active ingredient from the treatment area. For enclosed areas including but not limited to storage rooms, coolers, shipping containers, enclosed truck trailers, ventilation shall continue until after thirty minutes (30) minutes of using fans or other mechanical ventilating system. In greenhouses, two (2) hours of ventilation using fans or other mechanical ventilating systems or four (4) hours of ventilation using vents, windows or other passive ventilation.

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, prior to venting the volatile active ingredient from the treatment area is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N,R,P, or HE prefilter.

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### 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).

**REI:** Do not enter or allow worker entry into treated areas prior to venting the volatile active ingredient from the treatment area. For enclosed areas including but not limited to storage rooms, coolers, shipping containers, enclosed truck trailers, ventilation shall continue until after thirty minutes (30) minutes of using fans or other mechanical ventilating system. In greenhouses, two (2) hours of ventilation using fans or other mechanical ventilating systems or four (4) hours of ventilation using vents, windows or other passive ventilation.

PPE required for early entry into enclosed areas prior to venting is:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N,R,P, or HE prefilter.

## PRODUCT INFORMATION

SmartFresh™ is a unique tool for counteracting many of the undesirable effects of both internal (produced within the plant) and external sources of ethylene on ornamentals, including fresh cut flowers, potted flowers, bedding, nursery and foliage plants. By counteracting ethylene, SmartFresh™ provides many benefits to ornamentals during transport and storage including:

- Reducing internal ethylene production
- Protection from external sources of ethylene
- Reducing respiration
- Delaying senescence
- Reducing chilling injury
- Reducing premature flower death
- Reducing premature leaf and flower drop and leaf yellowing

SmartFresh™ is used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. SmartFresh™ is effective under both cool (below 55°F, 13°C) and warm (above 55°F, 13°C) temperature conditions.

Ornamentals must be exposed to the volatile active ingredient of SmartFresh™ in enclosed areas, such as storage rooms, greenhouses, coolers, shipping containers, enclosed truck trailers. This product is not intended for use outdoors or in other non-enclosed areas. These enclosed treatment areas must be gas tight as leakage will reduce SmartFresh™'s effectiveness.

### Cut Flowers, Potted Flowers, Bedding, Nursery and Foliage Plants

SmartFresh™ treatment benefits many flowers and plants such as, but not limited to:

Achillea, Aconitum, Agapanthus, Alchemilla, Allium, Alstroemeria, Alyssum, Aphelandra, Aquilegia, Asclepias, Astrantia, Asparagus fern, Azalea, Begonia, Bouvardia, Brassia (*Schefflera*), Brodiaea (*Triteleia*), Calathea, Campanula, Carnation, Celosia, Centaurea, Chamaedorea, Chelone, Coleus, Cordyline, Cymbidium, Crocosmia (*Montbretia*), Daucus (Queen Annes Lace), Delphinium, Dendrobium, Dianthus, Dicentra, Dizygotheca, Doronicum, Echium, Eremurus, Eustoma, (*Lisianthus*), Ficus, Freesia, Fuchsia, Geranium, Gladiolus, Godetia, Gypsophila, Hibiscus, Ilex (Holly), Impatiens, Ixia, Kalanchoe, Kniphofia, Lavatera, Lily, Lysimachia, Miniature Carnation, Monkshood, Pelargonium, Petunia, Philodendron, Phlox, Physostegia, Poinsettia, Radermachera, Rose, Rudbeckia, Salvia, Saponaria, Scabiosa, Silene, Snapdragon, Solidaster, Stock, Streptocarpus, Sweet William, Trachelium, Trollius, Veronica, Wax Flower, and Zygocactus.

## Timing of application

SmartFresh™ is used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. Flowers and plants are treated whether or not they may have been previously treated with SmartFresh or another anti-ethylene product. Additional applications are beneficial for prolonged storage periods and for some species with more than one flower per stem (i.e. snapdragons, delphiniums, miniature carnations, and alstromeria) and flowers at different stages of development on the same plant (i.e. geraniums, impatiens, and azaleas).

Plants being held for shipment in enclosed areas are easily treated with SmartFresh™. For example, non-boxed sleeved potted plants and cut flowers (held dry or in solution), or boxed plants and cut flowers with the lids and/or precooling vents completely open and directly exposed to the surrounding atmosphere can be treated. Bedding or potted plants on movable racks are also easily treated.

## Application Method and Rate

Prior to application, ensure that the treatment area can be properly and promptly sealed following application. SmartFresh™ SmartTabs are used in conjunction with the SmartFresh™ Activator Kit. SmartFresh™ SmartTabs are **Green** tablets that, when mixed with **Blue** Activator Tablets in a proprietary Activator Solution, release the volatile active ingredient 1-methylcyclopropene (1-MCP). Make sure that you have a sufficient supply of both SmartFresh™ SmartTabs and SmartFresh™ Activator Kits available to treat your selected treatment area.

Step 1: Selection of the appropriate number of SmartTabs and SmartTab Activator Kits for use

a) Accurately determine the volume of the EMPTY treatment area in cubic feet. Multiply inside dimensions: volume = length X width X height. For example, if the treatment area is 10 feet high x 20 feet long x 12 feet wide, the treatment volume would be 10 x 20 x 12 = 2400 cubic feet. To calculate the height measurement for greenhouses with a peaked roof, use one half of the sum of the height at the peak plus the height at the wall.

b) Choose the correct number of **Green** SmartFresh™ SmartTabs according to the size of the area as follows.

Use one GREEN tablet per 150 cubic feet of treatment area or

For 20 foot truck container use 7 GREEN tablets

For 40 foot truck container use 14 GREEN tablets

Never use more than ten (10) **Green** SmartFresh™ SmartTabs per activator kit. If more than ten (10) **Green** SmartFresh™ SmartTabs are needed, you must divide them among two (2) or more SmartFresh™ Activator Kits. Each Kit activates up to 10 SmartFresh™ SmartTabs only.

**Always use two (2) Blue tablets for EACH Activator Kit.**



Step 2. Evaluation Of The Quality Of The Treatment Room / Trailer / Container/Greenhouse

To be used with SmartFresh™, rooms/containers/trailers/greenhouses must be gas tight and have an internal fan for mixing the atmosphere.

**Check that:**

- All room/trailer/container/greenhouse drain holes are plugged
- There are no holes in the walls, ceiling, or floor
- All vents to outside air are closed
- When viewed from a dark interior, no outside light is visible
- Door seals are in EXCELLENT condition
  - No missing rubber      No large cracks
  - No plastic slat doors      No roller top doors
  - No side doors
- Scrubbers and/or ozone generators are off

Step 3: Fill the treatment room with the ornamentals to be treated

Step 4: Release of 1-MCP

- a) Remove the pack of two (2) Blue SmartFresh™ Activator Tablets from the foam block.  
**Always use both Blue tablets.**
- b) Remove the appropriate number of **Green** SmartTabs from the SmartFresh™ SmartTabs Package.
- c) Peel off the foil seal from the SmartFresh™ Activator Solution taking care not to spill the solution.
- d) Add both the **Blue** and **Green** Tablets to the Activator Solution.
- e) Replace the cap.
- f) Place the small container on a level surface e.g. in the bottom gap of the pallet. Keep the container upright.
- g) Exit the treatment room immediately and promptly close the doors and ensure they are tightly sealed in order to contain the SmartFresh™ and ensure its maximum efficacy. The release of SmartFresh™ to the area will start several minutes after addition of the SmartTabs to the Activator Solution.
- h) Circulate air in the room by means of the internal air circulation system for AT LEAST one (1) hour.
- i) Do not open the doors for AT LEAST four (4) hours for ornamentals treated at >55F and for at least ten (10) hours for ornamentals treated at or below 55F.

Step 5: Reentry To The Storage Area

At the end of the SmartFresh™ treatment period, vent the treated area by opening the doors for a minimum of thirty minutes with continued full internal ventilation before allowing workers to enter. For greenhouses, vent the treated area by opening doors and windows for a minimum of two hours with continued full internal ventilation or four hours with passive ventilation before allowing workers to enter. At the end of the room venting, remove the SmartFresh™ Activator Solution and dispose of it as non-hazardous waste on-site or at an approved waste disposal

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facility. Store treated ornamentals not intended for immediate sale according to standard commercial practices.

## Restrictions

Do not split tablets. Use whole tablets only.

Do not smoke during the SmartFresh™ application.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in original packaging in a cool, dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### WARRANTY AND DISCLAIMER

AgroFresh Inc. warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. AgroFresh Inc. **MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.** Handling, storage and use of the product by Buyer or User are beyond the control of AgroFresh Inc. and Seller. To the extent permitted by applicable law, risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property, or failure to follow label directions will be assumed by the Buyer or User. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, AgroFresh Inc. OR SELLER SHALL NOT BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT**

*SmartFresh™ is a registered trademark of AgroFresh, Inc./Rohm and Haas Company*

AgroFresh Inc.  
A Fully-Owned Subsidiary of Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA. 19106  
(215) 592-3000

SUBLABEL B: Fruit and vegetables

<b>SmartFresh™</b> <b>SmartTabs</b>	AgroFresh Inc. A subsidiary of Rohm and Haas Company Philadelphia, PA. 19106 Tel: (215) 592-3000
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Protects harvested fruit and vegetables from the various effects of ethylene.

**Active Ingredient:**

1-Methylcyclopropene.....0.63%

**Other Ingredients:** ..... 99.37%

**Total:** ..... 100.0%

**Keep Out Of Reach Of Children**

## CAUTION

Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions. If the Conditions of Sale and Warranty are not acceptable, return the product and its generating system unopened and unused within thirty days of purchase to the place of purchase.

<b>FIRST AID</b>	
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<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>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>HOTLINE</b> <b>1-215-592-3000</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact Rohm and Haas at 215-592-3000 for emergency medical treatment information twenty four (24) hours a day, seven (7) days a week.	

**EPA REGISTRATION NO. 71297-3**

**EPA EST. NO. 707-WA-001**

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**Net Contents:**

Tablets	Ounces	Grams	Tablets	Ounces	Grams	Tablets	Ounces	Grams
1	0.044	1.25	11	0.484	13.75	21	0.924	26.25
2	0.088	2.5	12	0.528	15	22	0.968	27.5
3	0.132	3.75	13	0.572	16.25	23	1.012	28.75
4	0.176	5	14	0.616	17.5	24	1.056	30
5	0.22	6.25	15	0.66	18.75	25	1.1	31.25
6	0.264	7.5	16	0.704	20	26	1.144	32.5
7	0.308	8.75	17	0.748	21.25	27	1.188	33.75
8	0.352	10	18	0.792	22.5	28	1.232	35
9	0.396	11.25	19	0.836	23.75	29	1.276	36.25
10	0.44	12.5	20	0.88	25	30	1.32	37.5

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Causes slight eye irritation. Harmful if absorbed through skin. Harmful if inhaled. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Avoid breathing vapor. 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 before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers of this product must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Safety glasses or goggles

Applicators and other handlers must follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations**

- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact 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 State or Tribal Agency responsible for pesticide regulation. All applicable directions, restrictions, precautions and conditions of sale and warranty are to be followed. This labeling must be in the user's possession during application.

### 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).

**REI:** Do not enter enclosed areas until the enclosed area has been vented unless wearing the appropriate PPE. Ventilation shall continue until after thirty (30) minutes of ventilation using fans or other mechanical ventilating systems.

PPE required for early entry into enclosed areas prior to venting is:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C); or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N,R,P, or HE prefilter.

### PRODUCT INFORMATION

SmartFresh™ is a unique postharvest tool for counteracting many of the undesirable effects of both internal (produced within the plant) and external sources of ethylene on fruit and vegetables. By counteracting ethylene, SmartFresh™ provides many benefits to fruit and vegetables during transport and storage including:

- Maintaining firmness
- Maintaining titratable acidity
- Preventing superficial scald and soft scald on apples
- Reducing internal ethylene production
- Protection from external sources of ethylene
- Reducing respiration
- Delaying ripening and senescence
- Reducing incidence of peel greasiness in apples
- Reducing incidence of core flush and mealiness in apples
- Reducing chilling injury

SmartFresh™ is used immediately after harvest, prior to storage, prior to shipment or just prior to sale. SmartFresh™ is effective under both cool (below 55°F, 13°C) and warm (above 55°F, 13°C) temperature conditions. To realize maximum benefit in controlling senescence, treat fruits and vegetables as soon as possible after harvest.

Harvested fruit and vegetables must be exposed to the volatile active ingredient of SmartFresh™ in enclosed areas, such as storage rooms, coolers, shipping containers, enclosed truck trailers, or ambient temperature, refrigerated, or controlled atmosphere food storage facilities. This product is not intended for use outdoors or in other non-enclosed areas. These enclosed treatment areas must be gas tight as leakage will reduce SmartFresh™'s effectiveness.

## **Fruit And Vegetables**

### **Storage Conditions**

SmartFresh™ is compatible with and complementary to both controlled atmosphere and regular air fruit and vegetable storage conditions. SmartFresh™ must be used in air tight storage areas.

### **Timing of Application**

SmartFresh™ is added to the storage area containing fruit or vegetables immediately after harvest, upon entering storage, during distribution or in transit. For best results, do not use with fruit previously treated with Ethephon. After application, fruit or vegetables not for immediate sale must be stored according to good standard commercial practices. Fruit and vegetables may benefit from repeat application, such as when the crop has been exposed to ethylene. It must be emphasized that keeping the fruit and vegetables cool at all times and strict adherence to phytosanitary practices remain essential in maintaining safe and high quality fruit and vegetables.

Apples: Apply SmartFresh™ soon after harvest. Best results are obtained when fruit is at the optimum maturity level for long term storage. For optimum quality, store apples that are to be held longer than six months in a controlled atmosphere.

Avocados: Apply SmartFresh™ to the fruit soon after harvest at the physiological maturity stage or just prior to the "turning black" stage. Only one application to the same fruit.

Bananas: Apply SmartFresh™ after the bananas have been exposed to ethylene and prior to reaching color stage 4.

Broccoli: Apply SmartFresh™ as soon after harvest as possible.

Kiwifruit: Apply SmartFresh™ either as soon after harvest as possible or after long term storage and before the fruit are transported and distributed.

Melons: Apply SmartFresh™ as soon after harvest as possible.

Persimmons: Apply SmartFresh™ as soon after harvest as possible.

Tomatoes: Apply SmartFresh™ between color stage mature green (Color Stage 1) and light red (Color Stage 5).

Pears, Asian pears: Apply SmartFresh™ as soon after harvest as possible.

Peaches, nectarines, plums, plumcots, and apricots: Apply SmartFresh™ either as soon after harvest as possible or after long term storage and before the fruit are transported and distributed.

## Application Method and Rate

Prior to application, ensure that the treatment area can be properly and promptly sealed following application. SmartFresh™ SmartTabs are used in conjunction with the SmartFresh™ Activator Kit. SmartFresh™ SmartTabs are **Green** tablets that, when mixed with **Blue** Activator Tablets in a proprietary Activator Solution, release the volatile active ingredient 1-methylcyclopropene (1-MCP). Make sure that you have a sufficient supply of both SmartFresh™ SmartTabs and SmartFresh™ Activator Kits available to treat your selected treatment area.

Step 1: Selection of the appropriate number of SmartTabs and SmartTab Activator Kits for use

a.) Accurately determine the volume of the **EMPTY** treatment area in cubic feet. Multiply inside dimensions: volume = length X width X height. For example, if the treatment area is 10 feet high x 20 feet long x 12 feet wide, the treatment volume would be 10 x 20 x 12 = 2400 cubic feet.

b.) Choose the correct number of **Green** SmartFresh™ SmartTabs according to the size of the area and the commodity to be treated as follows.

Apple, Asian pear, avocado, broccoli:

Use one GREEN tablet per 120 cubic feet of treatment area

Pear: Use one GREEN tablet per 200 cubic feet of treatment area.

Melon, tomato, kiwifruit, persimmon, peach, nectarine, plum, plumcot, apricot:

Use one GREEN tablet per 240 cubic feet of treatment area

Bananas: Use one GREEN tablet per 380 cubic feet of treatment area

Never use more than ten (10) **Green** SmartFresh™ SmartTabs per activator kit. If more than ten (10) **Green** SmartFresh™ SmartTabs are needed, you must divide them among two (2) or more SmartFresh™ Activator Kits. Each Kit activates up to 10 SmartFresh™ SmartTabs only.

**Always use two (2) Blue tablets for EACH Activator Kit.**

Step 2. Evaluation Of The Quality Of The Treatment Room / Trailer / Container

To be used with SmartFresh™, rooms/containers/trailers must be gas tight and have an internal fan for mixing the atmosphere.

### Check that:

- All room/trailer/container drain holes are plugged
- There are no holes in the walls, ceiling, or floor
- All vents to outside air are closed
- When viewed from a dark interior, no outside light is visible
- Door seals are in EXCELLENT condition
  - No missing rubber      No large cracks
  - No plastic slat doors      No roller top doors
  - No side doors
- Scrubbers and/or ozone generators are off

Step 3: Fill the treatment room with the fruit or vegetables, to be treated

Step 4: Release of 1-MCP

- a) Remove the pack of two (2) Blue SmartFresh™ Activator Tablets from the foam block. **Always use both Blue tablets.**
- b) Remove the appropriate number of **Green** SmartTabs from the SmartFresh™ SmartTabs Package.
- c) Peel off the foil seal from the SmartFresh™ Activator Solution taking care not to spill the solution.
- d) Add both the **Blue** and **Green** Tablets to the Activator Solution.
- e) Replace the cap.
- f) Place the small container on a level surface e.g. in the bottom gap of the pallet. Keep the container upright.
- g) Exit the treatment room immediately and promptly close the doors and ensure they are tightly sealed in order to contain the SmartFresh™ and ensure its maximum efficacy. The release of SmartFresh™ to the area will start several minutes after addition of the SmartTabs to the Activator Solution.
- h) Circulate air in the room by means of the internal air circulation system for AT LEAST one (1) hour.
- i) Do not open the doors for AT LEAST twelve (12) hours for avocado, banana, broccoli, kiwifruit, melon, persimmon and tomato, fifteen (15) hours for Asian pear, twenty four (24) hours for apple, nectarine, peach, pear, plum, plumcot and apricot.
- j) For controlled atmosphere storage containers or storage rooms, do not change the room atmosphere to controlled atmosphere conditions for AT LEAST twenty four (24) hours.

Step 5: Reentry To The Storage Area

At the end of the SmartFresh™ treatment period, vent the treated room by opening the doors for a minimum of thirty minutes with continued full internal ventilation before allowing workers to enter. At the end of the room venting, remove the SmartFresh™ Activator Solution and dispose of it as non-hazardous waste on-site or at an approved waste disposal facility. Store treated commodities not intended for immediate sale according to standard commercial practices, in either refrigerated air or controlled atmosphere conditions.

### **Restrictions**

Do not split tablets. Use whole tablets only.

Do not smoke during the SmartFresh™ application.



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### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in original packaging in a cool, dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### WARRANTY AND DISCLAIMER

AgroFresh Inc. warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. AgroFresh Inc. **MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.** Handling, storage and use of the product by Buyer or User are beyond the control of AgroFresh Inc. and Seller. To the extent permitted by applicable law, risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property, or failure to follow label directions will be assumed by the Buyer or User. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, AgroFresh Inc. OR SELLER SHALL NOT BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT**

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