



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

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 12, 2016

Dr. Ann Beaulieu  
Director, Regulatory Affairs  
AgroFresh, Inc.  
400 Arcola Road, PO Box 7000  
Collegeville, PA 19426

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment – amended phone numbers and instructions in first aid box  
Product Name: SmartFresh Technology  
EPA Registration Number: 71297-2  
Application Date: 18 September 2015  
OPP Decision Number: 509523

Dear Dr. Beaulieu:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false

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or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

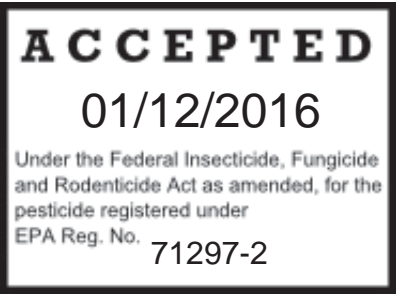
If you have any questions, please contact Cody Kendrick of my team by phone at (703) 347-0468 or via email at [kendrick.cody@epa.gov](mailto:kendrick.cody@epa.gov).

Sincerely,

A handwritten signature in blue ink that reads "Andrew C. Bryceland". The signature is fluid and cursive, with the first name "Andrew" and last name "Bryceland" clearly legible.

Andrew Bryceland, Team Leader  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)  
Office of Pesticide Programs

Enclosure



# Master Label

## SmartFresh™ Technology

A unique postharvest tool for counteracting many of the undesirable effects of both internal and external sources of ethylene on harvested fruit and vegetables.

**ACTIVE INGREDIENT:**

**1-Methylcyclopropene.....3.3%**

**OTHER INGREDIENTS.....96.7%**

**TOTAL.....100.0%**

**A:** SUBLABEL – COMMERCIAL LABEL FOR THE TREATMENT OF APPLES, MELONS, TOMATOES, PEARS, AVOCADOS, MANGOES, PAPAYAS, KIWIFRUIT, PEACHES, NECTARINES , PLUMS, APRICOTS, PLUMCOTS, ASIAN PEARS, BANANAS, BROCCOLI, AND PERSIMMONS

**B:** SUBLABEL – COMMERCIAL LABEL FOR THE TREATMENT OF APPLES, MELONS, TOMATOES, PEARS, AVOCADOS, KIWIFRUIT, PEACHES, NECTARINES , PLUMS, APRICOTS, PLUMCOTS, ASIAN PEARS, BANANAS, BROCCOLI, AND PERSIMMONS

**C.** SUBLABEL – COMMERCIAL LABEL FOR THE TREATMENT OF SMALL APPLE STORAGE ROOMS

**EPA Reg. No. 71297-2**

**Lot No.**

Produced by: AgroFresh Inc.  
400 Arcola Road, PO Box 7000  
Collegeville, PA  
Tel: 1-866-206-1001

**SUBLABEL – COMMERCIAL LABEL FOR THE TREATMENT OF APPLES, MELONS, TOMATOES, PEARS, AVOCADOS, MANGOES, PAPAYAS, KIWIFRUIT, PEACHES, NECTARINES, PLUMS, APRICOTS, PLUMCOTS, ASIAN PEARS, BANANAS, BROCCOLI, AND PERSIMMONS**

AgroFresh Inc  
 400 Arcola Road, PO Box 7000  
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**SmartFresh™ Technology**

**Active Ingredient:** 1-Methylcyclopropene..... 3.3%  
**Other Ingredients:** ..... 96.7%  
**Total:** ..... 100.0%

**EPA REGISTRATION NO. 71297-2**  
**EPA EST. NO. 707-WA-001**

**NOTICE:** 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 in its generating system unopened and unused within thirty days of purchase to the place of purchase.

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

<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>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For general information on product use, etc., call the National Pesticides Information Center at 1-800-858-7378. For emergencies, call the poison control center 1-800-222-1222.	

**Mat id**

**Net Contents: SmartFresh™ Technology Water Soluble Pouch Sizes**

0.009 oz	(0.25 grams)	0.32 oz	(9.1 grams)	3.2 oz	(89.3 grams)
0.012 oz	(0.35 grams)	0.45 oz	(12.9 grams)	3.8 oz	(106.3 grams)
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Lot No.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Causes slight eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators of this product must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material

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

**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).

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.

## CONDITIONS OF SALE AND WARRANTY

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. 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. **IN NO CASE WILL AgroFresh OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.**

## GENERAL INFORMATION

SmartFresh™ Technology is a powder that, when mixed with water in a proprietary generating system, releases the volatile active ingredient 1-methylcyclopropene (1-MCP).

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

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

SmartFresh™ Technology can be used immediately after harvest, prior to storage, prior to shipment and/or just prior to sale. SmartFresh™ Technology 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, products should be treated as soon as possible after harvest.

Harvested fruits and vegetables must be exposed to the volatile active ingredient of SmartFresh™ Technology in enclosed areas, such as storage rooms, greenhouses, 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 should be gas tight as leakage will reduce SmartFresh™ Technology's effectiveness.

## 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 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.

### Fruit and Vegetable Storage Conditions

SmartFresh™ Technology is compatible with and complementary to fruit and vegetables stored under both controlled atmosphere and regular air fruit storage conditions. SmartFresh™ Technology must be used in air tight treatment areas.

### Timing Of Harvest And Application

SmartFresh™ Technology should be added to the treatment area containing fruit and vegetables immediately after harvest, upon entering storage or in transit. For best results, do not use with fruit or vegetables previously treated with Ethephon. To realize maximum benefit for optimum quality, fruit should be pre-cooled promptly and SmartFresh™ Technology should be applied in the treatment area as soon after harvest as possible and before the climacteric peak of respiration has occurred. Best results from SmartFresh™ Technology are obtained with fruit and vegetables at the optimum maturity level for long term storage. Fruit and vegetables may benefit from repeat application. After application, fruit and vegetables not for immediate sale should be stored, according to good standard commercial practices, in either refrigerated air or controlled atmosphere. Storage in controlled atmosphere is recommended for fruit that is to be held longer than 6 months.

It must be emphasized that maintaining the cold chain (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. For optimum control of superficial scald on pome fruits, SmartFresh™ Technology must be applied within two weeks of harvest.

Apples: Apply SmartFresh™ Technology 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™ Technology to the fruit soon after harvest at the physiological maturity stage or just prior to the "turning black" stage.

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

Broccoli, melons, persimmons, mangoes, papayas, pears and Asian pears: Apply SmartFresh™ Technology as soon after harvest as possible.

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

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

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

## APPLICATION METHOD

Prior to application, ensure that the treatment area can be properly and promptly sealed following application.

SmartFresh™ Technology is applied by the use of proprietary generators which are available in two sizes: large and small. See Table 1 to select the appropriate size generator and the amount of SmartFresh™ Technology for the fruit and vegetables to be treated in the treatment area. Fill the treatment area with fruit and vegetables. Place the appropriate generator on a stable surface of the treatment area in a position that would be within the flow of air from the internal refrigeration system.

Push the start button to activate the generator. With the generator running, add 2 gallons (8 liters) of water to the large generator or 0.85 quarts (0.8 liters) of water to the small generator. Use water at a temperature between 20 degrees and 40 degrees Centigrade (68 to 104 degrees Fahrenheit). Remove the appropriate size SmartFresh™ Technology water soluble pouches from the protective foil packets and drop the pouches into the water contained in the generator. Immediately leave the storage area and seal the door in order to contain the 1-MCP vapor and ensure the maximum efficacy of 1-MCP. The release of the 1-MCP to the area will start several minutes after the water soluble pouch is added to the generator.

After the area is sealed, post a sign on all of the entrances to the treatment area. The sign should read “**CAUTION. Do not enter area. SmartFresh™ Technology treatment in progress.**” The doors to the storage area should remain sealed for the following periods of time to ensure effective SmartFresh™ Technology treatment.

Apple, apricot, nectarine, peach, pear, plum, and plumcot– 24 hours  
Asian pear – 15 hours  
Avocado, banana, broccoli, kiwifruit, melon, persimmon, mango,  
papaya and tomato – 12 hours

Entrance to the room prior to these time periods will compromise the treatment. During the treatment, the internal refrigerated air circulation should be running to ensure good air circulation within the room. All vents to outside air should be closed, and any ethylene scrubbing devices or ozone generating equipment should be turned off. At the end of the SmartFresh™ Technology 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 generator. The spent water contained in the generator can be disposed by pouring down a suitable drain. Treated fruit and vegetables not intended for immediate sale should be stored according to good, standard commercial practices, in either refrigerated air or controlled atmosphere. Storage in controlled atmosphere conditions is recommended for fruit that is planned to be held longer than 6 months.

### Restrictions

- **Restricted Entry Period (REI):** 30 minutes after room has been vented
- Do not smoke during the SmartFresh™ Technology application.



Table 1. Selection of Appropriate Size Generators and SmartFresh™ Technology Pouches

Selection based on volume of treatment area. Calculate the treatment area volume by measuring the length, width and height of the treatment area in feet. Multiply these three numbers together to obtain the treatment area volume in cubic feet. For example, if a room is 4 feet wide, 50 feet long and 5 feet high, the treatment area volume equals 1000 cubic feet. To determine the amount of SmartFresh™ Technology powder, multiply the treatment volume by the rate shown in the table for the selected crop and use the pouches that correspond to the calculated amount.

CROP	RATE* per 1000 ft <sup>3</sup>		Restriction
	ounces	grams	
Apple, Asian Pear, Avocado, Broccoli	0.051 - 0.067	1.4 – 1.9	Do not apply more than 0.067 ounces/1000ft <sup>3</sup> (1.9 grams/1000 ft <sup>3</sup> )
Pear	0.02 – 0.04	0.58 – 1.2	
Apricot, Kiwifruit, Mango, Melon, Nectarine, Papaya, Peach, Plumcot Plum, Persimmon, Tomato	0.031– 0.034	0.87 – 0.96	
Banana	0.017 – 0.020	0.48 – 0.58	

\* The large (2 gallon capacity) generator should be used for amounts greater than 0.63 ounces (18 grams) of powder. It is best to use multiple generators for more than two pouches.

## 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 may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Dispose of empty outer foil package in trash. Triple rinse the generator with water after use. Instructions for returning the used generators will be provided by AgroFresh Inc.

*SmartFresh™ Technology is a registered trademark of AgroFresh Inc.*  
U.S. Patents 5,518,988 and 6,017,849

**AgroFresh Inc.**  
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**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

<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>
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<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>
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Lot No.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Causes slight eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators of this product must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material

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

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

- Long-sleeved shirt and long pants
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- 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.

## CONDITIONS OF SALE AND WARRANTY

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## GENERAL INFORMATION

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

- . Maintaining firmness
- . Maintaining titratable acidity
- . Preventing superficial scald and soft scald on pome fruit
- . Reducing internal ethylene production
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- . Reducing fruit respiration
- . Delaying ripening and senescence
- . Reducing incidence of peel greasiness in apples
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## Directions For Use

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### Fruit and Vegetable Storage Conditions

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### Timing Of Harvest And Application

SmartFresh™ Technology should be added to the treatment area containing fruit and vegetables immediately after harvest, upon entering storage or in transit. For best results, do not use with fruit or vegetables previously treated with Ethephon. To realize maximum benefit for optimum quality, fruit should be pre-cooled promptly and SmartFresh™ Technology should be applied in the treatment area as soon after harvest as possible and before the climacteric peak of respiration has occurred. Best results from SmartFresh™ Technology are obtained with fruit and vegetables at the optimum maturity level for long term storage. Fruit and vegetables may benefit from repeat application. After application, fruit and vegetables not for immediate sale should be stored, according to good standard commercial practices, in either refrigerated air or controlled atmosphere. Storage in controlled atmosphere is recommended for fruit that is to be held longer than 6 months.

It must be emphasized that maintaining the cold chain (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. For optimum control of superficial scald on pome fruits, SmartFresh™ Technology must be applied within two weeks of harvest.

Apples: Apply SmartFresh™ Technology 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™ Technology to the fruit soon after harvest at the physiological maturity stage or just prior to the "turning black" stage.

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

Broccoli, melons, persimmons, pears and Asian pears: Apply SmartFresh™ Technology as soon after harvest as possible.

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

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

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

## APPLICATION METHOD

Prior to application, ensure that the treatment area can be properly and promptly sealed following application.

SmartFresh™ Technology is applied by the use of proprietary generators which are available in two sizes: large and small. See Table 1 to select the appropriate size generator and the amount of SmartFresh™ Technology for the fruit and vegetables to be treated in the treatment area. Fill the treatment area with fruit and vegetables. Place the appropriate generator on a stable surface of the treatment area in a position that would be within the flow of air from the internal refrigeration system.

Push the start button to activate the generator. With the generator running, add 2 gallons (8 liters) of water to the large generator, or 0.85 quarts (0.8 liters) of water to the small generator. Use water at a temperature between 20 degrees and 40 degrees Centigrade (68 to 104 degrees Fahrenheit). Remove the appropriate size SmartFresh™ Technology water soluble pouches from the protective foil packets and drop the pouches into the water contained in the generator. Immediately leave the storage area and seal the door in order to contain the 1-MCP vapor and ensure the maximum efficacy of 1-MCP. The release of the 1-MCP to the area will start several minutes after the water soluble pouch is added to the generator.

After the area is sealed, post a sign on all of the entrances to the treatment area. The sign should read “**CAUTION. Do not enter area. SmartFresh™ Technology treatment in progress.**” The doors to the storage area should remain sealed for the following periods of time to ensure effective SmartFresh™ Technology treatment.

Apple, apricot, nectarine, peach, pear, plum, and plumcot– 24 hours

Asian pear – 15 hours

Avocado, banana, broccoli, kiwifruit, melon, persimmon, and tomato – 12 hours

Entrance to the room prior to these time periods will compromise the treatment. During the treatment, the internal refrigerated air circulation should be running to ensure good air circulation within the room. All vents to outside air should be closed, and any ethylene scrubbing devices or ozone generating equipment should be turned off. At the end of the SmartFresh™ Technology 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 generator. The spent water contained in the generator can be disposed by pouring down a suitable drain. Treated fruit and vegetables not intended for immediate sale should be stored according to good, standard commercial practices, in either refrigerated air or controlled atmosphere. Storage in controlled atmosphere conditions is recommended for fruit that is planned to be held longer than 6 months.

### Restrictions

- **Restricted Entry Period (RED):** 30 minutes after room has been vented
- Do not smoke during the SmartFresh™ Technology application.

Table 1. Selection of Appropriate Size Generators and SmartFresh™ Technology Pouches

Selection based on volume of treatment area. Calculate the treatment area volume by measuring the length, width and height of the treatment area in feet. Multiply these three numbers together to obtain the treatment area volume in cubic feet. For example, if a room is 4 feet wide, 50 feet long and 5 feet high, the treatment area volume equals 1000 cubic feet. To determine the amount of SmartFresh™ Technology powder, multiply the treatment volume by the rate shown in the table for the selected crop and use the pouches that correspond to the calculated amount.

CROP	RATE* per 1000 ft <sup>3</sup>		Restriction
	ounces	grams	
Apple, Asian Pear, Avocado, Broccoli	0.051 - 0.067	1.4 – 1.9	Do not apply more than 0.067 ounces/1000ft <sup>3</sup> (1.9 grams/1000 ft <sup>3</sup> )
Pear	0.02 – 0.04	0.58 – 1.2	
Apricot, Kiwifruit, Melon, Nectarine, Peach, Plumcot, Plum, Persimmon, Tomato	0.031– 0.034	0.87 – 0.96	
Banana	0.017 – 0.020	0.48 – 0.58	

\* The large (2 gallon capacity) generator should be used for amounts greater than 0.63 ounces (18 grams) of powder. It is best to use multiple generators for more than two pouches.

## 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 may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Dispose of empty outer foil package in trash. Triple rinse the generator with water after use. Instructions for returning the used generators will be provided by AgroFresh Inc.

*SmartFresh™ Technology is a registered trademark of AgroFresh Inc.*  
U.S. Patents 5,518,988 and 6,017,849

**AgroFresh Inc.**  
400 Arcola Road  
Collegeville, PA. 19426  
(866) 206-1001

**SUBLABEL – COMMERCIAL LABEL FOR THE TREATMENT OF  
SMALL APPLE STORAGE ROOMS**

AgroFresh Inc  
400 Arcola Road, PO Box 7000  
Collegeville, PA. 19426  
Tel: 1-866-206-1001

**SmartFresh™ Technology**

**Active Ingredient:** 1-Methylcyclopropene..... 3.3%  
**Other Ingredients:** ..... 96.7%  
**Total:** ..... 100.0%

**EPA REGISTRATION NO. 71297-2**  
**EPA EST. NO. 707-WA-001**

**NOTICE:** 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 in its generating system unopened and unused within thirty days of purchase to the place of purchase.

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

<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>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For general information on product use, etc., call the National Pesticides Information Center at 1-800-858-7378. For emergencies, call the poison control center 1-800-222-1222.</p>	

**Net Contents:** 3 water soluble pouches containing 0.07 ounces (2 grams) each  
(0.21 ounces total; 6 grams total)

Lot No.



## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Causes slight eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators of this product must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material

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

#### 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).

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.

## CONDITIONS OF SALE AND WARRANTY

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. 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. **IN NO CASE WILL AgroFresh OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.**

## GENERAL INFORMATION

SmartFresh™ Technology is a powder that, when mixed with water in a proprietary generating system, releases the volatile active ingredient 1-methylcyclopropene (1-MCP).

SmartFresh™ Technology is a unique postharvest tool for counteracting many of the undesirable effects of both internal (produced within the apple) and external sources of ethylene on harvested apples. By counteracting ethylene, SmartFresh™ Technology provides many benefits to the fruit 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 apple 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™ Technology can be used immediately after harvest, prior to storage, prior to shipment and/or just prior to sale. SmartFresh™ Technology 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, products should be treated as soon as possible after harvest.

Harvested apples must be exposed to the volatile active ingredient of SmartFresh™ Technology in enclosed areas, such as storage rooms, greenhouses, 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 should be gas tight as leakage will reduce SmartFresh™ Technology's effectiveness.

## 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 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.

### Apple Storage Conditions

SmartFresh™ Technology is compatible with and complementary to apples stored under both controlled atmosphere and regular air apple storage conditions. SmartFresh™ Technology must be used in air tight treatment areas.

### Timing Of Harvest And Application

SmartFresh™ Technology should be added to the treatment area containing apples immediately after harvest, upon entering storage or in transit. For best results, do not use with fruit previously treated with Ethephon. To realize maximum benefit for optimum quality, apples should be pre-cooled promptly and SmartFresh™ Technology should be applied in the treatment area as soon after harvest as possible and before the climacteric peak of respiration has occurred. Best results from SmartFresh™ Technology are obtained with apples at the optimum maturity level for long term storage. Fruits may benefit from repeat application. After application, apples not for immediate sale should be stored, according to good standard commercial practices, in either refrigerated air or controlled atmosphere. Storage in controlled atmosphere is recommended for apples that are to be held longer than 6 months.

It must be emphasized that maintaining the cold chain (keeping the apples cool at all times) and strict adherence to phytosanitary practices remain essential in maintaining safe and high-quality apples. For optimum control of superficial scald on apples, SmartFresh™ Technology must be applied within two weeks of harvest.

### APPLICATION METHOD

Prior to application, ensure that the treatment area can be properly and promptly sealed following application.

SmartFresh™ Technology is applied by the use of a proprietary dispenser. See Table 1 to select the appropriate number of SmartFresh™ Technology and dispensers for apples and the size of the treatment area. Fill the treatment area with apples. Place the appropriate number of dispensers on a stable, level surface of the treatment area in a position that would be within the flow of air from the internal refrigeration system.

Remove the lid and seal from the dispenser. Open the bag that contains the SmartFresh™ Technology. Place the appropriate number of SmartFresh™ Technology into the appropriate number of dispensers. Use one dispenser for 1 – 3 SmartFresh™ Technology, two dispensers for 4 – 6 SmartFresh™ Technology, three dispensers for 7 – 9 SmartFresh™ Technology, etc. However many dispensers are used, only use a maximum of three SmartFresh™ Technology per dispenser. Add ½ gallon (2 liters) of water at a temperature between 20 degrees and 40 degrees Centigrade (68 to 104 degrees Fahrenheit) to each dispenser. Do not use cold water. Immediately leave the storage area and seal the door in order to contain the 1-MCP vapor and ensure the maximum efficacy of 1-MCP. The release of the 1-MCP to the area will start several minutes after the water is added to the dispenser. Reseal unused SmartFresh™ Technology in the bag and store in a cool dry place for future use.

After the area is sealed, post a sign on all of the entrances to the treatment area. The sign should read **“CAUTION. Do not enter area. SmartFresh™ Technology treatment in progress.”** The doors to the

storage area should remain sealed for 24 hours to ensure effective SmartFresh™ Technology treatment. Entrance to the room prior to 24 hours will compromise the treatment. During the treatment, the internal refrigerated air circulation should be running to ensure good air circulation within the room. All vents to outside air should be closed, and any ethylene scrubbing devices or ozone generating equipment should be turned off. At the end of the SmartFresh™ Technology 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 dispenser(s). The spent water contained in the dispenser(s) can be disposed by pouring down a suitable drain. Treated apples not intended for immediate sale should be stored according to good, standard commercial practices, in either refrigerated air or controlled atmosphere. Storage in controlled atmosphere conditions is recommended for apples that are planned to be held longer than 6 months.

**Restrictions**

**Restricted Entry Period (RED):** 30 minutes after room has been vented  
Do not smoke during the SmartFresh™ Technology application.

**TABLE 1. Selection Of SmartFresh™ Technology and Dispensers For Treatment Of Apples**

Selection based on volume of treatment area. Calculate the treatment area volume by measuring the length, width and height of the treatment area in feet. Multiply these three numbers together to obtain the treatment area volume in cubic feet. For example, if a room is 4 feet wide , 5 feet long and 5 feet high, the treatment area volume equals 100 cubic feet.

Treatment Area Size (empty volume)	Number of SmartFresh™ Technology Required	Number of Dispensers Required**
ft <sup>3</sup>		
1,000 – 1,500	1	1
2,000 – 2,900	2	1
3,000 – 4,000	3	1
4,000 – 5,000	4	2
5,000 – 6,000	5	2
6,000 – 7,000	6	2
7,000 – 8,000	7	3
8,000 – 9,000	8	3
9,000 – 10,000	9	3
10,000 – 11,000	10	4
11,000 – 12,000	11	4
12,000 – 13,000	12	4
13,000 – 14,000	13	5
14,000 – 15,000	14	5
15,000 – 16,000	15	5
16,000 – 17,000	16	6
17,000 – 18,000	17	6
18,000 – 19,000*	16	6

\* For larger treatment area, continue to extrapolate, with each SmartFresh™ Technology adding an additional 1000 ft<sup>3</sup> to the treatment area size.

\*\* Maximum of 3 SmartFresh™ Technology per dispenser

## **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 may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Dispose of empty outer foil package in trash. Triple rinse the dispenser. Then offer for recycling or reconditioning, or puncture and dispose of in sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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