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ReTain®

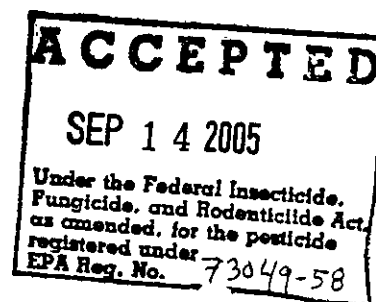
PLANT GROWTH REGULATOR FOR CALIFORNIA
SOLUBLE POWDER
FOR USE ON APPLE, PEAR, & STONE FRUIT (EXCEPT CHERRY) IN THE STATE
OF CALIFORNIA

Active Ingredient:

[S]-trans-2-Amino-4-(2-aminoethoxy)-3-butenic acid hydrochloride15%
Other Ingredients85%
Total100%

EPA Reg. No. 73049-58
EPA Est. No. 33967-NJ-1

Valent BioSciences Corporation
870 Technology Way
Libertyville, IL 60048
1-800-6-VALENT



Net Weight: 11.7 oz (333 grams)

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID	
If inhaled	--Move person to fresh air. --If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. --Call a poison control center or doctor for further treatment advice.
If on skin or clothing	--Take off contaminated clothing. --Rinse skin immediately with plenty of water for 15-20 minutes. --Call a poison control center or doctor for treatment advice.
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 1-800-892-0099 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-6-Valent.	

PLEASE SEE ATTACHED APPLICATION GUIDE FOR COMPLETE PRECAUTIONARY
STATEMENTS AND DIRECTIONS FOR USE

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to Supplemental Labeling under "AGRICULTURAL USE REQUIREMENTS" in the DIRECTIONS FOR USE section for information about this standard

APPLICATION GUIDE

ReTain®

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

CAUTION

Harmful if inhaled or absorbed through skin. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves

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

User Safety Recommendations

Users should:

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

Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. This product is moderately toxic to avian species and exposure to birds should be avoided.

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/Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

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

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

- Coveralls
- Waterproof gloves
- Shoes plus socks

GENERAL INFORMATION

IMPORTANT: Before application, read all use directions thoroughly. Use ReTain® only as directed.

ReTain® contains 15% (wt/wt) [S]-*trans*-2-amino-4-(2-aminoethoxy)-3-butenoic acid hydrochloride, commonly known as aminoethoxyvinylglycine, aviglycine HCl, or AVG. AVG is a potent plant growth regulator produced by fermentation. AVG inhibits the production of ethylene in plant tissues. Ethylene affects plant processes such as fruit maturation, ripening, and abscission.

ReTain® Uses

Apple: ReTain® delays fruit maturity, providing growers a delayed harvest period of up to 7 to 10 days depending on application timing. Depending on cultivar, orchard conditions, and grower objectives, one or more of the following benefits will be associated with this delay: improved harvest management, reduction of preharvest fruit drop, increased fruit size, additional time for color development, maintenance of fruit firmness, improved fruit quality (e.g., reduced incidence and/or severity of watercore), and enhanced storage potential.

Pear: ReTain[®] will offer one or more of the same benefits as listed for apples, depending on the cultivar, growing conditions, and grower objectives. Consult your local Valent Agricultural Specialist (1-800-6-Valent) for specific information on the best use practices for your particular orchard(s).

Stone fruit (except cherry): Depending on cultivar, orchard conditions, and grower objectives, ReTain[®] will offer one or more of the following benefits: improved harvest management, increased fruit size, maintenance of fruit firmness, reduction of preharvest fruit drop, improved fruit quality, and enhanced storage potential.

Consult your local Valent Agricultural Specialist (1-800-6-Valent) for specific information on the best use practices for your particular orchard(s).

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APPLICATION INSTRUCTIONS

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

ReTain[®] is packaged in a water-soluble bag inside a metallized polyester pouch. Each water-soluble bag contains 11.7 oz (333 grams) of ReTain[®]. Once the pouch is opened, the entire contents of the water-soluble bag must be used.

Crops

ReTain[®] is for use on apple, pear, and stone fruit (except cherry).

Use Rate

Use one pouch (11.7 oz = 333 grams) of ReTain[®] per acre.

NOTE: See USE OF ADJUVANTS section for the adjuvants and rates for your particular crop and situation.

NOTE: Use the label rate in order to obtain the maximum benefit(s) of ReTain[®]. Use of lower rates of ReTain[®] has resulted in inconsistent and /or less than desired product performance.

Timing of Application

ReTain[®] is to be applied only after fruit set has occurred. ReTain[®] has a 7 day preharvest interval (PHI) for Apple, Pear, and Stone Fruit (except cherries).

For fruit quality and harvest management of apple, pear and stone fruit (except cherry), ReTain[®] is applied prior to the anticipated *beginning of the normal harvest period of the untreated fruit* for the current season. For apple and pear, the normal harvest period for a particular orchard block refers to that time when fruits not treated with ReTain[®] would be harvested for long-term storage. For stone fruit (except cherry), the normal harvest period for a particular orchard block refers to that time when fruits not treated with ReTain[®] would be picked and sent directly to market. To help determine the *beginning of the normal harvest period*, refer to historical trends for harvest dates and the "days from full bloom to harvest" interval for each cultivar in your area.

Apple:

Apply one pouch of ReTain® per acre, four weeks prior to the anticipated *beginning of the normal harvest period of the untreated apples* for the current season. Application of ReTain® four weeks prior to the anticipated *beginning of the normal harvest period* (i.e., first pick) provides optimum response. Applications made either too early or too late will significantly reduce efficacy of the product for one or more of the possible benefits.

Alternative timing for multiple pick harvest operations: If the objective is to improve the fruit quality and storage potential of later picked apples (2nd, 3rd, 4th picks), apply one pouch of ReTain® per acre, one to two weeks prior to the anticipated beginning of the normal harvest period of the untreated apples for the current season. ReTain® applied one to two weeks before harvest typically will not delay the start of the harvest (1st pick)

Pear: Apply ReTain® one to two weeks prior to the anticipated *beginning of the normal harvest period* of untreated fruit for the current season. For additional specific information on pears, consult your local Valent Agricultural Specialist (1-800-6- Valent).

Stone Fruit (except cherry)

Peach & Nectarine: Apply one pouch of ReTain® per acre one to two weeks prior to the anticipated beginning of the normal harvest period of untreated fruit for the current season. Consult your local tree fruit specialist or Valent Agricultural Specialist (1-800-6-Valent) for more information.

Plum, Prune, Apricot, and Interspecific Apricot and Plum (such as Plumcot, Pluot®, & Aprium®): Follow the use instructions given for peach and nectarine. For these crops, consult your local Valent Agricultural Specialist (1-800-6-Valent) for additional specific information.

NOTE: Because the proper timing of ReTain® application is particularly important to product performance, serious consideration is to be given, on a block-by-block basis, to any site conditions (e.g., elevation, sun exposure, soil texture), growing condition(s) (e.g., prevailing or anticipated weather patterns, such as high temperature or drought conditions, nutrient levels) or production practice(s) (e.g., crop load, pruning severity) that could accelerate or delay fruit maturation during the course of the season.

Spray Volume

Apply ReTain® in a sufficient amount of water to ensure good coverage of the tree canopy. Product efficacy requires that fruits and foliage receive uniform spray coverage or else the desired result may not occur. Use calibrated spray equipment to ensure uniform coverage of leaves and fruit. Adjust water volumes based on tree size and spacing. In many cases, 100 gallons per acre or 2x Tree Row Volume-dilute have been shown to be effective. Excessive spray application volumes that result in spray runoff will reduce product performance.

Prepare spray solution by mixing the required amount of product with water in a clean, empty spray tank. Discard any unused spray material at the end of each day.

Use of Adjuvants

Apple & Pear: For optimal response, use ReTain® with Break-Thru®, RNA Si 100, Silwet L-77®, or Sylgard® 309 organosilicone surfactant. Use a final surfactant concentration of 0.05 to 0.1% (v/v) in the spray tank. To prevent possible spotting, use the 0.05% (v/v) concentration when high temperature (in excess of 90°F) weather conditions prevail or are anticipated. Do not use a surfactant concentration greater than 0.1% (v/v). To reduce foaming, add the organosilicone surfactant last and minimize agitation.

Stone Fruit (except cherry): To improve wetting and coverage of stone fruit (except cherry), use an organosilicone adjuvant such as Break-Thru®, Silwet L-77®, or Sylgard® 309 at a final surfactant concentration in the spray tank of up to 0.1% v/v. Do not use a concentration higher than 0.1% v/v. If a non-organosilicone adjuvant is preferred, use Regulaid® or NuFilm-P® at the rates indicated on the manufacturers' label. To reduce foaming, add the adjuvant last and minimize agitation.

Important Considerations

- For best results, apply ReTain® under slow drying conditions, e.g. early in the morning or at night, in order to ensure adequate absorption.
- Do not make applications during the day or early evening when fruit is still warm.
- Maintain solution pH between 6 and 8.
- Do not apply ReTain® to trees under stress (e.g. heat, water, disease, insect). Injured or stressed fruits (due to heat stress, sunburn, disease or insect damage, poor nutrient

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content, etc.) may not respond to ReTain[®]. Product benefits may not be observed in damaged fruit.

- Do not use overhead cooling or irrigation equipment for at least 8 hours following ReTain[®] application.
- Do not apply ReTain[®] if rain is expected within 8 hours of application.
- Combination effects and potential interactions between ReTain[®] and naphthaleneacetic acid (NAA) or ethephon products have not been thoroughly evaluated. Use of these products on ReTain[®]-treated blocks is not advised.
- ReTain[®] has a 7 day preharvest interval (PHI) for Apple, Pear, & Stone Fruit (except cherries).

Compatibility With Other Agricultural Products

ReTain[®] can also be tank-mixed with DiPel[®], Biobit[®], and Xentari[®] biological insecticides. Compatibility and performance data for ReTain[®] with other agricultural products are not available.

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STORAGE AND DISPOSAL

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

Pesticide Storage: Store product in a cool and dry place. Avoid extended storage conditions at temperatures above 25°C (77°F).

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: Dispose of empty outer foil bag in trash.

NOTICE TO USER

Warranty and Disclaimer Statement:

To the fullest extent permitted by law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. To the fullest extent permitted by law, user assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

Break-Thru[®] is a registered trademark of Goldschmidt Chemical Corporation

RNA Si 100 is a product of RNA Corporation.

Silwet L-77[®] is a registered trademark of Crompton Corporation

Sylgard[®] 309 is a registered trademark of Dow Corning Corporation.

Biobit[®], DiPel[®] and XenTari[®] are registered trademarks of Valent BioSciences Corporation.

NuFilm-P[®] is a registered trademark of Miller Chemical and Fertilizer Corporation.

Regulaid[®] is a registered trademark of KALO, Inc.

Aprium[®] and Pluot[®] are registered trademarks of Zaiger Genetics.

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