



Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD **2014-2016** LIC. NO.

8187.33

VBC-30102™

PLANT GROWTH REGULATOR

LIQUID CONCENTRATE

ACTIVE INGREDIENT:

[S]- <i>trans</i> -2-Amino-4-(2-aminoethoxy) -3-butenoic acid hydrochloride	20.0%
OTHER INGREDIENTS	80.0%
TOTAL	100.0%

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

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

Net Contents: 1 Gallon (3.785 L)



Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD **2011-2013** LIC. NO.

VALENT BioSciences®
CORPORATION

870 Technology Way
Libertyville, IL 60048
1-847-968-4700

Lot No.:





KEEP OUT OF REACH OF CHILDREN

CAUTIONEPA Reg. No.: 73049-468
EPA Est. No.: 33762-IA-001**FIRST AID**

If inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

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 (682-5368).

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

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

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.

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.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

Hand-wand applicators must wear dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with N, R, P, or HE filter when applying this product.

Follow the 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

For terrestrial uses: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

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.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this labeling about Personal Protective

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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 FOR USE

IMPORTANT: Before application, read all use directions thoroughly. Use VBC-30102™ only as directed.

VBC-30102 contains 20% (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 flower development, fruit set, fruit maturation, fruit ripening, and fruit abscission.

GENERAL APPLICATION INSTRUCTIONS

- Do not apply this product through any type of irrigation system.
- Because the proper timing of VBC-30102 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, drought or flood conditions, nutrient levels) or production practices that could impact flowering, fruit set, or fruit maturation during the course of the season.
- Apply VBC-30102 in a sufficient amount of water to ensure good coverage of the crop. Use calibrated spray equipment to ensure uniform coverage. Adjust water volumes based on plant size and spacing. 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. Dispose of any unused spray material at the end of each day.
- Avoid applications during the heat of the day. For best results, apply VBC-30102 under slow drying conditions, e.g. early in the morning or at night, in order to maximize absorption.
- Maintain solution pH between 6 and 8.
- Do not apply VBC-30102 to plants under stress (e.g., heat, water, disease, insect). Injured or stressed plants may not respond to VBC-30102.
- Do not use overhead cooling or irrigation equipment for at least 8 hours following VBC-30102 application.
- Do not apply VBC-30102 if rain is expected within 8 hours of application.

COMPATIBILITY WITH OTHER AGRICULTURAL PRODUCTS

VBC-30102 can be tank-mixed with DiPel®, Biobit®, and XenTari® biological insecticides. Compatibility and performance data for VBC-30102 with other agricultural products are not available.

PINEAPPLE

CROP	OBJECTIVE / BENEFIT	APPLICATION TIMING / USE INSTRUCTIONS
Pineapple	<p>Reduce the incidence of natural induction (NI) of flowering in pineapple, also known as Naturally Differentiated Flowering (NDF).</p> <p>Reduction of NDF allows for artificial induction of flowers (forcing) at the appropriate plant maturity to give more uniform flowering and consequently more uniform fruit maturity.</p> <p>Consult your local Valent BioSciences Corporation Specialist for specific information on the best use practices.</p>	<p>Apply 1 pint of VBC-30102 (95 grams AVG active ingredient) per acre directing the spray pattern toward the apex of the stem (plant core) of pre-flowering pineapples.</p> <p>Make the first application of VBC-30102 7-days prior to the first anticipated occurrence of conditions that favor NDF. Make subsequent applications at 7 day intervals when conditions favor NDF.</p> <p>Apply no more than 23 pints of VBC-30102 (2200 grams AVG active ingredient) per acre per crop of pineapples.</p> <p>Conditions that favor NDF in pineapple include:</p> <ul style="list-style-type: none"> • cool temperatures (< 68°F); • short photoperiod (< 12 hr); • prolonged overcast and rainy weather • pre-flowering plant weights greater than 3.0 lbs. <p>Make the last application of VBC-30102 per growing cycle prior to artificial induction of flowers (forcing).</p>

Water Volume: VBC-30102 efficacy requires that the plant core receive thorough spray coverage. Insufficient spray application volumes or uneven application patterns will reduce product performance. Spray volumes of 125 to 250 gallons per acre have been shown to be effective.

Adjuvants: VBC-30102 may be used with Break-Thru®, RNA Si 100, Silwet L-77®, or Sylgard® 309 organosilicone surfactants at a final surfactant concentration of 0.05 - 0.1% (v/v). To reduce foaming, add the adjuvant last and minimize agitation.

Additional Notes:

- Apply VBC-30102 to pineapple plants only prior to initiation of flowering. Applying VBC-30102 to pineapples that have undergone NDF may result in malformed fruit that must be culled.
 - Do not spray onto pineapple plants that are in bloom or have fruit.
 - Do not allow spray to drift onto pineapple plants that are in bloom or have fruit.
 - Do not apply VBC-30102 to pineapples if chilling and other conditions that favor NDF have occurred prior to first scheduled application.
 - Once the first application of VBC-30102 has been made, continued control of NDF by VBC-30102 will require additional applications during the entire period of susceptibility to NDF up to 7 days prior to the time of forcing.
 - If more than 7 days have elapsed since the previous VBC-30102 application, pineapples will again become susceptible to NDF even if previously treated with VBC-30102.
 - If a chilling event or other conditions that favor NDF have occurred later than 7 days from the previous application, but before subsequent VBC-30102 applications can be made, no further applications of VBC-30102 should be made.
- Except for approved adjuvants, combination effects and potential interactions between VBC-30102 and other agrochemical products have not been thoroughly tested. Tank-mixing VBC-30102 with other agrochemical products may reduce the efficacy of VBC-30102.

Table 1: Parts per Million (ppm) of AVG in Spray Tank at Varying Spray Volumes and Amounts of VBC-30102 (AVG HCl) per Acre

Amount of VBC-30102, (AVG HCl)/A	AVG Parts per Million (ppm) at Specified Gallons per Acre (gpa)					
	90 gpa	100 gpa	150 gpa	200 gpa	250 gpa	300 gpa
0.25 pt (118 mL) of VBC-30102 (23.8 gm AVG HCl)	70 ppm	63 ppm				
0.5 pt (237 mL) of VBC-30102 (47.5 gm AVG HCl)	140 ppm	126 ppm	84 ppm	63 ppm	50 ppm	
1 pt (473 mL) of VBC-30102 (95 gm AVG HCl)			167 ppm	126 ppm	100 ppm	84 ppm
2 pt (946 mL) of VBC-30102 (190 gm AVG HCl)					200 ppm	176 ppm
Each pint of VBC-30102 contains 95 gm AVG HCl active ingredient (a.i.)						

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 Handling: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available. If recycling is not available puncture container and dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

NOTICE TO USER

Warranty and Disclaimer Statement: To the extent consistent with applicable 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 extent consistent with applicable law, user assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

VBC-30102 is a trademark of Valent BioSciences Corporation.

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

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 Momentive Performance Materials.

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

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