

CytoFlor™

PLANT GROWTH REGULATOR

FOR USE ON ORNAMENTALS

Active Ingredient:

6-benzyladenine 1.9%

Other Ingredients 98.1%

Total 100.0%

EPA Reg. No. 73049-407

EPA Est. No. 33762-IA-001

List No. A511823

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KEEP OUT OF REACH OF CHILDREN CAUTION

1.0 FIRST AID	
If in Eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call toll-free 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).	

2.0 PRECAUTIONARY STATEMENTS

2.1 HAZARD TO HUMANS (AND DOMESTIC ANIMALS) CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Do not get in eyes, on skin, or on clothing. Wear protective eyewear, long-sleeved shirt and long pants, chemical-resistant gloves and shoes and socks.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

2.2 Personal Protective Equipment (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical resistance category selection chart.

Applicators and other handlers for all uses must wear:

- Protective eyewear.
- Long-sleeved shirt and long pants.
- Chemical-resistant gloves (such as barrier laminate; butyl, nitrile or neo-prene rubber; polyvinyl chloride or Viton).
- Shoes plus socks.

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.

2.3 User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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.

2.4 Environmental Hazards

Do not apply directly to water, or 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.

3.0 STORAGE AND DISPOSAL

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

Pesticide Storage: Store product in a cool and 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 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 and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available. If recycling is not available puncture and dispose of the container in a sanitary landfill, or by other procedures approved by state and local authorities.

4.0 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. No aerial application is permitted for the uses on this label.

IMPORTANT: Before application, read all directions on the label thoroughly. Use CytoFlor™ Plant Growth Regulator Solution (hereafter referred to as *CytoFlor*) only as directed.

CytoFlor contains 6-benzyladenine (6BA) as its active ingredient. 6BA is a potent plant growth regulator belonging to the group of growth regulators known as cytokinins.

FOR USE IN: COMMERCIAL GREENHOUSES, GLASSHOUSES (WHERE PLANTS ARE GROWN IN CONTAINERS), AND ON ACTIVELY-GROWING STOCK IN GROUND.

5.0 AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry 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.
- Chemical-resistant gloves (such as barrier laminate; butyl, nitrile or neoprene rubber; polyvinyl chloride or Viton).
- Shoes plus socks.

6.0 PRODUCT INFORMATION

CytoFlor promotes flowering in certain ornamental crops and increases lateral or basal branching. Additionally, applications of *CytoFlor* are known to reduce the overall height of specific plants resulting in more compact and marketable plants.

Plant response to *CytoFlor* is strongly influenced by cultural and environmental variables. Growth media, water/fertilizer management, temperature, light, greenhouse composition, and other cultural practices may impact plant response.

Plant size, container size and cultivar or variety is known to influence treatment response. Although multiple cultivars have been tested for sensitivity to *CytoFlor* and have demonstrated high levels of tolerance, it is impossible to ensure an acceptable response in all cultivars. For first time users of *CytoFlor* or when looking at new varieties, always conduct trials on a limited number of plants to determine crop response.

Consult your local Mycorrhizal Applications Agricultural Specialist (866-476-7800) for specific information regarding the use of this product in your particular nursery.

7.0 GENERAL APPLICATION INSTRUCTIONS

- Make sure that sufficient volumes of water are used to thoroughly wet foliage. Spray uniformity is equally important.
- Uniformly apply 1-2 quarts of finished spray solution to 100 sq ft of area (109-218 gallons per acre).

Compatibility With Other Agricultural Products

Information on tank mix compatibility of *CytoFlor* is limited at this time.

Christmas Cactus (*Schlumbergera* spp.):

Do not exceed 5.8 oz 6-benzyladenine per acre.

CytoFlor can be applied as a foliar spray:

To increase branching when the plant is growing vegetatively: Apply *CytoFlor* at 100 ppm (138 fl oz *CytoFlor* per acre; 2.85 oz a.i. 6BA/acre) as a uniform foliar spray after planting when new vegetative growth begins.

To increase the number of flower buds under reproductive conditions: Apply *CytoFlor* at 100 to 200 ppm (138 to 276 fl oz *CytoFlor* per acre; 5.7 a.i. 6BA/acre) as a uniform foliar spray after the start of short days following leveling, or when flower buds become visible. Specific guidelines, as indicated below, are based on lighted or natural season grown plants.

- **For floral initiation under short day conditions (i.e., lighting/black cloth):** Wait 5 to 10 days after the start of short days to level by removing immature phylloclades. Make a single application of *CytoFlor* immediately following, or 1 day after leveling.
- **For floral initiation under natural environmental conditions:** Make a single application of *CytoFlor* after flower buds first become visible (i.e., pinpoint bud stage). Timing of first visible bud will vary by cultivar. Avoid early applications which will result in phylloclade promotion and delayed flowering.

Plantain Lily (*Hosta* spp.): Use is limited to Nurseries, Greenhouses and Field Application by Manually Pressurized Handwand or Ground Boom.

Do not exceed 87.3 oz 6-benzyladenine per acre.

Use of *CytoFlor* on *Hosta* has been shown to promote lateral growth of finished plants by inducing the outgrowth of axillary and rhizomic buds. *CytoFlor* can also be used to increase offsets during propagation.

For the promotion of lateral growth on finished plants:

Apply *CytoFlor* at rates ranging from 1000-3000 ppm in a uniform spray volume. *CytoFlor* is most effective when plants are fully established prior to application (i.e., at least 3 to 4 weeks after potting), when there is evidence of surface root development, but before flower initiation.

For increased production of offsets (propagation):

Using uniform spray volumes spray *CytoFlor* at rates ranging from 1000-3000 ppm to fully-established, actively-growing stock plants. Repeat the application at 30-day intervals during the growing season. Offsets may be harvested at any time.

Treatment effects may vary by *Hosta* cultivar. Different cultivars respond differently to a given rate of *CytoFlor*. Multiple applications at 30-day intervals using lower rates may be more effective than a single application at higher rates. Conduct trials on a small number of plants under actual use conditions to establish the proper use rates and timings.

APPLICATION INSTRUCTIONS FOR USE ON CONTAINERIZED ANNUAL AND PERENNIAL FLOWERING AND FOLIAGE CROPS AND TROPICAL PLANTS

Do not exceed 14.5 oz 6-benzyladenine per acre.

- Apply *CytoFlor* as a foliar spray when plants are fully established and under active growth (i.e., at least 3 to 4 weeks after potting).
- Apply *CytoFlor* at rates ranging from 50 to 500 ppm (32 to 320 fl oz *CytoFlor* per acre; Max 6.63 oz 6BA/acre).
- Apply in a uniform spray volume of 2 quarts per 100 square feet of area. Cultivars within the same species may respond differently to a given rate of *CytoFlor*. For first time users of *CytoFlor*, always treat a limited number of plants starting with 50 ppm (32 fl oz *CytoFlor* per acre) on annuals and 100 ppm (64 fl oz *CytoFlor* per acre) on perennials and tropical plants; study for plant responses and adjust rates accordingly.
- Multiple applications of *CytoFlor* at 7- to 10-day spray intervals are often necessary to achieve optimum results (i.e., increased lateral growth).
- *CytoFlor* can cause significant injury to *Exacum*. DO NOT use *CytoFlor* on this genus.
- *CytoFlor* has been shown to cause a significant delay in flowering on *Gaillardia*. DO NOT apply *CytoFlor* to *Gaillardia* more than once during the production cycle.
- Do not use *CytoFlor* on *Aster* or *Cosmos*.

INCREASE OF LATERAL BRANCHING AND FLOWER BUD FORMATION FOR NON-EDIBLE PLANTS AND NON-BEARING FRUIT TREES

Do not exceed 87.3 oz 6-benzyladenine per acre.

- Apply 50-500 ppm *CytoFlor* (32 to 320 fl oz *CytoFlor* per acre; 6.63 oz 6BA/acre) as a foliar spray or drench treatment to ornamental plants to stimulate lateral branching in container-grown plants. The typical application rate in most ornamental plants is 300-500 ppm (192 to 320 fl oz *CytoFlor* per acre), but some species (e.g., *Hosta* spp.) are less sensitive. *CytoFlor* is a chemical substitute for mechanical pinching/shearing.
- Due to the increased number of branches/offshoots, *CytoFlor* can increase the number of flower buds to form.
- *CytoFlor* can be applied in plug flats, liners, or to finished plants when plants are actively growing and have good root growth. Plants have to have lateral buds available for branching. Uniformity of cuttings is important for efficacy.

- Make multiple applications if single application of *CytoFlor* does not provide adequate efficacy. Allow 10-14 days between applications to observe efficacy of the previous application and to avoid phytotoxicity.
- Apply *CytoFlor* when plants have sufficient stem development to support branching.
- *CytoFlor* may increase branch angle of some narrow-angled plants such as Bradford pear (*Pyrus calleryana*).
- Due to the increased resource allocation to a greater number of lateral branches, *CytoFlor* may reduce growth rate/overall height of the plant resulting in a more compact and marketable plant.
- *CytoFlor* may delay flowering.

REMOVAL OF UNDESIRE FRUIT FROM NURSERY ORNAMENTAL APPLE AND PEAR TREES

Do not exceed 2.65 oz 6-benzyladenine per acre.

- Apply 50-200 ppm *CytoFlor* (32-128 fl oz *CytoFlor* per acre) as a foliar spray treatment to flowering apple and pear trees where the presence of fruit is undesired after flowering.
- Apply *CytoFlor* when fruitlets are young and small, normally not later than 3 weeks after flowering.
- Generally, one application is sufficient to remove undesired fruit. If a second application is desired to obtain additional fruit removal, allow 7-10 days to observe the effect of the first application.
- Use sufficient spray volume to ensure complete tree coverage.
- *CytoFlor* applications will be the most effective when the maximum temperature is above 65°F on the day of application, and the following 2-3 days.

CytoFlor Dilution Table

Fluid ounces of *CytoFlor* per 100 gallons of spray required to obtain given ppm concentration

50 ppm	100 ppm	200 ppm	300 ppm	400 ppm	500 ppm	900 ppm	1000 ppm	2000 ppm	3000 ppm
32	64	128	192	256	320	576	640	1280	1920

Note: *CytoFlor* contains 75 grams active ingredient per 128 fluid ounces (one gallon).

8.0 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.

CytoFlor is a trademark of Valent BioSciences LLC
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Registrant:

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