

PISTON™



Contains chlorfenapyr, the active ingredient used in Pylon®.

For Use Only On Fruiting Vegetables and Ornamental Crops Grown in Commercial Greenhouses

Active Ingredient:	(% by weight)
Chlorfenapyr*:	21.4%
Other Ingredients	78.6%
Total	100.0%

* 4-bromo-2-(4-chlorophenyl)-1-(ethoxymethyl)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile
 Contains 2.0 pounds of chlorfenapyr per gallon.

EPA Reg. No.: 91234-19

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

See Inside Booklet For First Aid, Precautionary Statements, and Directions For Use.

FIRST AID

IF SWALLOWED	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF ON SKIN	<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.
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 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 eyes. Call a poison control center or doctor for treatment advice.

HOT LINE NUMBERS

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents), you may call SafetyCall® at 1-844-685-9173, 24 hours per day, 7 days per week. For chemical emergency: spill, leak, fire, exposure or accident, you may call CHEMTREC: 1-800-424-9300.

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

Piston is not manufactured or distributed by BASF Corporation, seller of Pylon®.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing vapors or spray mist. Avoid contact with skin, eyes or clothing. Wash hands 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.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below.

Applicators and Other Handlers Must Wear: (1) long-sleeved shirt and long pants; (2) chemical-resistant gloves, such as Barrier Laminate (≥ 14 mils), Butyl Rubber (≥ 14 mils), Nitrile Rubber (≥ 14 mils), Neoprene Rubber (≥ 14 mils), Polyvinyl Chloride (PVC) (≥ 14 mils), or Viton (≥ 14 mils); (3) shoes plus socks.

In Addition, All Mixers/Loaders/Applicators of Liquids Using a Mechanically-Pressurized Handgun for Application to Fruiting Vegetables Grown in Commercial Greenhouses Must Wear: (1) long-sleeved shirt and long pants; (2) chemical-resistant gloves, such as Barrier Laminate (≥ 14 mils), Butyl Rubber (≥ 14 mils), Nitrile Rubber (≥ 14 mils), Neoprene Rubber (≥ 14 mils), Polyvinyl Chloride (PVC) (≥ 14 mils), or Viton (≥ 14 mils); (3) PF 5 respirator; and (4) shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. **Do not** reuse them.

ENGINEERING CONTROLS STATEMENT

When handlers use closed systems or enclosed cabs in a manner that meets the requirements of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d) (4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **applicators and other handlers**, and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should: (1) Wash hands thoroughly before eating, drinking, chewing gum, using tobacco, or using the toilet. (2) Remove contaminated clothing/PPE immediately and then wash thoroughly and change into clean clothing. (3) 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

This pesticide is toxic to aquatic organisms, birds, and wildlife.

This product is toxic to bees exposed to direct treatment on blooming crops or weeds. **Do not** apply this product or allow it to drift to blooming crops or weeds if bees are actively foraging in the treatment area.

Do not contaminate water by cleaning of equipment or when disposing of equipment washwaters or rinsate. **Do not** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or regional office of the EPA. **Do not** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge.

PHYSICAL OR CHEMICAL HAZARDS

Do not apply this product around electrical equipment due to the possibility of shock hazard. **Do not** mix or allow this product to come into contact with an oxidizing agent. Hazardous chemical reaction may occur.

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 treated area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

USE RESTRICTIONS

- Do not** apply Piston except as specified on this label.
- Do not** apply Piston in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the treated area during application.
- Do not** use Piston on any other crops except fruiting vegetable crops and ornamental crops grown in commercial greenhouses.
- Do not** contaminate food or feedstuffs.
- Do not** compost any discarded plant materials that have been treated with Piston.
- Do not** apply Piston through any type of irrigation system.
- Do not** tank mix with products that contain a label prohibition against tank mixing.
- Do not** apply more than three (3) applications of Piston during a crop growing cycle.
- Do not** use Piston to formulate, reformulate or repack into any other pesticide product without the written permission of Atticus, LLC.
- Do not** apply more than 39 fl ozs of Piston (0.6 lb ai) per acre, per crop growing cycle in fruiting vegetables.
- It is unlawful to use Piston on anything other than ornamental crops or fruiting vegetable crops in commercial greenhouses.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 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), notification to workers, and restricted-entry interval.

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: (1) Coveralls; (2) Chemical-resistant gloves, such as Barrier Laminate (≥ 14 mils), Butyl Rubber (≥ 14 mils), Nitrile Rubber (≥ 14 mils), Neoprene Rubber (≥ 14 mils), Polyvinyl Chloride (PVC) or Viton (≥ 14 mils); (3) Shoes plus socks.

PRODUCT INFORMATION

Piston is a broad-spectrum insecticide-miticide for use on greenhouse grown fruiting vegetables and greenhouse grown ornamentals. It has excellent stomach activity when ingested and good contact activity when pests come in contact with it. Piston is classified in a class of insecticides-miticides called Pyrroles. Members of this class of products have a similar mode of action that involves uncoupling oxidative phosphorylation and preventing conversion of ADP to ATP which affects energy metabolism so that mites and insects cannot generate enough energy to survive.

Piston does not have ovicidal activity. Therefore, it should be used in combination with a registered miticide or insecticide with ovicidal activity if moderate to heavy numbers of mite or insect eggs are present at application time.

Resistance Management: All crop protection chemicals should be used in resistance pest management programs suitable for the crop-pest complex involved. The program should involve different classes of chemistry in the control of the pests. For more information on insect resistance, contact the local Cooperative Extension Service for suggestions on minimizing insect resistance.

When using Piston in greenhouses, **do not** apply more than two (2) consecutive applications before rotating to an insecticide-miticide with a different mode of action. In addition, **do not** apply Piston to consecutive crops in the commercial greenhouse unless applied in combination with another insecticide-miticide with a different mode of action.

Mixing Instructions: Agitate or shake Piston containers prior to use in order to prepare a uniform spray solution. Add $\frac{1}{2}$ to $\frac{3}{4}$ of the required amount of clean water to the spray tank and start agitation. Measure the required amount of Piston with a calibrated measuring device and add to the spray tank while agitating. Add the rest of the water and continue with agitation. If preparing a tank-mixture, add Piston to the tank first and be sure that it is fully dispersed in water before adding the additional materials. To prevent waste and disposal of used spray solution, it is best to prepare no more spray solution than is needed for the immediate operation.

Compatibility: Although Piston is compatible with many spray products, a full range of compatibilities under all local conditions has not been evaluated. Therefore, the compatibility of any mixture with Piston must be determined using a jar test. Conduct a jar test by adding proportionate amounts of each ingredient of the tank-mixture to a pint or quart jar. Cap, shake, and let sit for at least 15 minutes. If a precipitate forms and it cannot be readily re-dispersed, do not use the mixture because it is incompatible.

Tank Mixing: As stated above, if using Piston in a tank-mixture, always add Piston to the spray tank first and make sure it is fully dispersed in water before adding any other tank-mix product. Follow all applicable directions, restrictions and precautions on the label for the tank mix partners. The most restrictive labeling applies when using a tank mix. **Do not** tank mix with products that contain a label prohibition against tank mixing. **It is unlawful to tank mix Piston if the tank mix will be used outdoors.**



FRUITING VEGETABLE CROPS GROWN IN COMMERCIAL GREENHOUSES

Piston is broad-spectrum and can be used to control insect and mite pests on greenhouse grown fruiting vegetables such as eggplant, groundcherry, pepino, pepper, tomatillo and tomato. If multiple pests are present, always use the rates required to control the most difficult pest. Use lower rates when populations are at action thresholds and higher rates when populations have reached economic injury levels for yield or quality.

Application Instructions: Always maintain agitation during application. Use the suggested dosage in sufficient water for thorough coverage of foliage. **Piston** can be applied up to and including the day of harvest.

Use Restrictions for Fruiting Vegetables Grown in Commercial Greenhouses

- Apply **Piston** according to the product guidelines and restrictions stated in the "USE RESTRICTIONS" and "Resistance Management" sections of this label.
- **Do not** apply **Piston** as an ultra low volume (ULV) spray.
- Do not use on tomato varieties with a mature fruit diameter of less than one (1) inch.
- Allow at least 5 to 7 days between applications.
- **Do not** apply more than 39 fl ozs of **Piston** (0.6 lb ai) per acre, per crop growing cycle in fruiting vegetables grown in commercial greenhouses.
- It is unlawful to use a tank-mixture with **Piston** outdoors.

Piston Application Rates and Comments Fruiting Vegetables Grown In Commercial Greenhouses Eggplant, Ground cherry, Pepinos, Peppers, Tomatillo and Tomato

Target Pests	Rate (fl ozs/A)	Rate (lbs ai/A)	Comments
Worms: Alfalfa looper (<i>Autographa californica</i>) Beet armyworm (<i>Spodoptera exigua</i>) Cabbage looper (<i>Trichoplusia ni</i>) Fall armyworm (<i>S. frugiperda</i>) Hornworms (<i>Manduca quinque maculata</i>) Southern armyworm (<i>S. eridania</i>) Tobacco budworm (<i>H. virescens</i>) Tomato fruitworm (<i>Heliothis zea</i>) Tomato pinworm (<i>Keiferia lycopersicella</i>) Yellowstriped armyworm (<i>S. ornithogalli</i>)	6.5 to 13	0.10 to 0.20	Apply as required by scouting. Apply in a spray volume between 5 and 100 gallons per acre. Repeat applications as needed (usually 5 to 10 days) for control, but allow at least 5-7 days between applications. Use a longer time interval when infestations are light to moderate; shorten the time interval for heavier infestations. Use lower rates when populations are at action thresholds and higher rates when populations are heavy and causing damage.
Mites: Broad mite (<i>Polyphagotarsonemus latus</i>) Two-spotted spider mite (<i>Tetranychus urticae</i> and other <i>Tetranychus</i> spp.)	6.5 to 13	0.10 to 0.20	
Thrips: Melon thrips (<i>Thrips palmi</i>) Onion thrips (<i>Thrips tabaci</i>) Western flower thrips (<i>Frankliniella occidentalis</i>)	9.8 to 13	0.15 to 0.20	

ORNAMENTAL CROPS GROWN IN COMMERCIAL GREENHOUSES

On greenhouse ornamentals, **Piston** is broad-spectrum and controls mites, insects and foliar nematodes. If multiple pests are present, always use the rates required to control the most difficult pest. Use lower rates when populations are at action thresholds and higher rates when populations have reached economic injury levels for yield or quality.

Application Instructions: Always maintain agitation during application. Use the suggested dosage in sufficient water for thorough coverage of foliage.

Use Restrictions for Ornamental Crops Grown in Commercial Greenhouses

- Apply **Piston** according to the product guidelines and restrictions stated in the "USE RESTRICTIONS" and "Resistance Management" sections of this label.
- **Do not** apply more than 41 fl ozs of **Piston** per 100 gallons per crop per season or 0.64 lb of active ingredient per 100 gallons per crop per season in ornamentals grown in commercial greenhouses (start to finish for one ornamental crop).
- It is unlawful to use a tank-mixture with **Piston** outdoors.

Crop Tolerance: Although **Piston** has been shown to be safe to many ornamental species when used according to label use directions, not all ornamental plant species and cultivars have been tested for tolerance to **Piston**, tank-mix combinations of **Piston**, or pesticide treatments before or after those of **Piston**. Also, since local conditions can influence plant tolerance, they may not match the conditions under which testing of **Piston** was conducted.

Sensitive Ornamental Plant Species: Some ornamental plant species have been found, under certain conditions, to be less tolerant to **Piston** when used according to label directions. Phytotoxicity is likely to occur if **Piston** is applied to the following ornamental plant species: Dianthus (*Dianthus* spp.) including carnations, pinks and Sweet William varieties, Kalanchoe (*Kalanchoe blossfeldiana*), Poinsettia (*Euphorbia pulcherrima*), Roses (*Rosa* spp.), Salvia (*Salvia* spp.) and Zinnia (*Zinnia* spp.).

If application is made to these sensitive ornamental plant species it is made at grower risk.

Follow these suggestions to reduce potential injury to ornamentals: (1) Do not apply to plugs in their early stages of development (1 to 2 leaf) as injury to some tender crops could occur. If application to plugs is necessary, test **Piston** on a small number of plants before doing large scale treatments. (2) Apply **Piston** during the coolest parts of the day and always apply prior to blooming or avoid applications to blooms where possible. (3) Prior to application, evaluate for potential phytotoxicity of all tank mixes with additives or other pesticide products. Additives, including spray adjuvants, are not necessary for use with **Piston**. Crop oils, surfactants and fertilizer adjuvants have been shown to increase the likelihood of phytotoxicity and are not recommended with **Piston**. If greenhouses are under high temperature conditions, use caution whenever including an additive with **Piston** because the injury potential is higher. Do not tank mix with products that contain a label prohibition against tank mixing. Apply the tank mix to a small area (8 to 12 plants) and evaluate for 3 to 5 days before attempting a large-scale spray to make certain that no phytotoxicity occurs.



**Piston Application Rates and Comments
Greenhouse Grown Ornamentals**

Target Pests	Rate (fl ozs/ 100 gals)	Rate (lbs ai/100 gals)	Comments
Mites: Broad mite (<i>Polyphagotarsonemus latus</i>) Citrus budmite (<i>Eriophyes sheldoni</i>) Cyclamen mite (<i>Phytonemus pallidus</i>) Rust mite (<i>Phyllocoptura</i> spp., <i>Epirimerus</i> spp. and <i>Aculus</i> spp.) Two-spotted spider mite (<i>Tetranychus urticae</i> and other <i>Tetranychus</i> spp.)	2.6 to 5.2	0.04 to 0.08	Use sufficient spray volume to ensure thorough and complete coverage of foliage. Apply when mites first appear, before crop damage occurs. Use Piston at 2.6 to 5.2 fl oz/100 gallons for 14 to 21 day control of low to moderate populations of mites. Against high mite populations, or a generally high infestation across multiple crops in the same greenhouse, apply Piston at 5.2 fl oz/100 gallons. Make a sequential application at 5 to 7 days after the first application to maintain control. Make only one sequential application. Piston is not systemic and does not translocate throughout the plant, but it is translaminar and moves rapidly from the top to the underside of a leaf to control mites. Piston will be diluted in rapidly expanding, new foliage as compared to the concentration in the leaf surface at the time of application. The sequential application mentioned above is important to maintain control.
Worms: Beet armyworm (<i>Spodoptera exigua</i>) Cabbage looper (<i>Trichoplusia ni</i>) Soybean looper (<i>Pseudoplusia includens</i>) Foliar nematodes (<i>Aphelenchoides</i> spp.)	2.6 to 6.4	0.04 to 0.10	Use sufficient spray volume to ensure thorough and complete coverage of foliage. Apply when worms first appear, before crop damage occurs.
Foliar nematodes (<i>Aphelenchoides</i> spp.)	5.2 to 10	0.08 to 0.16	Use sufficient spray volume to ensure thorough and complete coverage of foliage. Apply an initial application at 5.2 fl ozs /100 gallons when first signs of plant damage or nematodes are observed, followed by a second application at 5.2 fl ozs/100 gallons 7 to 14 days later. A third application at 5.2 fl ozs/100 gallons can be made at 4 to 6 weeks after the initial application if plant damage or nematodes are detected. To improve nematode control, add an IGR (insect growth regulator) or second MOA (Mode of Action) product registered for this use as a tank mixture.
Fungus gnats (<i>Bradysia</i> spp.)	5.2 to 10	0.08 to 0.16	Use sufficient spray volume to ensure thorough and complete coverage of foliage. Apply when fungus gnats are in the early larval stage. Piston will not control emerged adults, therefore, add an IGR or second MOA product registered for this use as a tank mixture.
Thrips: Chili thrips (<i>Scirtothrips dorsalis</i> Hood) Western flower thrips (<i>Frankliniella occidentalis</i>)	5.2 to 10	0.08 to 0.16	Use sufficient spray volume to ensure thorough and complete coverage of foliage. Apply when thrips are immature and when populations are building, before crop damage occurs. Western flower thrips are difficult to control because they may be concealed in blooms. Combinations with other effective insecticides will enhance overall control. Alternation with other MOA products such as Overture® 35 WP insecticide or Mesuro!® 75-W can help prevent resistance development. Incorporate an IGR such as Pedestal® novaluron insecticide in your spray program.

STORAGE AND DISPOSAL

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

Pesticide Storage

Keep Piston in its tightly closed original container, when not in use. **Do not** store below 32° F. **Do not** store in direct sunlight. Store in a cool, dry (preferably locked) area that is inaccessible to children and animals.

Pesticide Disposal

Wastes resulting from the use of Piston may 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 pressure rinse container (or equivalent) promptly after emptying (see rinsing instructions below).

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) 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 ¼ 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 for reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Offer for recycling if available for reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Steps to be taken in case material is released or spilled: Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal. Keep the spill out of all sewers and open bodies of water.

LIMITATION OF WARRANTY AND LIABILITY

IMPORTANT: READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

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