



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

March 15, 2021

Jeannie S. Hemiller
Regulatory Director
AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92600

Subject: Registration Review Label Mitigation for Flumetsulam
Product Name: Python Herbicide
EPA Registration Number: 5481-677
Application Dates: 2/24/2021
Decision Numbers: 572026

Dear Ms Hemiller:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Flumetsulam Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements 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 Agency find or if it is brought to our attention that a website contains false 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.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

Page 2 of 2
EPA Reg. No. 5481-677
Decision No. 572026

If you have any questions about this letter, please contact Darius Stanton by phone at 703-347-0433, or via email at stanton.darius@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington".

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure

ACCEPTED

03/15/2021

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 5481-677

FLUMETSULAM

Group

2

HERBICIDE

Python® Herbicide

For broadleaf weed control in field corn and soybeans

Active Ingredient

flumetsulam: N-(2,6-difluorophenyl)-5-methyl-1,2,4-triazolo-[1,5a]

- pyrimidine-2-Sulfonamide80%

Other Ingredients20%

Total100%

Contains 0.8 lb of flumetsulam per pound of product.

Keep Out of Reach of Children

CAUTION

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.
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.

EMERGENCY INFORMATION

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:

For Medical Emergencies phone:1-888-681-4261

For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC®1-800-424-9300

For Product Use Information phone: AMVAC®1-888-462-6822

Refer to inside of label booklet for additional precautionary information including Directions for Use.

EPA Reg. No.: 5481-677

EPA Est No.: _____

Net Contents: _____



Manufactured for:
AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660 U.S.A.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION - Harmful if absorbed through the skin causes eye irritation. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

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.

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.

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 washwaters or rinsate.

Flumetsulam has been identified in groundwater sampling from a field research site under vulnerable conditions. There is the possibility that flumetsulam may leach through soil to groundwater, especially, where soils are coarse and groundwater is near the surface.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying. 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.

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.

Exception: If the product is soil-injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

Product Information

Python® Herbicide is a selective product for broadleaf weed control in field corn and soybeans. Apply Python as a preplant surface, preplant, or preemergence treatment in corn and soybeans. Apply Python with water, liquid fertilizer, or impregnated on dry bulk fertilizer. Absorption of Python occurs through both shoot and root uptake. Susceptible weeds exposed to Python stop growing and either die or remain non-competitive with the crop. Python provides residual control of weeds that may emerge after application. Because uptake and translocation of Python involves uptake by both roots and/or shoots, adequate soil moisture is necessary for optimal herbicidal activity.

When applications are made under adverse (dry or cold) conditions, or when less susceptible species are treated, reduced activity may be observed and weeds may be suppressed and not controlled. Weed suppression is a visual reduction in weed competition (reduced population, size, and/or vigor) as compared to an untreated area. Improve the level of control by applying Python under favorable growing conditions (i.e., adequate moisture and warmer temperature) and by using a higher rate in the rate range.

Use Restrictions

Do not mix or load this product within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Design the pad and maintain it to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Do not allow surface water to either flow over or from the pad, which means the pad must be self-contained. Slope the pad to facilitate material removal. An unroofed pad will have the capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Maintain containment capacities at all times. These minimum containment capacities do not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

- Do not apply this product in Nassau and Suffolk Counties in New York State.
- Do not aerially apply this product in New York State.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not apply more than a total of 1.4 oz of Python (0.07 lb active ingredient flumetsulam) per acre per year.
- Do not apply more than a cumulative total of 0.07 lb active ingredient flumetsulam per year if using in sequential or tank mix applications with other products.
- **Preharvest Interval:** Do not apply within 85 days before field corn and soybean harvest.
- **Preharvest Interval:** Do not apply within 45 days of field corn forage harvest.
- Do not use flood irrigation to apply or incorporate this product.
- Use this product in a manner that prevents back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.
- **Avoid all direct or indirect contact with non-target plants.** Do not apply near desirable vegetation. Allow adequate distance between target area and desirable plants to minimize exposure.
- Do not graze or feed treated soybean forage, hay or straw to livestock.
- Do not apply Python to sweet corn or popcorn.
- Do not apply when air temperature is near freezing or when freezing conditions are expected for several days following application.

Do not apply under conditions that favor runoff or wind erosion of soil containing Python to non-target areas. To prevent off-site movement due to runoff or wind erosion:

- Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, settle the soil surface first by rainfall or irrigation.
- Do not apply to impervious substrates, such as paved or highly compacted surfaces, or frozen or snow covered ground.
- Do not apply to soils when saturated with water.
- Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

Use Precautions

- Uneven application or uneven incorporation of Python can result in erratic weed control or crop injury.
- Extended cold, wet conditions (soil temperature below 50°F and excessive rainfall with wet soil conditions) following preemergence application of Python to field corn which persist during germination and early crop development may result in crop injury. Injury symptoms, including yellowing of leaves and/or crop stunting, are usually temporary and affected corn plants usually recover without affecting yield.
- Dry weather following preplant surface or preemergence applications of Python may reduce the product's effectiveness. If sufficient activating rainfall or overhead irrigation does not occur within 7 to 10 days following application, incorporate the herbicide lightly into the soil using a rotary hoe, harrow, or shallow cultivation. Use a preplant incorporated application if furrow irrigation is used or when dry weather is expected following application.

Weed Resistance Management Guidelines

Python contains Flumetsulam, a Group 2 herbicide (ALS inhibitor). Any weed population may contain plants naturally resistant to Group 2 herbicides. Such resistant weed plants may not be effectively managed using Group 2 herbicides but may be effectively managed utilizing another herbicide alone or in mixtures from a different Group and/or by using cultural or mechanical practices. However, any herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides. Consult your Amvac representative, state cooperative extension service, professional consultants, or other qualified authorities to determine appropriate actions for treating specific resistant weeds.

Best Management Practices

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using full labeled rates and following use directions is important to delay the selection for resistance. Scouting after a herbicide application is important because it can facilitate the early identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to implement measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in retarding the spread of resistant weed seed.

Principles of herbicide resistance management

1. Apply integrated weed management practices. Use multiple herbicide modes-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.
2. Use the full labeled herbicide rate and proper application timing for the hardest to control weed species present in the field.
3. Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.
4. Monitor site and clean equipment between sites.

For annual cropping situations, also consider the following:

- Start with a clean field and control weeds early by using a burndown treatment or tillage in combination with a preemergence residual herbicide as appropriate.
- Use cultural practices such as cultivation and crop rotation, where appropriate.
- Use good agronomic principles that enhance crop competitiveness.
- Use new commercial seed that is as free of weed seed as possible.

Crop Rotation Intervals

When tank mixing with other herbicides, follow the crop rotation restrictions on the label of each product used. The following rotational crops may be planted at the indicated interval following application of Python:

Crop	Rotation Interval (Months)
soybeans, corn (field, silage, seed)	0
alfalfa, dry beans, lima beans, peas, peanuts, barley, oats, rye, snap beans (1), sweet potatoes, wheat	4
rice	6
seeding of cover crops (2), forage grasses (3), popcorn, tobacco	9
grain sorghum, potatoes	12
cotton, sunflower, sweet corn (4)	18
sugar beets, canola	26 (5)

Numbers in parentheses (-) refer to the following Crop Specific Rotational Requirements.

Crop Specific Rotational Requirements:

1. Do not plant snap beans grown for commercial seed production.
2. The following cover crops may be planted for establishment of federal Conservation Reserve Programs and Agricultural Reserve Programs no sooner than 9 months following application of Python: **legumes** including alfalfa, clovers, crownvetch, birdsfoot trefoil, and lespedeza; and **grasses** including big bluestem, little bluestem, switchgrass, Russian wildrye, green needle, smooth bromegrass, Garrison creeping foxtail, canary grass, orchardgrass, intermediate wheatgrass, tall wheatgrass, crested wheatgrass, western wheatgrass, and Indian grass. Some stand reduction or temporary stunting of legume seedlings is possible. However, Amvac will not accept responsibility for any crop injury or stand failure of these seeded crops following use in corn or soybeans and the subsequent 9-month rotational crop restriction. Additionally, Amvac will not accept responsibility for any crop injury or stand failure of native grasses as a result of inadequate seedbed preparation, erratic germination, lack of seedling vigor, or plant stress from unfavorable environmental conditions.
3. Do not plant forage grasses grown for commercial seed production.
4. Certain sweet corn varieties may be planted 10 1/2 months after application of up to 1 oz of Python per acre. This interval applies only to varieties of sweet corn which have been identified as tolerant to an ALS inhibiting herbicide. Contact your local Amvac representative for current approved varieties.
5. Rotation to sugar beets and canola requires a 26-month rotation interval and a successful field bioassay.

Field Bioassay Instructions: Using typical tillage, seeding practices, and timings for the particular crop, plant several strips of the desired crop variety across the field previously treated with Python. Plant the strips perpendicular to the direction in which Python was applied. Locate the strips so that different field conditions are encountered, including differences in soil texture, pH, and drainage. If the crop does not show visible symptoms of injury, stand reduction, or yield reduction, the field can be seeded with the test crop. If visible injury or stand reduction occurs, do not seed the test crop and repeat the bioassay the next growing season.

Spray Drift Management

The interaction of equipment and weather related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

Do not apply when weather conditions favor drift to non-target sites.

Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see sections on Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size:

- **Do not use nozzles that produce a fine-droplet spray.**
- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream will produce larger droplets than other orientations and is recommended. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Do not make applications at a height greater than 10 feet above the top of the tallest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Make application when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply when wind is gusting or wind speed exceeds 15 mph as uneven spray coverage and drift may result. Avoid applications below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator needs to be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Do not make applications during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: Apply Python only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Safe Pesticide Handling Procedures

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Assure accurate measurement of pesticides by all operation employees.
- Mix only enough product for the job at hand.
- Avoid over filling the spray tank.
- Do not discharge excess material on soil at a single spot in the field or at the mixing/loading station.
- Triple rinse the container in which product was purchased. Add the rinsate to the spray mix.

Mixing Directions

This product can be mixed in accordance with the most restrictive label limitations and precautions. Do not exceed the label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing. It is the responsibility of the pesticide user to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Python Herbicide – Alone

1. Fill the tank with 1/2 of the total amount of water or liquid fertilizer required for the load.
2. Start agitation.
3. Add the required amount of Python for acreage being treated by opening the bottle(s) and measuring directly into the spray tank. Allow the product to fully disperse. If liquid fertilizer is being used as the spray carrier rather than water, pre-mix the Python as described below before adding to the spray tank.
4. After product has completely dispersed, add non-ionic surfactants or other adjuvant materials.
5. Continue agitation while filling the spray tank to the required volume.
6. To ensure a uniform spray mixture, continuous agitation is required during application. If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying. Apply within 24 hours of mixing. Weed control with Python, which has been mixed and allowed to stand for more than 24 hours, may be reduced.

Pre-Mixing (Other Products): If pre-mixing is required for other dry or flowable products applied in tank mix combination with Python, follow directions for pre-mixing of such products provided in their respective product labels.

Python Herbicide - Tank Mix

If a broader spectrum of weed control is needed, Python may be tank mixed with labeled rates of other products provided (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; (2) tank mixing with Python is not prohibited by the label of the tank mix product; and (3) the tank mix combination is compatible as determined by a "jar test" described in the Tank Mix Compatibility Testing section.

Tank Mixing Precautions:

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed specified application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix.
- Do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture

containing boron unless the tank and spray equipment have been adequately cleaned. (See Equipment Clean-Out Procedures.)

Tank Mix Compatibility Testing: A jar test is recommended prior to tank mixing to ensure compatibility of Python and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, gels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

Mixing Order for Tank Mixes:

1. Fill the spray tank to 1/4 to 1/3 of the total spray volume required with water or liquid fertilizer
2. Start agitation.
3. Add the required amount of Python for acreage being treated by opening the bottle(s) and measuring directly into the spray tank.
4. After adding Python, add different formulation types in the following order: (1) water soluble packets; (2) any compatibility agent, if required; (3) dry flowables; (4) wettable powders; (5) aqueous suspensions, flowables and liquids. Maintain agitation and fill spray tank to 3/4 of total spray volume and add: (6) emulsifiable concentrates; (7) solutions; and (8) adjuvants. Allow time for complete mixing and dispersion after each addition.
5. Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application.

If application or agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to resuspend than when originally mixed.

Clean-Out Procedures for Spray Equipment

1. Drain any remaining spray mixture from the application equipment.
2. Hose down the interior surfaces of the tank while filling the tank 1/2 full of water.
3. Add household ammonia at a rate of 1 gallon per 100 gallons of water. Recirculate for 5 minutes and spray out part of this mixture for 5 minutes through the boom. Drain tank.
4. Remove all spray nozzles and screens and clean separately.
5. If the spray equipment will be used for pesticide application to crops sensitive to Python, repeat steps 1 through 3. Thoroughly clean exterior surfaces of spray equipment.

Note: Rinsate must be disposed of on-site according to label use directions or at an approved waste disposal facility.

Liquid Mixture (Slurry) in a Nurse Tank

Mix Python with water in a nurse tank to prepare a liquid slurry concentrate that can be measured and dispensed on a liquid volume basis. This liquid slurry will contain 1 lb of Python (0.8 lb flumetsulam) per gallon of total solution. Use a nurse tank with an agitation system designed for mixing and dispensing a product as a liquid slurry. The slurry will settle in the tank after standing for a few minutes. To ensure uniformity of the liquid slurry, maintain continuous agitation in the tank or agitate the slurry thoroughly and continuously for at least 10 minutes prior to each dispensing.

To prepare the liquid slurry, initially mix Python in a ratio of 1 lb of herbicide product per 2 quarts of water. After the Python is completely dispersed and uniformly mixed, add sufficient water to bring the mixture to a final liquid volume of 1 gallon per 1 lb of Python. Prior to mixing, calibrate the slurry mix tank for various mixing volumes. Use the following when mixing various volumes of liquid slurry.

Amount of Python to Add (lb)	Add Python to the Following Amount of Water (qt)	Add Water to Slurry to Obtain Final Mixed Liquid Volume (gal)
1	2 (0.5 gal)	1
5	10 (2.5 gal)	5
10	20 (5 gal)	10
20	40 (10 gal)	20
30	60 (15 gal)	30

Application in Liquid Fertilizer

Always pre-mix or slurry Python with water prior to adding to liquid fertilizer in spray tanks. Make sure Python is completely and uniformly dispersed in water and then add to the spray tank or induction system through a 20 to 35 mesh screen. Add any rinsate to the spray mixture.

When necessary, use a compatibility agent to ensure that Python mixes properly. The use of an appropriate compatibility agent is especially important when tank mixing Python and other dry flowables, wettable powders, flowables, liquids, aqueous suspensions, or solutions with emulsifiable concentrates in liquid fertilizer. If the emulsifiable concentrate formulation rises to the surface of the fertilizer as an oil ("oils out"), the oil may combine with the wettable powder, flowable, or suspension to form oily curds (viscous phase) which are difficult to disperse. A jar test, utilizing relative proportions of the tank mix ingredients, is recommended prior to mixing with a large quantity of liquid fertilizer.

Note: Refer to Clean-Out Procedures for Spray Equipment for directions on cleaning equipment prior to use in crops other than soybeans.

Application with Dry Bulk Fertilizer

Dry bulk fertilizer may be impregnated or coated with Python. Application of dry bulk fertilizer impregnated with Python provides weed control equal to the same rates of Python applied in liquid carriers. Follow label directions for Python regarding rates per acre, crops, special instructions, cautions and special precautions. Apply 200 to 700 lb of the fertilizer/herbicide mixture per acre. Apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury. Non-uniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve weed control.

Most dry fertilizers can be used for impregnation with Python. When coated ammonium nitrate and/or limestone are used alone, do not impregnate with Python. These materials will not absorb the herbicide. Blends containing a mixture of ammonium nitrate and/or limestone as part of the fertilizer mixture can be impregnated.

Compliance with all federal and state regulations relating to blending pesticide mixtures with dry bulk fertilizer, registration, labeling and application are the responsibility of the individual and/or company offering the fertilizer and chemical mixture for sale.

Impregnation: Python must be pre-mixed with water to form a slurry prior to impregnation of dry bulk fertilizer. For best results, use 1 pint of water to properly slurry the material. Make sure Python is completely and uniformly dispersed in water. Then add sufficient water to adjust the total volume of the mixture to deliver a spray volume of at least 6 pints per ton of fertilizer. Place nozzles used to spray the Python onto the fertilizer to provide uniform spray coverage. Use any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender.

Calculate amounts of Python by the following formula:

$$\frac{2000}{\text{lb/acre of fertilizer}} \times \text{1 oz of Python} = \text{Quantity of product per ton of fertilizer}$$

Note: Thoroughly clean dry fertilizer blending equipment prior to use with other herbicides. It is important to clean the blender, herbicide spray tank, and spraying apparatus thoroughly. Rinse the sides of the blender and the herbicide tank with water. Clean spraying apparatus prior to preparing fertilizer/herbicide mixtures for crops other than corn or soybeans (see Clean-Out Procedures for Spray Equipment). Then, impregnate the rinsate onto a load of dry fertilizer intended for an approved crop. Use a maximum rate of 1 gallon of rinsate per ton of fertilizer. Follow with one to two loads of unimpregnated fertilizer in the blender before switching herbicides. The fertilizer application equipment must be empty, clean, and dry before applying any material to crops other than corn or soybeans.

Application Methods

Ground Application

Apply Python in sufficient spray volume to provide uniform coverage using only properly calibrated ground equipment. Apply in a total spray volume of 10 to 40 gallons per acre using low pressure (20 to 40 psi). Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture. To ensure thorough coverage when applying to minimum or no-till soybeans or field corn, apply in a total spray volume of 20 gallons or more per acre. **Note:** Emerged soybeans are not tolerant to rates of Python specified for soil applied treatments. Treatments at soil applied rates made after soybeans have emerged (at-cracking or later) will result in severe crop injury.

Band Application: Calculate the amount of herbicide needed for band treatment by the formula:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Amount needed per acre of field}$$

Preplant Soil Incorporated Application: For best results, apply and incorporate Python from 0 to 30 days before planting field corn or soybeans. Preplant incorporated treatments may be applied in water, liquid fertilizer, or dry fertilizer. Uniformly incorporate the herbicide treatment into the top 2 to 3 inches of the final seedbed.

Preplant Surface Application: For best results, apply Python alone or in certain tank mixes up to 30 days before planting. If weeds are present at the time of treatment, apply Python in a tank mix combination with a non-selective or contact herbicide such as glyphosate. Python may provide suppression of annual grasses if there is sufficient rainfall to move the herbicide into the soil prior to weed germination. Rainfall or overhead sprinkler irrigation is necessary to move Python into the weed germination zone. The amount of moisture required following application depends upon existing soil moisture, soil texture and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is adequate. If adequate soil moisture is not received within 7 to 10 days after a preplant surface application, shallow cultivate to control established weeds and move the herbicide into the weed germination zone. When adequate soil moisture is received following dry conditions, performance may vary by weed species and the depth of the weed root system in the soil. Do not move treated soil out of the row or move untreated soil to the surface during planting or weed control will be diminished.

Preemergence Application: Apply at the time of planting or after planting field corn or soybeans, but prior to weed emergence. Rainfall or overhead sprinkler irrigation is necessary to move Python into the weed germination zone. The amount of moisture required following application depends upon existing soil moisture, soil texture and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is adequate. If adequate soil moisture is not received within 7 to 10 days after a preplant surface application, shallow cultivate to control established weeds and move the herbicide into the weed germination zone. When adequate soil moisture is received following dry conditions, performance may vary by weed species and the depth of the weed root system in the soil.

Early Preplant Burndown

Apply 0.8 to 1 oz of Python per acre in a tank mix with 2,4-D, glyphosate, glufosinate, or other herbicide product labeled for burndown and/or residual weed control in the fall or early spring prior to planting corn or soybeans. The application can be made with ground or aerial application equipment. Apply to crop stubble or tilled soil including fallow beds. This treatment provides early burndown of existing weeds plus residual weed control. For optimal burndown control, apply when weeds are 4 inches or less in height. For optimal residual control, apply after soil temperature has dropped below 50°F for fall applications. Under most conditions, fields should remain suitably clean prior to planting, thus avoiding the need for additional burndown weed control. If weeds are present at time of application, tank mix Python with other products labeled for burndown and/or residue weed control. Reduced residual (in-crop) weed control may be expected when conditions prevent planting by average (historical) planting date for the area. Do not apply to frozen soils or snow covered ground.

Select the most appropriate 2,4-D formulation for tank mixtures. Many 2,4-D products are labeled for use in the fall and in the spring prior to no-till soybean planting. These products can be applied preplant or preemergence to corn, but labels vary with regard to application timing and planting intervals. Soybeans may be planted following applications of 2,4-D but, depending upon use rates and formulation used, have planting interval restrictions ranging from 7 to 30 days. Always read and follow the 2,4-D product label directions and restrictions before use.

Soil Textures

Where rates are based upon coarse, medium, or fine textured soils, soil textural classes are generally categorized as follows:

Coarse	Medium	Fine
sand loamy sand sandy loam	loam silt silt loam	silty clay loam sandy clay sandy clay loam clay loam silty clay clay

- Do not use as a preemergence treatment on peat or muck soils as reduced weed control will result.
- Use a lower rate in the rate range where soils have a sand or loamy sand texture throughout the soil profile.
- Do not apply to areas where the soil pH is greater than 7.8 as this may result in unacceptable crop injury.
- Do not apply to soils containing greater than 5% organic matter if the soil pH is below 5.9 as reduced weed control will result.
- **Corn Only:** Use of Python on soils with less than 1.5% organic matter may result in crop injury. Apply to fields that contain soils with less than 1.5% organic matter only if the risk of crop injury is acceptable.
- **Corn Only:** If any herbicide with ALS (acetolactate synthase) inhibitor mode of action was applied the previous year, apply Python to corn only if the rotational restrictions to corn for the preceding product have been met.
- **Corn or Soybeans:** Corn or soybeans growing in calcareous soils or on soils with historically high salt content (soil test results for salinity indicating electrical conductivity greater than 1 mmho/cm) may exhibit chlorosis and/or stunting resulting from reduced availability of iron or other micronutrients essential for normal crop vigor and growth. The presence of soil active herbicides, such as Python, may cause additional stress under these conditions, resulting in enhanced leaf chlorosis and/or crop stunting. This added stress may retard crop recovery, especially under conditions of limited rainfall. In fields which contain calcareous or high salt content soils and/or have a history of causing iron chlorosis in soybeans, growers should plant soybean varieties with known tolerance to iron deficient soils or plant “IR” or “IMR” designated varieties, commonly referred to as “imidazolinone resistant” corn hybrids. On these type soils, the likelihood of crop injury can also be reduced by using a lower rate in the rate range for the soil type and/or by applying Python 10 to 14 days prior to planting.

Weeds Controlled

Python will not control ALS resistant biotypes of weeds listed below.

Soil Texture	Python (oz/acre)
Coarse	0.8 - 0.89
medium or fine	0.89 – 1.00
Weeds Controlled	
carpetweed	pigweed species
chickweed	purslane, common
goosefoot	shepherd's-purse
henbit	sida, prickly
lambquarters, common	spurge, nodding
mallow, Venice	spurge, spotted
mustard, wild	thistle, Russian
pigweed, redroot	Velvetleaf
pigweed, smooth	waterhemp species (2)
Within soil texture class, use the higher rate in the rate range on soils with >3% organic matter. Do not apply more than 14 days before planting.	
Soil Texture	Python (oz/acre)
coarse	0.89 - 1.00
medium or fine	1.14 - 1.33
Weeds Controlled	
beggarweed, Florida (3)	poinsettia, wild
carpetweed	Puncturevine
chickweed	purslane, common
cocklebur, common (3) (4)	pusley, Florida
goosefoot	ragweed, common (3)
henbit	ragweed, giant (1)
horseweed (marestail)	shepherd's-purse
jimsonweed (3)	sicklepod (3) (4)
kochia (1)	sida, prickly
ladysthumb	smartweed, Pennsylvania
lambquarters, common	spurge, nodding
mallow, Venice	spurge, spotted
morningglory sp. (1) (4)	sunflower, common (3)
mustard, wild	thistle, Russian
nightshade species (3)	Velvetleaf
pigweed, redroot	waterhemp species (2)
pigweed, smooth	wormwood, biennial (1)
pigweed species	
Within soil texture class, use the higher rate in the rate range on soils with >3% organic matter. On medium and fine textured soils, for best results, make early preplant applications up to 30 days before planting. On coarse textured soils, do not apply more than 14 days before planting.	

Numbers in parentheses (-) refer to the following Weed Specific Directions.

Weed Specific Directions:

1. Partial control: Consistent control of these weeds may also require a tank mixture with another soil-applied herbicide or the sequential application of a postemergence herbicide.
2. Waterhemp: For improved control of waterhemp, apply Python in tank mix combination with a surface applied acetanilide or dinitroaniline herbicide registered for use in field corn and/or soybeans.
3. Control of light to moderate infestations: The level of control provided by Python on cocklebur, jimsonweed, common ragweed, Florida beggarweed, common sunflower, nightshade, and sicklepod can vary depending upon weed density and soil or environmental conditions. Control of moderate to heavy infestations of these weeds may be variable with satisfactory control of higher populations dependent upon consistent soil moisture. Consistent control of these weeds may also require a tank mixture with another preemergence herbicide or the sequential application of a postemergence herbicide (e.g., control of moderate to heavy infestations of nightshade will be improved by applying Python in tank mix combination with a surface-applied acetanilide product.

Sicklepod (soybeans only): Where sicklepod infestations are present, up to 1.33 oz of Python per acre may be used on all soil textures.

Control of cocklebur, morningglory, jimsonweed, common ragweed, Florida beggarweed, common sunflower, nightshade, and sicklepod may be improved by adhering to the following procedures:

- Thoroughly till moist soil to destroy germinating and emerged weeds.
 - Apply a higher rate in the rate range allowed for the soil texture and organic matter content to be treated.
 - Plant crop immediately after the last tillage operation. If Python is to be applied preemergence, apply at planting or immediately afterwards.
 - If available, sprinkle irrigate within two days after application. Apply 1/2 to 1 inch of water depending upon soil texture.
 - Weed control may be decreased if irrigation or rainfall does not occur within 7 to 10 days after planting and application. Under these conditions, emerged weeds may be controlled by a uniform shallow cultivation or rotary hoeing.
4. **Soybeans only:** In mid-Atlantic, mid-south, and southeastern regions of the U.S. where cocklebur, morningglory species and sicklepod infestations are present, apply Python at 1.25 to 1.33 oz per acre on all soil textures.

Uses

Field Corn

Apply soil applied organophosphate insecticides in a T-band or a band to avoid potential crop injury. Soil insecticides from other classes of chemistry may be applied in-furrow, T-banded, or banded. Do not use soil insecticide products that contain terbufos or phorate.

Postemergence applications of any other herbicide containing flumetsulam may be made to corn following a soil application of Python provided that the total amount of flumetsulam does not exceed 0.07 lb active ingredient per acre per year. Corn previously treated with Python that is stressed or damaged by conditions such as cold weather, hail, drought, water saturated soil, disease, or insects must not be treated with other herbicides with ALS inhibitor mode of action as further crop injury may result.

Do not apply Python to sweet corn or popcorn.

Postemergence Applications for Control of Velvetleaf

Apply Python as a broadcast postemergence spray at the rate of 0.46 to 0.93 oz per acre to velvetleaf when it is 1 to 8 inches tall. Apply to field corn from emergence (spike stage) until it is 20 inches tall or through the V6 stage, whichever occurs first. For optimal control, apply when velvetleaf is less than 8 inches tall and actively growing. Velvetleaf more than 8 inches tall may only be suppressed and recover two to three weeks following application. Do not apply if rainfall is expected within 6 hours after application.

Velvetleaf Height (inches)	Python (oz/acre)	Python (lb ai/acre)
1 – 3	0.46	0.023
1 – 6	0.7	0.035
1 – 8	0.93	0.047

All postemergence applications of Python must include a nonionic surfactant at 1 quart per 100 gallons (0.25% v/v) or a crop oil concentrate at 1 gallon per 100 gallons (1% v/v). Under dry growing conditions, the use of an agriculturally approved sprayable liquid fertilizer or ammonium sulfate, in combination with the nonionic surfactant, crop oil concentrate, or methylated seed oil may enhance control. Use 28%, 30% or 32% urea ammonium nitrate at 2.5% volume/volume (2.5 gallons per 100 gallons), or 2 to 4 lb of sprayable ammonium sulfate per acre. Use only surfactants approved for use on food crops. **Do not** use liquid fertilizer solutions or suspensions as the total carrier because excessive crop injury may occur. For best results, do not cultivate within 10 days before or after application.

Postemergence Applications for Extended Preemergence Control

Apply Python alone or in a tank mix combination of triazine-containing premix products registered for use in corn to provide extended preemergence broadleaf weed control of the following from postemergence applications: lambsquarters, pigweed, waterhemp, velvetleaf, and triazine-resistant varieties (triazine-tolerant biotypes of these weed species). Make a broadcast application from emergence (spike stage) until corn is 20 inches tall or through the V6 stage, whichever occurs first.

Soil Organic Matter	Python (oz/acre)	Python (lb ai/acre)
coarse	0.8 – 0.89	0.04 – 0.045
medium or fine	0.89 – 1.14	0.045 – 0.057

Apply Python alone as a broadcast soil surface application in a spray volume of 10 to 40 gallons per acre. Use drop nozzles when corn foliage development is sufficient to prevent uniform soil coverage. Use a higher rate in the rate range for soils greater than 3% organic matter. Do not use liquid fertilizer solutions or suspensions as the total carrier because excessive crop injury may occur.

When applying Python in a tank mix with triazine-containing premix products under normal growing conditions, the above-listed weeds that have not emerged at the time of application will have consistent preemergence control. Do not exceed the cumulative rate of 0.07 lb ai flumetsulam per acre per crop year.

Spike Stage Application

Apply with water as the carrier from corn emergence (ground cracking stage) up to 2 inches in height (before the first leaf is unfurled). During corn emergence, do not apply with liquid fertilizer as severe crop injury may result. Adequate soil moisture is required for optimum herbicidal activity.

Reduced Rates of Python® with Triazine-Containing Pre-Mix Products

Use this only in the states of Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. Tank mix reduced rates of Python with labeled rates of triazine-containing pre-mix herbicides registered for soil-applied weed control in corn. When tank mixing, do not exceed specified application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels. These combinations can provide improved control of certain broadleaf weeds not consistently controlled by these triazine pre-mix products. When applied under normal growing conditions, these tank mixes should provide consistent control of velvetleaf, lambsquarters, pigweed species, waterhemp, and triazine “resistant” varieties (triazine tolerant biotypes) of these species. When tank mixing, do not exceed specified application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

On soils with less than 3% organic matter, tank mix 0.8 oz of Python per acre with a labeled rate of the triazine pre-mix product. On soils with greater than 3% organic matter, tank mix 0.89 to 1 oz of Python per acre with a labeled rate of the triazine pre-mix product. Refer to the Mixing Directions and Application Methods sections to determine the amount of Python and total spray volume required for the acreage to be treated.

Python® with Genetically Modified Corn Varieties

If an IR or IMR designated hybrid (referred to as imidazolinone resistant) is planted, any organophosphate insecticide, including Counter® or Thimet®, can be applied according to label directions without increasing the likelihood of injury to corn from Python. The adverse interaction between Counter or Thimet and Python **does not** occur in corn hybrids identified as IR or IMR. This adverse interaction **can** occur in imidazolinone tolerant IT, PT hybrids, which are considered as “standard” hybrids regarding this effect. IR or IMR hybrids may also be planted to reduce injury to corn from Python on soils with less than 1.5% organic matter or pH greater than 7.8.

Corn Planting Depth: When using Python, corn must be planted at least 1 1/2 inches deep.

Corn inbred lines grown for hybrid seed production may be injured by Python. Thoroughly test inbred lines for crop tolerance before treating large acreage. While growers are not prohibited from using Python on seed corn, **Amvac will not accept responsibility for crop injury arising from the use of Python on field corn grown for seed.**

Burndown Applications in Minimum Tillage or No-Tillage Application

When used either alone or in combination in a burndown application, Python with crop oil concentrate will control or suppress the following weeds: marestail, common chickweed, field pennycress, and mustard species.

Python® Plus Glyphosate: In minimum-tillage or no-tillage situations where corn is planted directly into a cover crop, stale seedbed, or previous crop residues, Python may be tank mixed with contact or non-selective herbicides such as glyphosate. Apply in 10 to 60 gallons of water or liquid fertilizer per acre with ground equipment. Add a nonionic surfactant at 1 to 2 quarts per 100 gallons diluted spray.

Python® Plus 2,4-D: For burndown control of susceptible annual and perennial broadleaf weeds prior to planting corn in reduced tillage systems, apply Python in tank mix combination with a 2,4-D herbicide labeled for this use. Apply Python in a tank mix with 1 to 2 pints per acre of a 3.8 lb a.e. per gallon 2,4-D amine or ester and apply in a minimum of 10 gallons of carrier per acre. When tank mixing with 2,4-D, read and follow the manufacturer’s label for applicable use directions, application timing, precautions, and limitations before use. **This tank mixture will not control emerged grasses.** Python may provide suppression of annual grasses if there is sufficient rainfall to move the herbicide into the soil prior to weed germination. Timely subsequent rainfall is required for optimal herbicidal activity.

Python® Followed by Postemergence Applications

Broadleaf weeds not controlled by soil applications of Python may be controlled with sequential postemergence herbicide products such as Hornet® Herbicide. Other postemergence herbicide alternatives for use following soil application of Python include Banvel®, Clarity®, Exceed™, 2,4-D, Marksman®, Buctril™, Beacon®, or other postemergence herbicides registered for use on corn (unless prohibited by the label). Follow each manufacturer’s label for weeds controlled, applicable use directions, precautions, and limitations before use.

Soybean

Do not graze or feed treated soybean forage, hay or straw to livestock.

Burndown Applications in Minimum Tillage or No-Tillage Application

When used either alone or in combination in a burndown application, Python with crop oil concentrate, will control or suppress the following weeds: marestail, common chickweed, field pennycress, and mustard species.

Python® Plus Glyphosate: In minimum-tillage or no-tillage situations where soybeans is planted directly into a cover crop, stale seedbed, or previous crop residues, tank mix Python with contact or non-selective herbicides such as glyphosate. Apply in 10 to 60 gallons of water or liquid fertilizer per acre with ground equipment. Add a nonionic surfactant at 1 to 2 quarts per 100 gallons diluted spray. Apply before, during (behind the planter), or after planting, but before the crop emerges.

Python® Plus 2,4-D: For burndown control of susceptible annual and perennial broadleaf weeds prior to planting soybeans in reduced tillage systems, apply Python in tank mix combination with a 2,4-D herbicide labeled for this use. Apply Python in a tank mix with 1 to 2 pints per acre of a 3.8 lb a.e. per gallon 2,4-D amine or ester and apply in a minimum of 10 gallons of carrier per acre. When tank mixing with 2,4-D, read and follow the manufacturer's label for applicable use directions, application timing, precautions, and limitations before use. **This tank mixture will not control emerged grasses.** Python may provide suppression of annual grasses if there is sufficient rainfall to move the herbicide into the soil prior to weed germination. Timely subsequent rainfall is required for optimal herbicidal activity. For soybeans, delay planting of the crop a minimum of 15 to 30 days following application to avoid potential crop injury from 2,4-D residues in the soil. Follow the specified rates, specific planting delays, and other use precautions and limitations on the label of the 2,4-D product used.

Python® Plus Canopy®: Tank mix Python with Canopy for broad spectrum weed control. Apply the tank mix as a preplant surface application in minimum or no tillage systems, preplant incorporated, or preemergence treatment. Apply Python at the rate of 0.8 to 1.25 oz per acre and Canopy at the rate of 2 to 3 fl oz per acre. Do not apply to soil with a pH greater than 6.8.

Python® Plus FirstRate®: Tank mix Python with FirstRate Herbicide for broad spectrum weed control. Apply the tank mix as a preplant surface application in minimum or no tillage systems, preplant incorporated, or preemergence treatment. Apply Python at the rate of 0.8 to 1.33 oz per acre and FirstRate at the rate of 0.3 to 0.6 oz per acre.

Postemergence Applications for Control of Teaweed (prickly sida) in Soybeans

Apply 0.125 oz of Python per acre as a postemergence application for control of teaweed (prickly sida) in soybeans. The application can be made with ground or aerial application equipment. Apply to soybeans from the first to fifth trifoliate leaf stage of growth. Make applications to actively growing teaweed when it has no more than two true leaves (2 inch maximum height). Weeds too large for optimum control will be suppressed, but may recover after two to three weeks. Do not spray at the cotyledon stage. Postemergence applications of Python may result in temporary chlorosis, transient leaf yellowing and/or growth retardation (stunt) of the soybean leaves. These effects will be evident for five to seven days after application to soybeans under stress. Under favorable growing conditions, the crop will quickly recover. Do not apply if rainfall is expected within 6 hours after application. For best results, do not cultivate within 10 days before or after application. If a postemergence application of Python is made following a previous preemergence application of Python, check to make sure that the cumulative rate of 0.07 lb of flumetsulam per acre per year is not exceeded. One ounce of Python contains 0.050 lb of flumetsulam. A postemergence application of Python at 0.125 oz per acre contains 0.00625 lb of flumetsulam. Do not use liquid fertilizer as total carrier for postemergence application.

Postemergence Weed Control: Apply to actively growing weeds. Unfavorable conditions such as drought, or near freezing temperatures before, at, or following application, may result in reduced weed control. The degree of control will depend upon weed susceptibility and growing conditions at the time of treatment.

Use of Surfactants: A nonionic surfactant at 0.25% volume/volume (1 quart per 100 gallons) must be included in all postemergence applications of Python. Use a surfactant with at least 80% active ingredient of which at least 50% is actual nonionic surfactant. Under extremely dry growing conditions, an agriculturally approved sprayable liquid fertilizer together with the nonionic surfactant may enhance control. Use 28%, 30%, or 32% urea ammonium nitrate at 2.5% volume/volume (2.5 gallons per 100 gallons). **Do not** use liquid fertilizer solutions or suspensions as the total carrier because excessive crop injury may occur. Use only agriculturally approved surfactants.

Tank Mix: Apply Python alone or in tank mix combination with other postemergence broadleaf and/or grass soybean herbicides registered for postemergence application in soybean unless tank mixing is specifically prohibited by the label of the tank mix product. Apply Python only with glyphosate products labeled for postemergence application on soybean varieties designated as containing the Roundup Ready® tolerant gene. Depending upon the product chosen, the performance of the grass control product may be adversely affected through herbicide antagonism. For best results, delay application of the postemergence grass control product for three days after applying Python.

Python® Plus FirstRate®: Tank mix Python with FirstRate® and apply it using ground or aerial application equipment as a postemergence application to soybeans any time from full emergence of the first trifoliolate leaf up to the 50% flowering stage of growth. Applying this tank mix prior to full emergence of the first trifoliolate leaf may cause temporary yellowing or chlorosis of soybeans. Additional tank mix partners may cause other effects regardless of the application timing.

Applying a postemergence application of Python plus FirstRate may provide residual soil activity on broadleaf weeds excluding sicklepod. Length and effectiveness of residual activity will vary and is dependent upon timeliness of rainfall following application (0.5 inches or more is needed within one week), degree of crop/weed canopy interception of the spray, and remaining reserve of viable ungerminated weed seeds on the soil surface.

Apply 0.12 oz of Python per acre plus 0.3 oz of FirstRate per acre. A second application, using the same amount of each product, may be made 14 days after the first. Do not apply more than a total of 0.24 oz of Python per acre plus 0.6 oz of FirstRate per acre per crop year. Apply when weeds are actively growing and before weeds exceed specified growth stages (number of true leaves per plant); see table below. Applications to larger weeds or to weeds under stress may result in unsatisfactory control. A crop oil concentrate at 1.2 gallons per 100 gallons of spray mixture (1.2% v/v), a nonionic surfactant at 1 to 2 pints per 100 gallons of spray mixture (0.125 to 0.25% v/v), or nonionic surfactant plus urea ammonium nitrate at 2.5 gallons per 100 gallons (2.5% v/v), or ammonium sulfate at 2 lb per acre (8.5 to 17 lb per 100 gallons of spray mixture) is required to be included in the tank mix of Python plus FirstRate.

Note: Crop oil concentrate may increase the potential for crop injury in soybeans. Python plus FirstRate may be applied alone or in tank mix combination with other postemergence herbicides.

The following weeds are controlled by a tank mix of Python plus FirstRate. These two products do not control known ALS resistant biotypes of listed weeds.

Weeds	Leaf Number at Application (Optimum to Maximum)	Maximum Height (inches)
Controlled		
cocklebur	2 – 8	6
dayflower, Asiatic	2 – 6	--
dayflower, marsh		
dayflower, spreading		
horseweed (marestail)	2 – 4	6
jimsonweed		4
mallow, Venice		<3
marshelder	4 – 6	10
morningglory (annual) (1) entireleaf ivyleaf palmleaf pitted red smallflower tall	2 – 4	6
mustard, wild (2)		4

ragweed common giant	4 – 8 4 – 6	10
sicklepod (3)	cotyledon – 1	<2
smartweed, Pennsylvania	2 – 4	6
sunflower, common	4 – 8	12
teaweed (prickly sida)	1 – 2	2
velvetleaf	2 – 4	6
Suppressed		
burcucumber	2 – 4	6
Canada thistle	--	10
copperleaf, hophornbeam	1 – 2	4
hemp sesbania	cotyledon – 1	<1
nutsedge, yellow	--	8
pigweed species redroot smooth spiny	1 – 2	<1

Numbers in parentheses (-) refer to the following Weed Specific Directions.

Weed Specific Directions:

1. Apply before morningglory begins to send out runners.
2. For optimum control, apply before wild mustard plants exceed four inches in diameter.
3. Reduced control will result if applications are made to sicklepod plants that are beyond the 1-leaf stage of growth. Additional herbicide treatment may be required to control sicklepod that germinates after application.

Python® Followed by Postemergence Applications

Broadleaf weeds not controlled by soil applications of Python in soybeans may be controlled with a sequential postemergence herbicide products such as FirstRate, Basagran™, Blazer®, Cobra®, Reflex®, Flexstar®, Classic®, Storm®, or other postemergence herbicides registered for use on soybeans (unless prohibited by the label). For enhanced control of sicklepod, apply FirstRate postemergence following application of Python. Follow the manufacturer's labels for application rates, weeds controlled, additional use directions, precautions, and limitations before use.

Python® as a Foundation Herbicide in Roundup Ready® Soybeans

Python at 0.8 to 1.33 oz per acre can be used as a foundation soil herbicide in a planned sequential program with any glyphosate formulation labeled for use in Roundup Ready soybeans. Use of Python as a soil foundation to control or suppress key broadleaf weeds listed in the soil applied section of this label will allow more optimal timing of a glyphosate postemergence treatment. In addition, because of the residual weed control provided by Python, subsequent postemergence herbicide applications may be unnecessary.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Nonrefillable rigid containers 5 gallons or less:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable nonrigid containers:

Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable rigid containers larger than 5 gal:

Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable rigid containers larger than 5 gal:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY

EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

© 2020 AMVAC Chemical Corporation is a wholly owned subsidiary of American Vanguard Corporation. All Rights Reserved. AMERICAN VANGUARD, AMVAC, CLASSIC, FIRSTRATE, PYTHON, HORNET, COUNTER, THIMET and their respective logos are trademarks owned by AMVAC Chemical Corporation.

CHEMTREC is a service mark of the American Chemistry Council, Inc. Banvel, Basagran and Clarity are trademarks of BASF. Buctril is a trademark of Bayer. Roundup Ready is a trademark of Monsanto. Canopy is a trademark of Du Pont. Marksman is a trademark of Star Group Solutions. Beacon, Exceed, Flexstar, and Reflex are trademarks of Syngenta. Blazer and Storm are trademarks of United Phosphorus. Cobra is a trademark of Valent.

AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660 U.S.A.