



PORTFOLIO[®]

IVM

Herbicide

For Selective Weed Control in non-crop sites:
Railroad, Highway, Roadside, Pipeline and Utility Rights-of-Way, Industrial Areas,
Fence Rows

Active Ingredient:	By Wt.
Sulfentrazone	39.6%
Other Ingredients:	60.4%
	100.0%

Contains 4.0 lbs sulfentrazone per gallon product.

EPA Reg. No. 101563-284

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN
CAUTION

See inside booklet for additional precautionary information.

SKU: D00001616
22049713B 250407AV1
Net Contents:
2.5 Gallons

PRODUCED FOR
Environmental Science U.S., LLC
5000 CentreGreen Way, Suite 400
Cary, NC 27513



FIRST AID	
IF INHALED	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES	• 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 SWALLOWED	• Call a poison control center or doctor immediately for treatment advice. • Do not give any liquid to the person. • 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.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact Environmental Science U.S., LLC Emergency Response Telephone No. 1-800-424-9300 for emergency medical treatment information.	

For Technical Support or information regarding the use of this product, call 1-800-331-2867

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Harmful if inhaled, swallowed, or absorbed through skin. Avoid breathing vapor or spray mist. 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.

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

User Safety Recommendations:

Users should:

- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

This pesticide is toxic to non-target plants and aquatic invertebrates. This product may contaminate water through drift of spray in wind or via runoff events. Use care when applying in areas adjacent to any body of water. 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 apply when weather conditions favor drift from target area. Do not contaminate water when disposing of equipment washwaters or rinsate.

Groundwater advisory: Sulfentrazone is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Do not use on coarse soils classified as sand which have less than 1% organic matter.

Surface water advisory: Sulfentrazone can contaminate surface water through spray drift. Under some conditions, sulfentrazone may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

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 through any type of irrigation system.

Applicators must not exceed labeled rates of this product. Refer to specific directions for use for maximum use rates. Calculate the 12-month period for the purpose of maximum use rates when PORTFOLIO® IVM herbicide is first applied.

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. These requirements only apply to uses of this product that are covered by the Worker Protection Standard.

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

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

- Coveralls over long-sleeved shirt and long pants,
- waterproof gloves, and
- shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Re-entry Statement: Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment area until spray has dried.

PRODUCT INFORMATION

PORTFOLIO IVM herbicide is a selective soil-applied herbicide for the control of certain broadleaf weeds, grasses, and sedges. When applied according to directions, it will provide control of susceptible species.

PORTFOLIO IVM herbicide is formulated as a flowable (suspension concentrate) containing 4 lbs of active ingredient per gallon. The mode of action of PORTFOLIO IVM herbicide involves uptake by both weed roots and shoots. Preemergence application of PORTFOLIO IVM herbicide requires soil moisture for activation. The amount of soil moisture required for activation following application depends on existing soil moisture, organic matter content and soil texture.

WEED RESISTANCE MANAGEMENT

For resistance management, PORTFOLIO IVM herbicide is a Group 14/Sulfentrazone herbicide. Any weed population may contain or develop plants naturally resistant to PORTFOLIO IVM herbicide and other Group 14 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same area. Appropriate resistance management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of PORTFOLIO IVM herbicide or other Group 14 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or pest control advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and that considers mechanical control methods, cultural (e.g., timing to favor the turf and not the weeds), biological (weed-competitive varieties) and other management practices.
- Scout area before herbicide application for identification of species and sizes.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method. Prevent movement of resistant weed seeds to other areas by cleaning equipment.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.

Contact your local extension specialist or pest control advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific types of turf and weed biotypes.

For further information or to report suspected resistance, contact call 1-800-331-2867. You can also contact your pesticide distributor or university extension specialist to report resistance.

MIXING AND APPLICATION INSTRUCTIONS

General Handling Instructions

This product may not be mixed or loaded 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. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient 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. Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Product must be used in a manner which will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

SPRAY TANK PREPARATION

It is important that spray equipment is clean and free of existing pesticide deposits before using this product. Follow the spray tank clean out procedures specified on the label of product previously applied before adding PORTFOLIO IVM herbicide to the tank.

PORTFOLIO IVM herbicide is a suspension concentrate intended for dilution with water. In certain applications, liquid fertilizer may replace water as diluent.

MIXING WITH WATER

For best results, fill spray tank with one half of the volume of clean water needed for the area to be treated. Start agitation system. Slowly add PORTFOLIO IVM herbicide to the spray tank. Complete filling the spray tank to the desired level. Continuous spray tank agitation is required at all times to maintain a uniform spray solution. Make sure PORTFOLIO IVM herbicide is thoroughly mixed before application or before adding another product to the spray tank.

USE OF SURFACTANTS

Temporary discoloration of some turf types may result from use of surfactants or adjuvants with PORTFOLIO IVM herbicide. High temperatures and high relative humidity may increase the risk of temporary discoloration. Use of surfactants is not recommended.

MIXING WITH LIQUID FERTILIZERS

Utilize local recommendations for sources and rates of fertilizer and refer to mixing directions on the fertilizer labels (e.g. UAN or urea solutions). Determine the compatibility of this product with the desired fluid fertilizer by mixing small proportional quantities in advance (See the "TANK MIXTURES COMPATIBILITY" section below).

TANK MIXTURE COMPATIBILITY

PORTFOLIO IVM herbicide is believed to be compatible with most herbicides, fungicides, insecticides, growth regulators, liquid fertilizers and spray adjuvants commonly used in turf and ornamental plant management. However, when preparing a new tank mix conduct an appropriate compatibility test by mixing proportional amounts of all spray ingredients in a test vessel (jar) prior to tank mixing with other products. Shake the mixture vigorously and allow it to stand for five to ten minutes. Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied. Provided the jar test indicates the mixture to be compatible, prepare the tank mixture as follows: Fill the tank one fourth full with water. With the agitator operating, add the recommended amounts of ingredients using the following order: dry granules first, and liquid suspensions (flowables) second. As the agitation continues and the tank is filled with water add EC products third followed by the addition of water soluble products.

Read and observe mixing instructions of all tank mix partners. Also read each product's label for Directions for Use, Precautionary Statements and Restrictions and Limitations. The most restrictive labeling applies in all tank mixtures. No label dosage rate should be exceeded. Tank mixture recommendations are for use only in states where the companion products and application site are registered. In addition, certain states or geographical regions may have established dosage rate limitations. Consult your state Pesticide Control Agency for additional information regarding the maximum use rates.

Premixing PORTFOLIO IVM herbicide spray solutions in nurse tanks is not recommended.

Ground Equipment

Power sprayers: Uniform and accurate spray coverage requires proper calibration and operation of spray equipment. The use of marker dyes or foams can improve application accuracy. Boom sprayers equipped with appropriate flat fan nozzles, tips and screens are ideal for broadcast applications. Power sprayers fitted with spray wand/gun may also be used for broadcast application after careful calibration by the applicator. Power sprayers fitted with spray wand/gun are suitable for spot treatments.

Hand operated sprayers: Backpack and compression sprayers are appropriate for small turfgrass areas and spot treatments. Wands fitted with a flat fan nozzle tip should be held stationary at the proper height during application. A side to side or swinging arm motion can result in uneven coverage.

Apply this product in a sufficient volume of carrier solution to provide a uniform spray distribution. Spray volumes of 0.5 to 4.0 gal/1,000 sq ft (20 - 175 gallons per acre) with spray pressures adjusted to 20 - 40 psi are appropriate. Apply the higher spray volumes for dense weed populations.

Sprayer Equipment Clean-Out

After spraying PORTFOLIO IVM herbicide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned using the following procedure:

1. Drain sprayer tank, hoses, and spray boom and thoroughly rinse the inside of the sprayer tank with clean water to remove sediment and residues. In addition, thoroughly flush sprayer hoses, boom, and nozzles with clean water.
2. Fill the tank 1/2 full with clean water and add appropriate detergent or ammonia (follow manufacturer's directions for use). Fill the tank to capacity and operate the sprayer for 15 minutes to flush hoses, boom, and nozzles.
3. Drain the sprayer system. Rinse the tank with clean water and flush through the hoses, boom, and nozzles. Remove and clean spray tips and screens separately.
4. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State and local regulations and guidelines.

Do not drain or flush equipment on or near desirable trees or plants. Do not contaminate any body of water including irrigation water that may be used on other plants.

SPRAY DRIFT MANAGEMENT

MANDATORY SPRAY DRIFT MANAGEMENT

- Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE* Standard S-572.
- Select coarse to very coarse droplet size when sulfentrazone is used as a preemergent/preplant application.
- Select medium to very coarse droplet size when sulfentrazone is used postemergence with a contact burndown herbicide.
- Applicators may spray only when wind speed is between 3 and 10 mph.
- Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE* standard).

Ground Applications:

- For boom spraying, the maximum release height must be 30 inches from the soil.
- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- When sulfentrazone is tank mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre.

Aerial Applications:

- Aerial application is allowed only when environmental conditions prohibit ground application.
- The maximum release height must be 10 feet from the top of the canopy, unless a greater application height is required for pilot safety.
- When this product is allowed to be applied by air, applicator must use a minimum finished spray volume of 5 gallons per acre.

For all aerial application except for forestry applications, public health uses or to applications using dry formulations. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward and parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the [Aerial Drift Reduction Advisory Information](#).

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Importance of 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 Wind, Temperature and Humidity, and Temperature Inversion section of this label).

Controlling Droplet Size

Volume: Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure: Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. 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 backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the 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 larger droplets than other nozzle types.

Boom Height: Making applications at the lowest height that produces a uniform spray pattern will reduce exposure of droplets to evaporation and wind.

Boom Length: For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height (by air): Applications should not be made at a height greater than 10 feet above the top of the largest 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:

- For aerial applications, when applications are made with a crosswind toward sensitive areas, the swath will be displaced downwind. 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.). For ground applications, when applications are made with a crosswind towards sensitive areas, the application should leave a buffer to avoid off-site movement.

Wind

Drift potential is lowest between wind speeds. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrains that could 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

Applications should not occur during a 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 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 upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The pesticide should only be applied 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).

Drift Control Additives

Drift control additives may be used with all spray equipment with the exception of controlled droplet applicators. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the label. It is recommended that additives be certified by the Chemical Producers and Distributors Association (CPDA).

Off-Target Movement of PORTFOLIO IVM Herbicide

Drift of dilute spray mixtures containing PORTFOLIO IVM herbicide must be prevented. Observation of the preceding environmental conditions, correct application equipment design, calibration and application practices will significantly diminish the risk of off-target spray drift. PORTFOLIO IVM herbicide can cause significant symptomatology by drift on to sensitive plants. This symptomatology may manifest initially as discreet, localized spots where contacted by PORTFOLIO IVM herbicide drift mixtures. Depending on concentration of the spray solution and droplets size (effectively determining the dosage of sulfentrazone) and also depending on the inherent sensitivity of the plants involved, these spots or lesions may or may not coalesce. These effects will usually not have lasting effects on plant growth but will likely reduce the value of affected fruit or foliage where grade or quality is associated with appearance. In severe drift instances with particularly sensitive plants, defoliation of affected foliage could result. Failure to follow these guidelines and environmental prohibitions that then result in off-target movement or drift of PORTFOLIO IVM herbicide on to unintended plants, irrespective of severity, constitutes misapplication of this product. Environmental Science U.S., LLC accepts no responsibility or liability for potential turf effects that may result from such misapplication of PORTFOLIO IVM herbicide.

INTEGRATED VEGETATIVE MANAGEMENT (IVM) USE INSTRUCTIONS

PORTFOLIO IVM herbicide provides residual control of the germinating weeds listed in the following Tables:

- Table 2. Weeds Controlled by PORTFOLIO IVM herbicide

Railroad Rights-of-Way

PORTFOLIO IVM herbicide can be used to control many weeds and maintain bare ground on railroad rights-of-way, including railroad yards, railroad crossings and railroad bridge abutments.

Highway, Roadside, Pipeline and Utility Rights-of-Way.

PORTFOLIO IVM herbicide can be used to control many weeds and maintain bare ground in highway, roadside, pipeline and utility rights-of-way. Such areas would include, but are not limited to, guard rails, road shoulders, electric utility substations, pipeline pumping stations, around electric transmission towers, around distribution line poles and in other areas where complete vegetation control is desired.

Industrial Areas, Fence Rows and Other Non-crop Sites

PORTFOLIO IVM herbicide controls weeds and maintains bare ground in industrial areas including production facilities, tank farms, storage areas, parking areas, lumber yards, airports, military installations, along fence rows, and in similar non-crop sites where complete vegetation control is needed.

IVM Restrictions

- Applications may be made by helicopter on railroad rights-of-way only.
- Do not graze or feed livestock forage cut from areas treated with PORTFOLIO IVM herbicide.
- The maximum single application rate is 0.275 fl oz product/1,000 sq ft (12 fl oz product/acre).
- The maximum annual application rate for sulfentrazone is 0.375 lb per acre per calendar year.
- When applied by ground, application must use a minimum of 10 gallons of spray solution per acre.
- **When this product is tank mixed with a contact burndown herbicide, applicators must use a minimum spray volume of 15 gallons per acre.**

IVM Use Precautions

- PORTFOLIO IVM herbicide has demonstrated tolerance on both cool and warm season turfgrasses. However, not all varieties have been evaluated. Turfgrass managers desiring to treat newly released varieties should first apply PORTFOLIO IVM herbicide to a small area prior to treatment of larger areas.

SPECIFIC INSTRUCTIONS FOR INTEGRATED VEGETATIVE MANAGEMENT (IVM)

Use Rate Conversion		
Fl oz product/1,000 sq ft	Fl oz product/acre	lb sulfentrazone/acre
0.18	8	0.250
0.275	12	0.375

- **Use the higher rates on sites with fine soil textures and on sites with more than 2% organic matter.**
- For best results, apply PORTFOLIO IVM herbicide alone or in combination with other herbicides for residual control of weeds in late summer, fall, or early spring to insure adequate moisture for soil activation.
- The most effective preemergence weed control will be obtained when PORTFOLIO IVM herbicide is activated by at least 0.5 inches of rainfall or irrigation within 7 days after application and prior to weed seed germination.
- Use labeled rates of burndown herbicides such as glyphosate, glyphosate-trimesium, diquat, 2,4-D, dicamba, etc. as tank mixtures with PORTFOLIO IVM herbicide. Use recommended adjuvants for the herbicide tank mix partner. It is the pesticide user’s responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must read and observe the product label of all tank mix partners. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

When applied as directed under the conditions described, the following established turfgrasses are tolerant to PORTFOLIO IVM herbicide at the listed use rates in a range from 0.250 to 0.375 lb ai/acre (0.18 to 0.275 fl oz/1,000 sq ft or 8 to 12 fl oz/acre).

Table 1. Application Rates for Tolerant grasses

Grass Type	Single Application Use Rates Refer to the “per species” maximum single application use rates. This product may be applied more than once per year as long as the maximum annual application rate is not exceeded.	
	fl oz/1,000 sq ft	fl oz/acre
Cool Season Grasses		
Bluegrass, Kentucky (<i>Poa pratensis</i>) Bluegrass, Rough ² (<i>Poa trivialis</i>) Fescue, fine ¹ (<i>Festuca rubra</i>) Fescue, tall ¹ (<i>Festuca arundinacea</i>) Ryegrass, perennial (<i>Lolium perenne</i>)	0.18	8
Warm Season Grasses		
Bahia grass ² (<i>Paspalum notatum</i>) Bermudagrass (<i>Cynodon dactylon</i>) & hybrids Buffalograss (<i>Buchloe dactyloides</i>) Carpetgrass (<i>Axonopus affinis</i>) Centipedegrass (<i>Eremochloa ophiuroides</i>) Kikuyugrass (<i>Pennisetum clandestinum</i>) Seashore Paspalum (<i>Paspalum vaginatum</i>) St. Augustinegrass (<i>Stenotaphrum secundatum</i>) ² Zoysiagrass (<i>Zoysia japonica</i>) ²	0.18 - 0.275	8 - 12
1 Use of this product on certain cultivars of Chewings Fescue Fine Fescue or Tall Fescue cultivars may result in undesirable injury. 2 PORTFOLIO IVM herbicide application may cause temporary discoloration to exposed leaf surfaces on St. Augustinegrass and certain cultivars of zoysiagrass, bahia grass, or rough bluegrass. Treated turfgrass will recover with new growth. Discolored leaf tissue will be removed with mowing. To reduce potential for discoloration, do not apply PORTFOLIO IVM herbicide on turfgrass that is weakened by weather, mechanical, chemical, disease or other related stress. Maintain proper cultural practices such as adequate moisture and fertility levels to promote healthy turf growth.		

RESIDUAL CONTROL OF GERMINATING WEEDS IN NON-CROP LAND

PORTFOLIO IVM herbicide provides residual control of the germination weeds listed in Table 2 in non-crop land at application rates between 0.299 to 0.451 lb total ai/acre (0.220 to 0.331 fl oz/1,000 sq ft or 9.6 to 14.4 fl oz/acre).

For areas with turfgrass, do not exceed the application rate for the turf species listed in Table 1.

Use the higher labeled rates to extend length of control.

Table 2. Weeds Controlled by PORTFOLIO IVM Herbicide

Common Name	Scientific Name
Beggarweed, Florida	<i>Desmodium tortuosum</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed, common	<i>Stellaria media</i>
Copperleaf, Hophornbeam	<i>Acalypha ostryifolia</i>
Crabgrass species	<i>Digitaria</i> spp.
Croton, tropic	<i>Croton glandulosus</i>
Daisy, American	<i>Coreopsis grandiflora</i>
Dayflower, common	<i>Commelina communis</i>
Dayflower, Virginia	<i>Commelina virginica</i>
Dock, curly	<i>Rumex crispus</i>
Fixweed	<i>Descurainia Sophia</i>
Galinsoga, hairy	<i>Galinsoga ciliata</i>
Groundcherry, clammy (seedling)	<i>Physalis heterophylla</i>
Groundcherry, cutleaf	<i>Physalis angulata</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia	<i>Kochia scoparia</i>
ALS/ Triazine Resistant Kochia	<i>Kochia scoparia</i>
Lambsquarter, common	<i>Chenopodium album</i>
Lettuce, wild	<i>Lactuca virosa</i>
Mallow, common	<i>Malva neglecta</i>
Milkweed, honeyvine	<i>Ampelamus albidus</i>
Mexicanweed	<i>Caperonia castanifolia</i>
Morningglory species	<i>Ipomoea</i> spp.
Mustard species	<i>Brassica</i> spp.
Nightshade species	<i>Solanum</i> spp.
Nutsedge species	<i>Cyperus</i> spp
Palmer amaranth	<i>Amaranthus palmeri</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Texasweed	<i>Caperonia palustris</i>
Thistle, Russian	<i>Salsola iberica</i>
Waterhemp, tall	<i>Amaranthus tuberculatus</i>
Waterhemp, common	<i>Amaranthus rudis</i>

STORAGE AND DISPOSAL

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

Pesticide Storage

Store product in original container only, away from other pesticides, fertilizer, food or feed.

Store in a cool, dry place and avoid excess heat.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. You may contact the Environmental Science U.S., LLC Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Environmental Science U.S., LLC Emergency Response Telephone No. is (800) 424-9300.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

Pesticide Disposal

If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

Container Handling

Metal or Plastic Containers - Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: **(For containers greater than 5 gallons)** 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. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **(For containers 5 gallons or less)** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Do not cut or weld metal containers.

Returnable/Refillable Containers - 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 into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Conditions of Sale and Limitation of Warranty and Liability:

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of Environmental Science U.S., LLC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Environmental Science U.S., LLC and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ENVIRONMENTAL SCIENCE U.S., LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or Environmental Science U.S., LLC, and buyer assumes the risk of any such use.

To the extent consistent with applicable law, Environmental Science U.S., LLC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ENVIRONMENTAL SCIENCE U.S., LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ENVIRONMENTAL SCIENCE U.S., LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

Owned or Licensed U.S. Patents for this product can be found at <https://patent.envu.com>

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Herbicide

**For Selective Weed Control in non-crop sites:
Railroad, Highway, Roadside, Pipeline and Utility Rights-of-Way,
Industrial Areas, Fence Rows**

Active Ingredient:	By Wt.
Sulfentrazone	39.6%
Other Ingredients:	60.4%
	100.0%

Contains 4.0 lbs sulfentrazone per gallon product.

EPA Reg. No. 101563-284

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION

See inside booklet for additional precautionary information.

FIRST AID	
IF INHALED	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES	• 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 SWALLOWED	• Call a poison control center or doctor immediately for treatment advice. • Do not give any liquid to the person. • 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.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact Environmental Science U.S., LLC Emergency Response Telephone No. 1-800-424-9300 for emergency medical treatment information.	

For Technical Support or information regarding the use of this product, call 1-800-331-2867

SKU: D00001616

22049713B 250407AV1

Net Contents:

2.5 Gallons

envu™

PRODUCED FOR
Environmental Science U.S., LLC
5000 CentreGreen Way, Suite 400
Cary, NC 27513

SULFENTRAZONE GROUP 14 HERBICIDE

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Harmful if inhaled, swallowed, or absorbed through skin. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing.

Environmental Hazards

This pesticide is toxic to non-target plants and aquatic invertebrates. This product may contaminate water through drift of spray in wind or via runoff events. Use care when applying in areas adjacent to any body of water. 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 apply when weather conditions favor drift from target area. Do not contaminate water when disposing of equipment washwaters or rinsate.

Groundwater advisory: Sulfentrazone is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Do not use on coarse soils classified as sand which have less than 1% organic matter.

Surface water advisory: Sulfentrazone can contaminate surface water through spray drift. Under some conditions, sulfentrazone may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

DIRECTIONS FOR USE

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

STORAGE AND DISPOSAL

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

Pesticide Storage

Store product in original container only, away from other pesticides, fertilizer, food or feed.

Store in a cool, dry place and avoid excess heat.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. You may contact the Environmental Science U.S., LLC Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Environmental Science U.S., LLC Emergency Response Telephone No. is (800) 424-9300.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

Pesticide Disposal

If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

Container Handling

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