

Revolver™ Herbicide

A Herbicide for the Control of Annual and Perennial Grasses in Bermudagrass, Zoysiagrass, and Buffalograss

ACTIVE INGREDIENTS: Foramsulfuron* (CAS Number 173159-57-4)..... **2.34%**

OTHER INGREDIENTS: ** **97.66%**

*This product is a suspension concentrate containing 0.19 lb ai/gal. Protected by U.S. Patent No 5,922,646.....**TOTAL: 100.00%**

**Contains Petroleum Distillates

Shake well before use.

EPA Reg No. 432-1266

E.P.A. Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-228-5635

For **PRODUCT USE** Information Call 1-888-331-2867

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.
IF SWALLOWED:	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.

Note to Physician: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

For MEDICAL Emergencies Call 24 Hours A Day 1-800-334-7577.

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

PRECAUTIONARY STATEMENTS

CAUTION

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

Applicators and other handlers must wear: Long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride. 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.

Engineering control statement:

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

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

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 cleaning equipment or disposing of equipment washwaters. Do not drain or rinse equipment near desirable vegetation.

Do not apply when conditions favor drift from treated areas.

Non-target plants may be adversely affected if the pesticide is allowed to drift from areas of application. To prevent damage to crops and other desirable plants, read and follow all directions and precautions on this label before using.

DIRECTIONS FOR USE

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

Read entire label before using this product.

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 same area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticides.

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 intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil or water, is coveralls over long-sleeved shirt and long pants, socks and shoes and chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

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. Keep unprotected persons out of the treated areas until sprays have dried.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store unused product in original container only, out of reach of children and animals. NEVER TRANSFER THIS PRODUCT TO ANOTHER CONTAINER FOR STORAGE.

PESTICIDE DISPOSAL

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

CONTAINER DISPOSAL

Empty containers should be triple rinsed (or equivalent), then offered for recycling or reconditioning; or puncture and disposed of in a sanitary landfill, or by incineration; or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

USES

REVOLVER Herbicide is a postemergent sulfonylurea herbicide for application as a foliar spray. REVOLVER is intended for professional use on golf course turf, sports fields, commercial lawns, cemeteries, parks, campsites, recreational areas, home lawns, roadsides, school grounds, and sodfarms to control cool season grasses and weeds from tolerant grasses.

SYMPTOMS

Weed growth ceases within hours after application. Symptoms progress from yellowing to necrosis generally resulting in eventual plant death within 1-4 weeks after application. The speed of symptom development varies with temperature and will be faster at warmer temperatures than cooler temperatures. For best results to control mature weeds, apply in spring or through fall when the daily average temperature is above 70 degrees.

TURF TOLERANCE

REVOLVER Herbicide has been tested and can be used on the following warm season turfgrass cultivars.

Bermudagrass: Baby, Common, Champion, Mini Verdi, Princess (seeded), Riviera (seeded), Nu Mex Sahara (seeded), Savannah, Tifway 419, Tifgreen 328, Tifton 10, Tifsport, Tifdwarf, Tifeagle, Transcontinental, Vamont, Yukon (seeded)

Zoysiagrass: Cavalier, Companion (seeded), Crowne, DeAnza, El Toro, Emerald, Greg Norman, Jamar, Meyer, Palisades, Zenith (seeded), Zeon.

Buffalograss: Buffalograss cultivars may be treated with REVOLVER Herbicide as a spot treatment only.

Other warm season turfgrass and their cultivars may be tolerant to Revolver Herbicide, however, tolerance testing should be done prior to use.

Cool season turfgrasses, such as Bentgrass, Ryegrass, Fescues, Annual Bluegrass, Roughstalk Bluegrass (*Poa trivialis*) and Kentucky Bluegrass are not tolerant to Revolver.

Seeding and Sprigging Intervals

Perennial ryegrass—Revolver Herbicide may be applied to Bermudagrass up to 1 week prior to overseeding with perennial ryegrass without a significant reduction in ryegrass stand.

Poa trivialis-- Revolver Herbicide may be applied to Bermudagrass up to 1 day prior to overseeding with *Poa trivialis* without a significant reduction in *Poa trivialis* stand.

Seeded Bermudagrass—Revolver Herbicide may be applied to Bermudagrass up to 1 week prior to seeding without a significant reduction in Bermudagrass stand. For newly established stands of Bermudagrass, do not apply Revolver Herbicide for at least 2 weeks after emergence since injury may result.

Sprigged Bermudagrass—Revolver Herbicide may be applied to sprigged Bermudagrass no sooner than 2 weeks after sprigging without a significant reduction in quality.

Seeded Zoysiagrass-- Revolver Herbicide may be applied to zoysiagrass up to 1 week prior to seeding without a significant reduction in zoysiagrass stand. For newly established stands of zoysiagrass, do not apply Revolver Herbicide for at least 3 weeks after germination since injury may result.

USE OF REVOLVER AROUND SENSITIVE GRASSES:

Avoid tracking or movement after application of Revolver to adjacent sensitive grasses such as bentgrass, ryegrass, and *Poa trivialis*.

- Allow an adequate buffer zone between sensitive grasses and the treated area. If uncertain about the size of the buffer, 15 feet is suggested.
- The product should dry on the leaf surface prior to allowing traffic on the treated area.
- Risk to sensitive grasses adjacent to Revolver applications is decreased when the soil is at less than field capacity at application. Avoid application when heavy rain is imminent or when the soil is saturated.
- Revolver is foliar absorbed; do not irrigate immediately after application. However, for the next 2 mornings after application, if dew is present, irrigate lightly (0.1-0.2 inches) prior to allowing traffic (mowing, etc.) each day in the area. Avoid water runoff during these irrigation cycles.

APPLICATION METHODS, MIXING, AND COMPATIBILITY

Uniform, thorough spray coverage is important to achieve consistent weed control. Select spray nozzles and pressure that deliver **MEDIUM** spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572. Nozzles that deliver **COARSE** spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of weeds.

Application

Broadcast:

REVOLVER Herbicide can be applied as a broadcast treatment in a minimum of 25 gallons of water per acre. For weed control in dense weed populations or under adverse growing conditions, use higher spray volumes up to 60 gallons per acre. Rates are listed in the Use Rate Table for Weed Control.

Spot treatment:

For hand held pump type sprayers, mix 0.5 to 2 fluid ounces of Revolver per gallon of water, depending on the weed and stage of growth. Use the higher rate for the more difficult to control or larger weeds. Spray to wet. Do not apply beyond runoff.

SPRAY SOLUTION pH

The efficacy of REVOLVER Herbicide may be affected by the pH of the spray solution. A pH near 7 is ideal. If pH is less than 6, add a buffer.

Mixing Instructions

REVOLVER Herbicide must be applied with clean and properly calibrated equipment. Prior to adding REVOLVER Herbicide, ensure that the spray tank, filters and nozzles have been thoroughly cleaned.

1. Fill spray-tank with 25% to 50% of the required volume of water, and begin agitation prior to the addition of REVOLVER Herbicide.
2. Continue agitation to ensure full dispersion of REVOLVER Herbicide.
3. If REVOLVER Herbicide is applied in a tank mixture with other pesticides, add REVOLVER Herbicide to the spray tank first and ensure it is thoroughly dispersed before adding other pesticides.
4. Continue to fill the spray tank with water to the desired volume and agitate while adding spray adjuvants and nitrogen fertilizers.

Continue agitation during application to ensure a uniform spray mixture.

RE-SUSPENDING SUSPENSION CONCENTRATE PRODUCTS IN SPRAY SOLUTION

Like other suspension concentrates, REVOLVER Herbicide will settle if left standing without agitation. If the spray solution is allowed to settle for one hour or more, re-agitate the spray solution.

COMPATIBILITY

If REVOLVER Herbicide is to be tank mixed with other pesticides not listed specifically on this label, compatibility should be tested prior to mixing. To test for compatibility, use a small container and mix a small amount (0.5 to 1qt) of spray, combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop (precipitation, settling, changes in color) do not use this mixture for spraying. Indications of incompatibility usually occur within 5-15 minutes after mixing. Read and follow the label of each tank mix product used for precautionary statements, directions for use, geographic and other restrictions.

TURFGRASS TRANSITION PERIOD

Overseeded Bermudagrass Turf

REVOLVER Herbicide can be applied to Bermudagrass for removal of ryegrass, bentgrass, *Poa trivialis* and *Poa annua* during the spring transition. Sites for transition would include, but not be limited to, golf course greens, tees, collars, fairways, roughs, and approaches that have been overseeded. Revolver may also be used on sports fields, residential and commercial lawns that have been overseeded. Treatments should be applied when removal of ryegrass is desired and Bermudagrass has resumed growth to ensure fill in. Rate and temperature will influence the speed of removal. Higher labeled rates and warmer spring temperatures will result in faster removal. The best time for application within the transition period will vary by location. Addition of nitrogen fertilizer in the tank mixture at the time of application may improve turf quality by increasing Bermudagrass growth during the transition. Rates are listed in the Use Rate Table for Weed Control.

WEED CONTROL

Tank Additions for Difficult-to-Control Weeds

Control of some difficult-to-control weeds with Revolver Herbicide, including volunteer/clumpy ryegrass, and goosegrass, may be improved by additional adjuvant and nitrogen fertilizer. These additives may also cause phytotoxicity to desirable grasses under some situations. Use of these additives should be tested in a limited area prior to widespread use.

- Use methylated or ethylated seed oil containing at least 80% MSO and 10% emulsifier or greater (up to 1 % v/v). Do not use non-ionic surfactants, crop oil concentrates, crop oil concentrate/methylated seed oil blends, and refined vegetable oils with REVOLVER Herbicide.
- Sources of nitrogen include ammonium sulfate (AMS) and urea ammonium nitrate (UAN). Use UAN (1.5-2 qt/A) in areas of low relative humidity and spray grade AMS (1.5-3 lb/A) for areas of high relative humidity.

Volunteer/Clumpy Ryegrass, Tall Fescue, and Other Mature Cool Season Grasses

REVOLVER Herbicide can be used to remove clumps of cool season grasses from desired turf. Herbicide rate and temperature will influence the speed of removal. Higher labeled rates and air temperatures will result in quicker removal. For best results to control mature weeds, make applications when the daily average temperature is above 70 degrees. Rates are listed in the Use Rate Table for Weed Control.

ANNUAL BLUEGRASS (*Poa annua*)

REVOLVER Herbicide may be used to control annual bluegrass. Revolver Herbicide controls existing annual bluegrass plants and does not control annual bluegrass that has not germinated. Higher labeled rates and air temperatures will result in quicker removal. For best results, make applications when the daily average temperature is above 60 degrees. Rates are listed in the Use Rate Table for Weed Control.

Non Overseeded warm season turfgrass:

Revolver may be used on desired turf that has not been overseeded with a cool season grass. Later germinating annual bluegrass will require additional applications.

Since Revolver does not have significant preemergent weed control activity, applications can be made in conjunction with a preemergent such as Ronstar® Herbicide to obtain pre and post activity. Always follow the most restrictive overseeding interval on the products used. Rates are listed in the Use Rate Table for Weed Control.

Overseeded warm season turfgrass

Revolver may be used on Bermudagrass that is overseeded with a cool season grass (ryegrass and *Poa trivialis*, for example) to control annual bluegrass, provided that the application is made prior to overseeding (see seeding intervals above). Better annual bluegrass control may be achieved if the overseeding is later in the Fall, since a greater percentage of annual bluegrass will have germinated. Use adequate spray volumes to assure contact with annual bluegrass plants, since seedlings are underneath the Bermudagrass canopy.

GOOSEGRASS

Fairways and Roughs

Make two applications of Revolver Herbicide at a 6-21 day interval. Tank mixes with Sencor or MSMA may improve control. The lower rate may be used for control of goosegrass at the 1-3 leaf stage. If using the 0.4 rate, and regrowth occurs, a third application may be necessary to control large established goosegrass. This third application should be made when regrowth occurs, but prior to re-tilling.

Rotation of Revolver Herbicide with alternate modes of action such as MSMA plus Sencor or Illoxan plus plus Sencor and use of an effective pre emergent goosegrass herbicide such as Ronstar will provide the best resistance management.

Green, Tees, and Collars

Make two applications of Revolver Herbicide at a 14-21 day interval. If using the 0.4 oz rate and regrowth occurs, a third application may be necessary to control large established goosegrass. This third application should be made prior to early tillering.

Rates are listed in the Use Rate Table for Weed Control.

Rotation of Revolver with alternate modes of action such as Illoxan on closely mowed, but not less than 5/16 inch cutting height turf, is a good resistance management practice.

Spot Treatment Weed Suppression:

Dallisgrass Suppression:

Revolver used in late summer or early fall will provide suppression of dallisgrass when used in spot treatments. Use Revolver at 1.5 – 2.0 fl oz per gallon and spray to wet followed 7–14 days later with an additional spot treatment. If regrowth occurs a third application may be necessary. Results are improved when the Revolver spot treatments are preceded 7 days prior to an application of MSMA at the rate used for dallisgrass control.

Other Weeds suppressed with spot treatments:

Mouseear Chickweed, White clover, Bur clover, Hop clover, Large crabgrass.

Buffalograss:

REVOLVER Herbicide may be used to control various cool season grasses in buffalograss. Apply 0.5-1 fl oz per gallon and spray to wet. Make one to two applications as needed.

USE RATE TABLE FOR WEED CONTROL

REVOLVER Herbicide should be applied at a rate of 0.1 to 0.8 ounces of product per 1000 sq. ft. Because REVOLVER Herbicide provides control of emerged weeds and has limited soil residual, sequential applications or residual tank mixtures may be required to control weeds emerging after application. **Broadcast applications of REVOLVER Herbicide should not exceed a maximum of 1.25 ounces of product per 1000 sq. ft per use season. In case of spot treatments, do not apply more than 2 fl oz of Revolver Herbicide per 1000 sq ft and treat no more than 10,000 sq. ft per acre.**

Weed or Grass Species Controlled	Product Application Rate Ounces/1000 sq. ft.	Product Application Rate Ounces/5000 sq. ft.	Product Application Rate Ounces/Acre
Ryegrass (transition)	0.2 - 0.4	0.4 - 2	5.5 - 17.4
Volunteer ryegrass, tall fescue, and other cool season grasses	0.4 - 0.8	2 - 4	17.4 - 35.2
Annual bluegrass	0.2 - 0.4	1 - 2	8.8 - 17.4
<i>Poa trivialis</i> , <i>Poa annua</i> , goosegrass and bentgrass in overseeded bermudagrass greens, tees, and collars	0.1 - 0.4	0.5 - 2.0	4.4 - 17.4
Goosegrass	0.4 – 0.6	2 - 3	17.4 – 26.2
Henbit, Doweweed, Carolina false dandelion, Little Barley	0.4	2	17.4

* Multiple applications may be required to control Goosegrass, large volunteer ryegrass, or where 0.1 oz rate is used

Weed Resistance

ALS-resistance exists in some biotypes. These biotypes are **not** controlled by REVOLVER Herbicide. Consider using herbicides with other modes of action to control resistant species.

TANK MIXES FOR REVOLVER HERBICIDE

When using REVOLVER Herbicide in tank mix combinations, follow the precautions and directions of the most restrictive label. Test compatibility with other unlisted pesticides prior to use.

The following products have been tested for physical compatibility and have shown to be compatible.

Herbicides

Atrazine	Image®*
SedgeHammer™	MSMA*
Sencor®*	Ronstar®50 WSP

*Note that tank mixtures of REVOLVER Herbicide with Image, Sencor or MSMA may increase temporary discoloration (yellowing) on Bermudagrass.

Insecticides

Sevin®

Foliar Insecticide Interaction

Foliar applications of an OP insecticide should **not** be made within 7 days of a REVOLVER Herbicide application or injury may result.

Tank Mixtures with Fungicides

26GT®

TANK CLEANUP PROCEDURE

1. Drain the tank completely, then wash out tank, boom and hoses with clean water. Drain again.
2. Fill the tank half full with clean water and add ammonia (i.e. 3% domestic ammonia solution) at a dilution rate of 1% (i.e. 1 gallon of domestic ammonia for every 100 gallons of rinsate). Completely fill the tank with water. Agitate/recirculate and flush through boom and hoses. Leave agitation on for 10 minutes. Drain tank completely.
3. Repeat Step 2.
4. Remove nozzles and screens and soak them in a 1% ammonia solution. Inspect nozzles and screens and remove visible residues.
5. Flush tank, boom, and hoses with clean water.
6. Inspect tank for visible residues. If present, repeat Step 2.

PRECAUTIONS FOR USE

1. Rainfall within 2 hours may necessitate retreatment with REVOLVER Herbicide or may result in reduced weed control. Applications should be made to actively growing weeds. Weed control may be reduced if application is made in the presence of heavy dew, fog, and mist/rain or when weeds are under stress due to drought.
2. DO NOT apply when wind causes drift to off-site vegetation as injury may occur. Small amounts of REVOLVER Herbicide delivered via drift or spray tank contamination can damage other plants. Careful management of spray drift and tank cleanout is recommended.
3. DO NOT broadcast more than 1.25 oz/1000 sq. ft. of REVOLVER Herbicide to the same turf location in one growing season.
4. Do not apply this product by air or through any type of irrigation system.
5. Apply Revolver Herbicide spray mixtures within 24 hours of mixing to avoid product degradation.
6. Do not apply REVOLVER Herbicide to turf exhibiting injury from previous applications of other products.
7. Avoid excessive mechanical disruptions such as aerification and verticutting within 1 week prior to or after application of Revolver Herbicide.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Bayer CropScience LP. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, all such risks shall be assumed by the user or buyer

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10/17/06, NOTIFICATION 04/26/07