

QUINCLORAC	GROUP	4	HERBICIDE
SULFENTRAZONE	GROUP	14	HERBICIDE



SOLITARE®

Herbicide

For postemergence control of annual grasses, broadleaf weeds,
and perennial sedges:

- Residential, Commercial and Institutional Lawns, Athletic Fields,
Commercial Sod Farms, and Other Non-crop Sites
- Golf Course Fairways and Roughs

envu™

Active Ingredients:

Sulfentrazone*	18.75%
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Quinclorac*	56.25%
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Other Ingredients:	25.00%
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Total:	100.0%
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*SOLITARE® herbicide contains 0.75 lb total active ingredient per one pound of product
(0.1875 lb Sulfentrazone and 0.5625 lb Quinclorac)

EPA Reg. No. 101563-310

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION

See inside booklet for additional precautionary information.

SKU: D00001607
22060660B 250407AV1

Net Contents: 4 Pounds

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

FIRST AID

IF SWALLOWED	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF ON SKIN 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 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.

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

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long sleeves and long pants
- Chemical-resistant gloves (gloves have a thickness of 14 mills or greater and include glove types such as Laminate, Butyl Rubber, Nitrile rubber, Neoprene, Natural Rubber, Polyethylene, PVC, or Viton)
- 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 marine/estuarine invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to plants in adjacent areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

Groundwater advisory: The active ingredients in this product are 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: SOLITARE® herbicide can contaminate surface water through spray drift. Under some conditions, SOLITARE herbicide 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.

USE RESTRICTIONS

This product may only be used in accordance with the Application Rates listed on this label.

Do not apply this product through any type of irrigation system.

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), notification to workers, and restricted-entry interval. The requirements in this box 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-sleeves and long pants.
- chemical-resistant gloves (gloves have a thickness of 14 mills or greater and include glove types such as Lamine, Butyl Rubber, Nitrile rubber, Neoprene, Natural Rubber, Polyethylene, PVC, or Viton).
- 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.

WEED RESISTANCE MANAGEMENT

For resistance management, please note that SOLITARE herbicide contains both a Group 4/Quinclorac and a Group 14/Sulfentrazone herbicide. Any weed population may contain plants naturally resistant to Group 4 and/or Group 14 herbicides. The resistant individuals 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 this product or other Group 4 and/or 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 weed identification and growth stage.
 - 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.

General Information

SOLITARE herbicide is formulated as a 75 WDG (Water Dispersible Granule) containing 0.75 lbs of active ingredient per pound of product.

SOLITARE herbicide is a selective post-emergence herbicide which controls annual grasses, broadleaf weeds and sedges in established turf areas including, but not limited to, residential, commercial and institutional lawns, athletic fields, commercial sod farms, golf course fairways and golf course roughs. SOLITARE herbicide is absorbed by shoots, foliage and roots.

A post-emergent application of SOLITARE herbicide is improved when adequate soil moisture is present at application. Best weed control results will be obtained when no rainfall or irrigation occurs within 24 hours after application. If no rainfall or irrigation occurs within 7 days after application of SOLITARE herbicide in the amount of 0.5 inches, then irrigation of at least 0.5 inches is recommended.

Do not apply aerially.

Mixing and Application Instructions

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 SOLITARE herbicide to the tank.

SOLITARE herbicide is a water dispersible granule intended for dilution with water. Mix SOLITARE herbicide thoroughly and continue agitation during application. If SOLITARE herbicide is left standing for extended period of time in spray tank, re-agitate to assure uniform suspension of product in spray mixture.

Mixing With Water

For best results, fill spray tank with one fourth of the volume of clean water needed for the area to be treated. Start the agitation system and add SOLITARE herbicide to the tank. Make sure SOLITARE 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 SOLITARE herbicide. High temperatures and high relative humidity may increase the risk of temporary discoloration. Use of surfactants is not recommended.

Tank Mixtures Compatibility

SOLITARE herbicide has been found to be compatible with most herbicides, fungicides, insecticides and growth regulators 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, then 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 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.

Use SOLITARE herbicide spray mixture immediately after mixing. Do not store the mixture.

Ground Equipment

Release height: Do not release spray at a height greater than 30 inches above the ground.

Spray Volume: When this product is tank mixed with a contact burndown herbicide, ground applicators must use a minimum finished spray volume of 15 gallons per acre.

Sprayer Type: Boom sprayers equipped with appropriate flat fan nozzles, tips and screens are ideal for broadcast applications.

Power sprayers: Uniform and accurate spray coverage requires proper calibration, agitation and operation of spray equipment. The use of marker dyes or foams can improve application accuracy. 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 gallons per 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 SOLITARE 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.

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 recommendation and in accordance with ASABE* Standard 572.
 - Select coarse to very coarse droplet size when this product is used as a preemergent application.
 - Select medium to very coarse droplet size when product is used postemergence with a contact burndown herbicide.
 - Do not apply when wind speeds are greater than 10 mph at the application site.
 - Do not apply as spray droplets smaller than medium to coarse (defined ASABE* standard).
- *American Society for Agricultural and Biological Engineers (ASABE).

SPRAY DRIFT ADVISORIES:

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

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

Information on 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 for pesticide performance. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions. (See information on Wind, Temperature and Humidity, and Temperature Inversions in subsequent sections).

Controlling Spray Droplet Size

Volume – Use high flow rate nozzles to apply the greatest practical spray volume. Nozzles with higher rated flow generally produce larger droplets.

Pressure – When higher flow rates are needed, use higher flow rate nozzles rather than increasing spray pressure.

Do not exceed the nozzle manufacturer's recommended pressures. Lower pressure produces larger droplets in many types of nozzles.

Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.

Nozzle Type and Droplet Size – 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 for ground application. Solid stream nozzle oriented straight back usually produce the largest droplets and lowest drift potential.

Wind – Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they potentially 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 low speed and variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common during conditions of limited cloud cover and little to no wind. They often begin to form as the sun sets and may often continue into the morning. The presence of a temperature inversion may be indicated by ground fog. However if fog is not present, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversions. Smoke that remains in layers and moves laterally in a concentrated cloud (under low speed wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas – The pesticide should only be applied when the wind is blowing away from sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops).

Off-Target Movement of SOLITARE Herbicide

Drift of dilute spray mixtures containing SOLITARE 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. SOLITARE herbicide can cause significant symptomology by drift on to sensitive plants. This symptomology may manifest initially as discreet, localized spots where contacted by SOLITARE 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 SOLITARE 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 SOLITARE herbicide.

SPECIFIC USE INSTRUCTIONS FOR TURFGRASS

Established Turf

This product may be used on seeded, sodded or sprigged turfgrasses that are well established. First application of this product can be made following the second mowing providing the turfgrass has developed into a uniform stand with a good root system. Turfgrass injury could result from application of this product on turfgrass that is not well established or has been weakened by stresses such as unfavorable weather conditions, disease, chemical or mechanical influences.

Temporary turfgrass discoloration has been observed when trinexapac-ethyl products have been either tank-mixed or applied within 7 days of a SOLITARE herbicide application. It is recommended that trinexapac-ethyl applications be made 7 days prior to, or after SOLITARE herbicide application to reduce risk of turfgrass discoloration.

Treated turfgrass will recover with new growth. Discolored leaf tissue will be removed with mowing. To reduce potential for discoloration, do not apply SOLITARE 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.

Restrictions and Other Use Precautions:

- Do not apply to golf course putting greens, collars or tees.
- Do not use on turfgrasses other than those listed on this label.
- Do not apply to turfgrasses under stress.
- Do not apply with surfactants unless previous experience has demonstrated combinations with surfactant to be physically compatible and non-injurious to the grass type in question.
- Do not treat pastures, rangeland, or other areas grazed or harvested for livestock forage or hay.
- Do not apply directly to landscape ornamentals or ornamental beds.
- Do not allow spray drift to contact landscape ornamentals, shrubs and trees.
- Do not use clippings as mulch or compost around flowers, ornamentals, trees or in vegetable gardens.

Application Rates

Use Rate Conversion				
oz product/ 1,000 sq ft	oz product/ acre	lb sulfentrazone/ acre	lb quinclorac/ acre	lb total ai/ acre
0.367	16	0.187	0.562	0.749
0.489	21	0.25	0.75	1.00

When applied as directed under the conditions described, single use application rates range from a minimum of 0.367 oz product/1,000 sq ft (16 oz product/acre) to a maximum of 0.489 oz product/1,000 sq ft (21 oz product/acre).

The maximum sulfentrazone application rate is 0.375 lbs ai/acre per calendar year.

Table 1. Application Rate for Tolerant grasses

Grass Type*	Use Rate Single Application This product may be applied twice per year as long as the total sulfentrazone applied does not exceed the maximum calendar year application rate.	
	oz product/1,000 sq ft	oz product/acre
Cool Season Grasses		
Bluegrass, Kentucky (<i>Poa pratensis</i>) Bluegrass, Rough (<i>Poa trivialis</i>) Fescue, tall (<i>Festuca arundinacea</i>) Ryegrass, perennial (<i>Lolium perenne</i>)	0.367	16
Warm Season Grasses		
Buffalograss (<i>Buchloe dactyloides</i>) Centipedegrass (<i>Eremochloa ophiuroides</i>) Seashore Paspalum (<i>Paspalum vaginatum</i>) Zoysiagrass (<i>Zoysia japonica</i>)	0.367	16
Bermudagrass** (<i>Cynodon dactylon</i>) & hybrids	0.367 - 0.489	16 - 21
*SOLITARE herbicide has demonstrated tolerance on both cool and warm season turfgrasses. However, not all varieties have been evaluated. To test for turf safety, apply SOLITARE herbicide in a small area and in accordance with label instructions. **TifSport bermudagrass and Zeon zoysiagrass are more susceptible to temporary turf discoloration than other bermudagrass and zoysiagrass varieties. It is recommended to treat a small area prior to treatment of larger areas.		

POSTEMERGENCE CONTROL OF GRASS AND BROADLEAF WEEDS

This product, when used alone, will control or suppress the weeds listed in Table 2 when applied shortly after they have emerged. Do not exceed the application rates specified for the turfgrass species in Table 1.

Table 2. Weeds Controlled or Suppressed by SOLITARE Herbicide

Common Name	Scientific Name	Controlled	Suppressed
Bittercress	(<i>Cardamine</i> spp.)		X
Barnyardgrass	(<i>Echinochloa crusgalli</i>)	1	
Black medic	(<i>Medicago lupulina</i>)	1	
Buttercups	(<i>Ranunculus</i> spp.)		X
Carolina geranium	(<i>Geranium carolinianum</i>)	1	
Carpetweed	(<i>Mollugo verticillata</i>)		X
Chickweed, common	(<i>Stellaria media</i>)	1	
Chickweed, mouseear	(<i>Cerastium vulgatum</i>)		X
Cinquefoil	(<i>Potentilla</i> spp.)		X
Clover	(<i>Trifolium</i> spp.)	1	
Crabgrass (Large and Smooth)	(<i>Digitaria</i> spp.)	1	
Cudweed	(<i>Gnaphalium</i> spp.)		X
Deergrass	(<i>Panicum clandestinum</i>)	1	
Dandelion	(<i>Taraxacum officinale</i>)	1	
Dock, Curly	(<i>Rumex crispus</i>)		X
Dollarweed	(<i>Hydrocotyle</i> spp.)	1	
Evening primrose	(<i>Oenothera biennis</i>)		X
Fiddleneck	(<i>Amsinckia</i> spp.)		X
Filaree	(<i>Erodium</i> spp.)		X
Foxtail spp.	(<i>Setaria</i> spp)	1	
Goldenrod	(<i>Solidago</i> spp.)	1	
Goosegrass	(<i>Eleusine indica</i>)	2	
Ground ivy	(<i>Glechoma hederacea</i>)	1	
Henbit	(<i>Lamium amplexicaule</i>)		X
Knotweed, prostrate	(<i>Polygonum aviculare</i>)		X

(continued)

Table 2. Weeds Controlled or Suppressed by SOLITARE Herbicide (continued)

Common Name	Scientific Name	Controlled	Suppressed
Kochia	(<i>Kochia scoparia</i>)	1	
Lambsquarters, common	(<i>Chenopodium album</i>)		X
Lawn burweed	(<i>Soliva pterosperma</i>)		X
Lespedeza, common	(<i>Lespedeza striata</i>)		X
London Rocket	(<i>Sisymbrium irio</i>)	1	
Mallow, common	(<i>Malva neglecta</i>)		X
Morningglory	(<i>Ipomea</i> spp.)	1	
Nutsedge, Yellow	(<i>Cyperus esculentus</i>)	1	
Parsley piert	(<i>Alchemilla arvensis</i>)	1	
Pigweed, Redroot	(<i>Amaranthus retroflexus</i>)	1	
Pigweed, Tumble	(<i>Amaranthus albus</i>)	1	
Pineappleweed	(<i>Matricaria matricarioides</i>)		X
Plantain, broadleaf	(<i>Plantago major</i>)	1	
Plantain, buckhorn	(<i>Plantago lanceolata</i>)	1	
Punctureweed	(<i>Tribulus terrestris</i>)		X
Purslane, common	(<i>Portulaca oleracea</i>)		X
Pusley, Florida	(<i>Richardia scabra</i>)	1	
Redweed	(<i>Melochia corchorifolia</i>)		X
Signalgrass, broadleaf	(<i>Brachiaria platyphylla</i>)	1	
Smartweed, Pennsylvania	(<i>Polygonum pensylvanicum</i>)	1	
Sorrel, Red	(<i>Rumex acetosella</i>)		X
Speedwell	(<i>Veronica</i> spp.)	1	
Spurge, (annuals)	(<i>Euphorbia</i> spp.)	1	
Spurge, prostrate	(<i>Euphorbia humistrata</i>)	1	
Spurge, spotted	(<i>Euphorbia maculata</i>)	1	

(continued)

Table 2. Weeds Controlled or Suppressed by SOLITARE Herbicide (continued)

Common Name	Scientific Name	Controlled	Suppressed
Star of Bethlehem	(<i>Ornithogalum umbellatum</i>)	1	
Stiltgrass, Japanese	(<i>Microstegium vimineum</i>)	1	
Torpedograss	(<i>Panicum repens</i> L.)		X
Velvetleaf	(<i>Abutilon theophrasti</i>)		X
Violet, wild	(<i>Viola pratincola</i>)	1	
Wild garlic	(<i>Allium vineale</i>)		X
Wild onion	(<i>Allium canadense</i>)		X
Woodsorrel, creeping	(<i>Oxalis corniculata</i>)		X
Woodsorrel, yellow	(<i>Oxalis stricta</i>)	1	

1. Weeds are suppressed at lower label rates (<16 oz/acre). For optimum control apply rates of at least 16 oz./A in a single application. Do not exceed the application rate specified for the turf species in Table 1.
2. SOLITARE herbicide controls goosegrass when applied postemergently to newly emerged weeds in the 1-4 leaf stage of development.

POSTEMERGENCE CONTROL OF ANNUAL AND PERENNIAL SEDGES

SOLITARE herbicide will control or suppress the sedges listed in Table 3. Apply the highest rate consistent with the rate needed for turfgrass safety in Table 1.

- Rates lower than 0.367 oz product/1,000 sq ft (16 oz product/acre) will generally control sedges for up to 60 days.
- A rate of 0.367 oz product/1,000 sq ft (16 oz product/acre) will provide approximately 75% control for up to 60 days.
- Yellow nutsedge (*Cyperus esculentus*) is the most susceptible sedge species.
- Temporary discoloration of some turfgrass species may result from use of surfactant. Use of surfactants is not recommended.

Good spray coverage is needed for optimum control of sedges.

Table 3. Sedge species controlled or suppressed by SOLITARE Herbicide

Common Name	Scientific Name
Kyllinga, green	<i>(Kyllinga brevifolia)</i>
Kyllinga, false green	<i>(Kyllinga gracillima)</i>
Nutsedge, purple ¹	<i>(Cyperus rotundus)</i>
Nutsedge, yellow	<i>(Cyperus esculentus)</i>
Sedge, globe	<i>(Cyperus globulosus)</i>
Sedge, cylindric	<i>(Cyperus retrorsus)</i>
Sedge, Surinam	<i>(Cyperus surinamensis)</i>
Sedge, Texas	<i>(Cyperus polystachyos)</i>
1. Multiple applications may be required. Second application must occur no earlier than 28 to 35 days after the first application.	

Application to reseeded, overseeded or sprigged areas:

Reseeding, overseeding or sprigging of treated areas within one (1) month after application of this product could inhibit the establishment of desirable turfgrasses. Overseeding of bermudagrass with perennial ryegrass at two (2) to four (4) weeks after an application can be done if slight injury to perennial ryegrass can be tolerated.

Best results are obtained for reseeded or overseeding when mechanical or power seeding equipment (slit seeders) are used to give good seed to soil contact and proper soil cultivation, irrigation and fertilization practices are followed.

Sod Production:

This product may be applied to established sod. Allow sod to establish a good root system, a uniform stand and to fill in the exposed edges. It is recommended that sod be established for up to three (3) months before an application of SOLITARE herbicide. Do not apply this product within three (3) months of harvest.

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 1-800-424-9300.

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>

Envu, the Envu logo are trademarks and SOLITARE® is a registered trademark owned by Environmental Science U.S., LLC or one of its affiliates.

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Herbicide

Active Ingredients:

Sulfentrazone*	18.75%
Quinclorac*	56.25%
Other Ingredients:	25.00%
Total:	100.0%

*SOLITARE® herbicide contains 0.75 lb total active ingredient per one pound of product (0.1875 lb Sulfentrazone and 0.5625 lb Quinclorac)

EPA Reg. No. 101563-310

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION

See inside booklet for additional precautionary information.

FIRST AID

IF SWALLOWED • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.

IF ON SKIN 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 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.

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.

SKU: D00001607

220606608 250407AV1

Net Contents: 4 Pounds

QUINCLORAC	GROUP 4	HERBICIDE
SULFENTRAZONE	GROUP 14	HERBICIDE

PRECAUTIONARY STATEMENTS - Hazards to Humans and Domestic Animals -

CAUTION - Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

STORAGE AND DISPOSAL

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

Pesticide Storage

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

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