PRODIAMINE	GROUP	3	HERBICIDE
SULFENTRAZONE	GROUP	14	HERBICIDE

ECHELON® 4SC

HERBICIDE

For Preemergence and early Postemergence Control of Crabgrass, selected annual grasses, sedges and annual broadleaf weeds in Turf Sites - Residential and Institutional Lawns, Athletic Fields, Commercial Sod Farms, Golf Course Fairways and Roughs, Roadsides, Utility right-of-ways, Railways and Industrial areas

EPA Reg. No. 279-3323

Active Ingredients:	**By Wt.**
Sulfentrazone:	13.6%
Prodiamine:	27.3%
Other Ingredients:	59.1%
	100.0%

Echelon 4SC herbicide contains 1.33 lb sulfentrazone and 2.67 lb prodiamine per gallon.

W	**EPA Est. 279-IL-1**
J	**EPA Est. 70815-GA-002**
CJ	**EPA Est. 97524-GA-1**
T	**EPA Est. 072344-MO-004**

EPA Establishment Numbers (The letter before each Establishment Number above corresponds to the first letter in the lot number on the container label.)

KEEP OUT OF REACH OF CHILDREN

CAUTION

For information regarding the use of this product, call 1-800-321-1362.

See additional precautionary information contained inside label booklet.

Sold By
FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104

Net Contents: ONE GALLON

GSS SL-1023 111622 08-25-22

11008464 - 22057767

Job

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 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 1-800-331-3148 for emergency medical treatment information.

For Information Regarding the Use of This Product, Call 1-800-321-1FMC (1362)

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. Prolonged or frequently repeated skin contact while mixing or handling may cause allergic reactions in certain individuals.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeves and long pants
- Chemical-resistant gloves (gloves have a thickness of 14 mils 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 product gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

This product 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 and aquatic organisms in adjacent areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

Non-Target Organism Advisory Statement: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

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 overlying 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) 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-sleeves and long pants, chemical-resistant 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.

WEED RESISTANCE MANAGEMENT

For resistance management, please note that Echelon 4SC herbicide contains both a Group 3/[Prodiamine] and a Group 14/[Sulfentrazone] herbicide. Any weed population may contain plants naturally resistant to Group 3 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 3 and/or 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 university researchers for additional pesticide resistance-management and/or integrated weed-management recommendations for specific types of turf and weed biotypes.

GENERAL INFORMATION

Echelon 4SC herbicide is a flowable formulation (suspension concentrate) containing 4 lb of active ingredient per gallon. The mode of action of Echelon 4SC herbicide involves uptake by both weed roots and shoots of existing weeds and prevention of growth by newly emerged weed seedlings.

Echelon 4SC herbicide is a selective pre-emergence and early post-emergence herbicide for control of sedges, crabgrass, annual grass and broadleaf weeds in turf sites including residential and institutional lawns, athletic fields, commercial sod farms, golf course fairways and roughs, roadsides, utility right-of-ways, railways and industrial areas.

DO NOT apply Echelon 4SC herbicide to soils classified as sand with less than 1% Organic Matter.

MIXING AND APPLICATION INSTRUCTIONS

Shake Well Before Using

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 contained 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 Echelon 4SC herbicide to the tank.

Echelon 4SC 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-fourth of the volume of clean water needed for the area to be treated. Start the agitation system and add Echelon 4SC herbicide to the tank. Make sure Echelon 4SC herbicide is thoroughly mixed before application or before adding another product to the spray tank.

Mixing With Liquid Fertilizers

The addition of a sprayable nitrogen fertilizer with a nitrogen percentage above 20% may increase herbicidal activity on certain weeds and decrease turf tolerance on desirable turfgrass cultivars. 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 Mixtures Compatibility

Echelon 4SC 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 (flowable) 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 may 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 Echelon 4SC herbicide spray mixture immediately after mixing. Do not allow spray solutions to stand or dry in the tank.

Ground Equipment

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

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. It is impor-

tant to avoid over-application of this product due to excessive overlapping or spot treatments. Spray pressures adjusted to 20-40 psi are appropriate.

Hand-operated sprayers: Backpack and compression sprayers are appropriate for small turfgrass areas and spot treatment. 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 may result in uneven coverage or excessive application.

Sprayer Equipment Clean-Out

After spraying Echelon 4SC 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 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).

Boomless Ground Applications: Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications: Take precautions to minimize spray drift.

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.

- 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 sulfentrazone is used as a preemergent application.
- Select medium to very coarse droplet size when sulfentrazone is used postemergent with a contact 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).

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 Echelon 4SC Herbicide

Drift of dilute spray mixtures containing Echelon 4SC 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. Echelon 4SC herbicide can cause significant symptomology by drift on

to sensitive plants. This symptomology may manifest initially as discreet, localized spots where contacted by Echelon 4SC 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 Echelon 4SC herbicide on to unintended plants, irrespective of severity, constitutes misapplication of this product. FMC accepts no responsibility or liability for potential turf effects that may result from such misapplication of Echelon 4SC 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 grass has developed into a uniform stand with a good root system. Turf injury may result from application of this product on turf that is not well established or has been weakened by stresses such as unfavorable weather conditions, disease, chemical or mechanical influences.

Echelon 4SC herbicide application may cause temporary discoloration to exposed leaf surfaces on certain cultivars of zoysiagrass. Treated turfgrass will recover with new growth. Discolored leaf tissue will be removed with mowing. To reduce potential for discoloration, do not apply Echelon 4SC 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.

Echelon 4SC herbicide applications made to fully dormant zoysiagrass does not appear to affect spring transition. Zoysiagrass tends to be most sensitive to Echelon 4SC herbicide applications during spring and fall transition. Echelon 4SC herbicide may cause temporary discoloration to exposed leaf surfaces of certain zoysiagrass cultivars. The temporary discoloration that may occur does not adversely affect long-term growth. Affected turfgrass will recover and discolored leaf tissue will be removed with mowing.

Do not add a surfactant or liquid fertilizers containing greater than 20% nitrogen as this may exacerbate discoloration.

Allow for 7 days separation between Echelon 4SC herbicide applications and plant growth regulator applications. Applications made within 7 days of plant growth regulators may lengthen discoloration.

Echelon 4SC herbicide has demonstrated tolerance on both cool and warm season turfgrasses. However, not all varieties and or cultivars have been evaluated. Turfgrass managers desiring to treat newly released varieties should first apply Echelon 4SC herbicide to a small area prior to treatment of larger areas.

Turfgrass Use Precautions

- Do not apply to golf course putting greens or tees.
- Do not use on turgrasses other than those listed on this label.
- Do not graze or feed livestock, forage cut from areas treated with Echelon 4SC herbicide.

- Do not apply directly to landscape ornamental foliage or ornamental beds containing dormant bulbs or non-woody perennials.
- Do not apply to areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass *(Poa annua)* are desirable species.
- Do not apply to creeping bentgrass if mowing height is less than 0.5 inch.
- Do not harvest treated sod before 90 days after application.
- Do not apply to newly set sod until the sod has rooted and exposed edges have grown in.
- 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.

Temporary turfgrass discoloration has been observed when a Primo-type plant growth regulator has been either tank-mixed or applied within 7 days of a Echelon 4SC herbicide application. It is recommended that Primo-type plant growth regulator applications be made 7 days prior to, or after Echelon 4SC herbicide application to reduce risk of turfgrass discoloration.

Application Rates

Use Rate Conversation			
fl oz product/acre	**lb sufentrazone/acre**	**lb prodiamine/acre**	**lb total ai/acre**
6	0.062	0.125	0.19
8	0.083	0.167	0.25
12	0.125	0.25	0.375
18	0.19	0.38	0.57
24	0.25	0.5	0.75
36	0.374	0.751	1.125

When applied as directed under the conditions described, single use application rates range from 8 to 36 fl oz product/acre or 0.184 to 0.826 fl oz product/1,000 sq ft. The maximum application rate is 1.125 lb ai/acre (36 fl oz ai/acre) per calendar year.

Refer to Table 1 for the recommended range for each grass type.

Table 1. Application Rates for Tolerant grasses.

Grass Type	USE RATES Do not exceed maximum use rates per turf species in a single application	
	fl oz product/ acre	**fl oz product/ 1,000 sq ft**
Cool Season Grasses		
Bentgrass, creeping[1] Fescue, fine[2] *(Festuca rubra)* Ryegrass, perennial *(Lolium perenne)*	8 - 12	0.184-0.275
Bluegrass, Kentucky *(Poa pratensis)* Fescue, tall[2] *(Festuca arundinacea)*	18 - 24	0.413 - 0.551
Sequential Application for Mixed Cool Season Turf/Cool Season Blends consisting of:		
Fescue, fine[2] *(Festuca rubra)* Ryegrass, perennial *(Lolium perenne)* Bluegrass, Kentucky *(Poa pratensis)* Fescue, tall[2] *(Festuca arundinacea)*	Initial Application 12	Initial Application 0.275
	Follow-up application 6 to 12 30 - 60 days later	Follow-up application 0.184 - 0.275 30 - 60 days later

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Table 1. (cont.)

Grass Type	USE RATES Do not exceed maximum use rates per turf species in a single application	
	fl oz product/ acre	fl oz product/ 1,000 sq ft
Warm Season Grasses		
Bahiagrass *(Paspalum notatum)* Buffalograss *(Buchloe dactyloides)* Carpetgrass *(Axonopus affinis)* Centipedegrass *(Eremochloa ophuiroides)* Kikuyugrass *(Pennisetum clandestinum)* Seashore Paspalum *(Paspalum vaginatum)* Zoysiagrass *(Zoysia japonica)*	18 - 24	0.413 - 0.551
Bermudagrass *(Cynodon dactylon)* & hybrids	24 - 36	0.551- 0.826

[1]If bentgrass is mowed lower than 0.5 inch, do not apply Echelon 4SC herbicide.

[2]Use of this product on certain varieties of Chewing Fine Fescue or Tall Fescue cultivars may result in undesirable injury.

[3]Echelon 4SC herbicide may be applied more than once per year, if needed, as long as total amount applied does not exceed the maximum application rate per turf type of 1.125 lb ai/acre (36 fl oz/acre), whichever is lower.

Table 1A. Applications for St Augustinegrass

- Application of Echelon 4SC herbicide to St. Augustinegrass may cause temporary discoloration to exposed leaf surfaces of St. Augustinegrass. Treated turfgrass will recover with new growth and discolored leaf tissue will be removed with mowing.
- Do not apply Echelon 4SC herbicide to St. Augustinegrass if temporary discoloration cannot be accepted.

Warm Season Grass	fl oz/acre	fl oz per 1000 sq ft
St. Augustine	Initial application 18	Initial application 0.413
	Follow-up application 18 45 - 60 days later	Follow-up application 0.413 45 - 60 days later

Preemergence Control of Annual, Biennial & Perennial Broadleaf Weeds and sedges

This product, applied alone or in recommended tank mixtures, will provide control of the following weeds for pre-emergence applications.

Table 2. Turgrass Weeds Controlled With Preemergence Application

Common Name	Scientific Name
Barnyardgrass	*(Echinochloa crus-galli)*
Bluegrass annual[1]	*(Poa annua)*
Carpetweed	*(Mollugo verticillata)*
Carolina Geranium	*(Geranium carolinianum)*
Chickweed, common[2]	*(Stellaria media)*
Chickweed, mousear (from seed)	*(Cerastium vulgatum)*
Crabgrass (large, Smooth)[3]	*(Digitaria spp.)*
Crowfootgrass	*(Dactyloctenium aegyptium)*
Cupgrass, Woolly	*(Eriochloa villosa)*
Foxtails, Annual	*(Setaria spp.)*
Goosegrass[4]	*(Eleusine indica)*
Hairy Bittercress	*(Cardamine hirsute)*
Henbit[2]	*(Lamium amplexicaule)*
Itchgrass	*(Rottboellia exaltata)*
Knotweed, prostrate	*(Polygonum aviculare)*
Kochia	*(Kochia scoparia)*
Kyllinga, green	*(Kyllinga brevifolia)*
Kyllinga, false	*(Kyllinga gracillima)*
Lambsquarters, common	*(Chenopodium album)*
Lovegrass	*(Eragrostis spp.)*
Nutsedge, yellow	*(Cyperus esculentus)*

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Table 2. (cont.)

Common Name	Scientific Name
Pancium (Texas, Fall)	*(Panicum spp.)*
Pigweed, Redroot	*(Amaranthus retroflexus)*
Purslane, Common	*(Portulaca oleracea)*
Pusley, Florida	*(Richardia scabra L.)*
Sedge, globe	*(Cyperus globulosus)*
Sedge, cylindrical	*(Cyperus retrorsus)*
Sedge, Surinam	*(Cyperus surinamensis)*
Sedge, Texas	*(Cyperus polystachyos)*
Shepherdspurse[2]	*(Capsella bursa-pastoris)*
Signalgrass, broadleaf	*(Brachiaria playphylla)*
Speedwell	*(Veronica spp.)*
Sprangletop	*(Leptochola spp.)*
Spurge, prostrate	*(Euphorbia humistrata)*
Witchgrass	*(Panicum capillare L.)*
Woodsorrel, yellow (from seed)	*(Oxalis stricta)*

1. *Poa annua* is a winter annual. Applications of Echelon 4SC herbicide should be made in August or September to established, non-overseeded turf before *Poa annua* germinates. Consult local Cooperative Extension Service for more specific applications timings for your local area since August and September are approximate timings.

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2. Apply this product in late summer, fall or winter before weed germinates for control.
3. Crabgrass control in cool season grasses from fall application: Areas where the ground is subject to winter freezes, this product may be applied in the fall at rates listed in Table 1 (8-24 fl oz per acre) for cool season grasses when soil temperatures are below 50°F, but prior to the ground freezing. This will provide control of crabgrass the following spring.
4. In areas of extended growing season and heavy pressure, weed control will be enhanced by a second application of this product after initial application. However, do not exceed the maximum single application rate specified for the turf species in Table 1 and do not exceed the maximum yearly rate of 1.125 lb ai/acre (36 fl oz/acre).

Postemergence Control of Annual, Biennial & Perennial Broadleaf Weeds, Grasses and Sedges

Echelon 4SC herbicide, applied alone or in recommended tank mixture, will provide control of the following weeds for post emergence applications. Do not apply adjuvants or surfactants with post applications of Echelon 4SC herbicide unless tested on small areas prior to broadcast applications.

Table 3. Turfgrass Weeds Controlled or Suppressed When Application is Made Postemergence

Common Name	Scientific Name	Controlled	Suppressed
Bittercress	*(Cardamine spp.)*		X
Black medic	*(Medicago lupulina)*		X
Buttercups	*(Ranunculus spp.)*		X
Carolina Geranium	*(Geranium carolinianum)*	1	
Carpetweed	*(Mollugo verticillata)*		X
Chickweed, common	*(Stellaria media)*	1	
Chickweed, mousear	*(Cerastium vulgatum)*		X
Cinquefoil	*(Potentilla spp.)*		X
Clover	*(Trifolium spp.)*		X
Crabgrass (Large and Smooth)	*(Digitaria spp.)*	2	
Cudweed	*(Gnaphalium spp.)*		X
Dandelion	*(Taraxacum officinale)*		X
Dock, Curly	*(Rumex crispus)*		X
Evening Primrose	*(Oenothera biennis)*		X
Fiddleneck	*(Amsinckia spp.)*		X
Filaree	*(Erodium spp.)*		X
Goldenrod	*(Solidago spp.)*	1	
Goosegrass	*(Eleusine indica)*	2	
Ground ivy	*(Glechema hederacea)*	1	
Henbit	*(Lamium amplexicaule)*		X

(Continued on next page)

Table 3. (Cont.)

Common Name	Scientific Name	Controlled	Suppressed
Knotweed, prostrate	*(Polygonum aviculare)*		X
Kochia	*(Kochia scoparia)*	1	
Lambsquarters, common	*(Chenopodium album)*		X
Lawn burweed	*(Soliva pterosperma)*		X
Lespedeza, common	*(Lespedeza striata)*		X
Mallow, common	*(Malva neglecta)*		X
Nutsedge, Yellow	*(Cyperus esculentus)*	1	
Parsley piert	*(Alchemilla arvensis)*	1	
Pigweed, Redroot	*(Amaranthus retroflexus)*	1	
Pigweed, Tumble	*(Amaranthus albus)*	1	
Pineapple weed	*(Matricaria matricarioides)*		X
Plantain, buckhorn	*(Plantago lanceolata)*	1	
Puncture weed	*(Tribulus terrestris)*		X
Purslane, common	*(Portulaca oleracea)*		X
Pusley, Florida	*(Richardia scabra)*	1	
Redweed	*(Melochia corchorifolia)*		X
Rocket, London	*(Sisymbrium irio)*		X
Smartweed, Pennsylvania	*(Polygonum pensylvanicum)*	1	
Sorrel, Red	*(Rumex acetosella)*		X
Speedwell	*(Veronica spp.)*	1	

(Continued on next page)

Table 3. (Cont.)

Common Name	Scientific Name	Controlled	Suppressed
Spurge, (annuals)	*(Euphorbia spp.)*	1	
Spurge, prostrate	*(Euphorbia humistrata)*	1	
Spurge, spotted	*(Euphorbia maculata)*	1	
Star of Bethlehem	*(Ornithogalum umbellatum)*	1	
Velvetleaf	*(Abutilon theophrasti)*		X
Violet, wild	*(Viola pratincola)*		X
Wild garlic	*(Allium vineale)*		X
Wild onion	*(Allium canadense)*		X
Woodsorrel, creeping	*(Oxalis corniculata)*		X
	(Oxalis stricta)	1	

1. Weeds are suppressed at lower label rates (<24 fl oz/acre). For optimum control, apply rates of at least 24 fl oz per acre in a single application. Do not exceed the application rate specified for the turf species in Table 1.
2. This product controls crabgrass and goosegrass when applied postemergent to newly emerged weeds up to the 1-4 leaf stage of development.

Application to Reseeded, Overseeded or Sprigged Areas

Reseeding, overseeding or sprigging of treated areas within three to twelve (3-12) months after application of this product could inhibit the establishment of desirable grasses. (See table 4 for exact intervals from application.)

Best results are obtained for reseeding 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.

Table 4. Overseeding Intervals After Product Applications

Total Amount of Product when Applied	Interval (Months Before Overseeding)		
Fl oz Product/Acre	North	Transition	South
8-12	3	3	3
18	3	3	3
24	4	4	4
36	6	5	5

Sod Production

It is recommended that sod be established for at least four (4) months before an application of product.

Do not apply this product within three (3) months of harvest.

ADDITIONAL USE INSTRUCTIONS

Railroad Rights-of-Way

Controls many weeds and maintains bare ground on railroad rights-of-way, including railroad yards, railroad crossings and railroad bridge abutments.

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

Controls many weeds and maintains bare ground in highway, roadside, pipeline and utility rights-of-way. Such areas would include, but are not limited to, guardrails, road shoulders, electric utility substations, pipeline pumping stations, around electric transmission towers, around distribution line poles plus other areas where complete vegetation control is desired.

Industrial Areas, Fence Rows and Other Non-Crop Sites

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.

METHOD AND APPLICATION RATES FOR ADDITIONAL USES

For residual control of germinating weeds in non-crop land, apply as a broadcast treatment using 24 to 36 fl oz product (0.75 to 1.125 lb ai) per acre by ground in a minimum of 10 gallons of spray solution per acre. Applications may be made by helicopter on railroad rights-of-way only.

Aerial Application Use Restrictions

- Aerial application is allowed only when environmental conditions prohibit ground application.
- The maximum release height must be 10 feet from the top of the crop 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.

Nozzle Orientation – For aerial application, the recommended practice is to orient nozzles so that the spray is released parallel to the airstream. This orientation usually produces larger droplets as compared to other nozzle orientations. Significant nozzle deflection from horizontal will reduce droplet size and increase drift potential.

Boom Length – For some aerial 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 – Aerial applications should not be made at a height greater than 10 feet above the top of the target plant canopy unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment – When aerial applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by the path of the aircraft upwind. Swath adjustment or offset distance should increase when conditions favor increased drift potential (higher winds, smaller droplets, etc).

DO NOT apply Echelon 4SC herbicide to soils classified as sand with less than 1% organic matter.

Use labeled rates of burndown herbicides such as glyphosate, glyphosate-trimesium, diquat, 2,4-D, dicamba, etc. as tank mixtures with Echelon 4SC herbicide (when tank mixing with these products, ground applicators must use a minimum spray volume of 15 gallons per acre). Use recommended adjuvants for the herbicide tank mix partner. For all products used in tank mixes, refer to the specific product labels for all restrictions on tank mixing and observe all label precautions, instructions and rotational cropping restrictions.

Timing

For best results, apply Echelon 4SC 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.

Weeds Controlled

Echelon 4SC herbicide, when applied post-emergence at 24 to 36 fl oz per acre, will control the following weeds in non-cropland areas (Table 5). Use the higher labeled rates to extend length of control. Use the higher rates on sites with fine soil textures and on sites with more than 2% organic matter.

Table 5. Weeds Controlled From Preemergence Application to Bare Ground Prior to Weed Seed Germination

Common Name	Scientific Name
Barnyardgrass	*(Echinochloa crus-galli)*
Bluegrass annual	*(Poa annua)*
Carpetweed	*(Mollugo verticillata)*
Carolina Geranium	*(Geranium carolinianum)*
Chickweed, common	*(Stellaria media)*
Chickweed, mousear (from seed)	*(Cerastium vulgatum)*
Crabgrass (large, Smooth)	*(Digitaria spp.)*
Crowfootgrass	*(Dactyloctenium aegyptium)*
Cupgrass, Woolly	*(Eriochloa villosa)*
Foxtails, Annual	*(Setaria spp.)*
Goosegrass	*(Eleusine indica)*
Hairy Bittercress	*(Cardamine hirsuta)*
Henbit	*(Lamium amplexicaule)*
Itchgrass	*(Rottboellia exaltata)*
Knotweed, prostrate	*(Polygonum aviculare)*
Kochia	*(Kochia scoparia)*
Kyllinga, green	*(Kyllinga brevifolia)*

(Cntinued on next page)

Table 5. (Cont.)

Common Name	Scientific Name
Kyllinga, false green	*(Kyllinga gracilima)*
Lambsquarters, common	*(Chenopodium album)*
Lovegrass	*(Eragrostis spp.)*
Nutsedge, yellow	*(Cyperus esculentus)*
Nutsedge, purple	*(Cyperus rotundus)*
Pancium (Texas, Fall)	*(Panicum spp.)*
Pigweed, Redroot	*(Amaranthus retroflexus)*
Purslane, common	*(Portulaca oleracea)*
Pusley, Florida	*(Richardia scabra L.)*
Sedge, globe	*(Cyperus globulosus)*
Sedge, cylindrical	*(Cyperus retrorsus)*
Sedge, Surinam	*(Cyperus surinamensis)*
Sedge, Texas	*(Cyperus polystachyos)*
Shepherdspurse	*(Capsella bursa-pastoris)*
Signalgrass, broadleaf	*(Brachiaria playphylla)*
Speedwell	*(Veronica spp.)*
Sprangletop	*(Leptochola spp.)*
Spurge, prostrate	*(Euphorbia humistrata)*
Witchgrass	*(Panicum capillare L.)*
Woodsorrel, yellow (from seed)	*(Oxalis stricta)*

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. Call CHEMTREC (Transportation and Spills): (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:

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: (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. Triple rinse (or equivalent). Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

CONDITIONS OF SALES AND LIMITATIONS 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 FMC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC 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, FMC 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

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To the extent consistent with applicable law, FMC 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 FMC 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 FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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