

279-3325

04-24-2009

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Mr. Michael C. Zucker
Product Registration
FMC Corporation
1735 Market Street
Philadelphia, PA 19103

APR 24 2009

SUBJECT: Application for Pesticide Notification (PRN 98-10)
Request General Label Change
EPA Reg. No. 279-3325
Application Dated March 17, 2009

Dear Registrant:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated 03/17/09 for the above product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

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

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs

	United States Environmental Protection Agency Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number
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Application for Pesticide - Section I

1. Company/Product Number FMC Corporation/ 279-3325	2. EPA Product Manager Ms. Joanne I. Miller	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) FMC Corporation/Echelon 0.16% Granular Herbicide on Fertilizer	PM# PM-23	
5. Name and Address of Applicant (Include ZIP Code) FMC Corporation 1735 Market Street Philadelphia, PA 19103 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. <u>279 - 3325</u> <u>APR 24 2009</u> Product Name <u>Echelon 0.16% Granular Herbicide on Fertilizer</u>	

Section - II

<input type="checkbox"/> Amendment - Explain below. <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input checked="" type="checkbox"/> Other - Explain below.
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Explanation: Use additional page(s) if necessary. (For section I and Section II.)

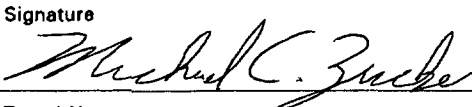
Notification of typographic and printing correction per PR Notice 98-10 (IV.A)

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of U.S.C. Sec.1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:					
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt No. per container		
3. Location of Net Contents Information <input type="checkbox"/> Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container 25 lb Bag		5. Location of Label Directions <input checked="" type="checkbox"/> on label/container	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph Paper glued Stenciled			<input type="checkbox"/> Other _____		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name Michael C. Zucker	Title Senior Registration & Label Specialist	Telephone No. (Include Area Code) (215)299-5876	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received (Stamped)
2. Signature 	3. Title Senior Registration & Label Specialist		
4. Typed Name Michael C. Zucker	5. Date 03/17/09		

FMC Agricultural Products

FMC Corporation
1735 Market Street
Philadelphia, PA 19103
215.299.6000 Phone
www.fmc.com

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March 17, 2009

Ms. Joanne I. Miller
Herbicide Branch, RD (7505P)
U.S. Environmental Protection Agency
One Potomac Yard, Room S-4900
2777 S. Crystal Drive
Arlington, VA 22202

Dear Ms. Miller:

Subject: Echelon 0.16% Granular Herbicide on Fertilizer
EPA Reg. No. 279-3325

Notification of Typographical and Printing errors

FMC is notifying the EPA that we have made typographical correction to the subject label. This change is a non-notification; however it is being submitted to the EPA due to some states requiring proof that the Agency has been officially notified of the label change. The change is as follows below:

- Page 1: Corrected calculation typo in the Pounds of active ingredient per pound of product (changed 0.16 to 0.0016).

The change is shown in red text on the referenced page of the label. Paper and electronic (PDF on CD) copies are enclosed for your records.

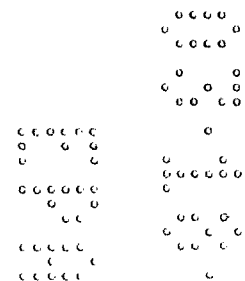
If I can be of any further assistance, please feel free to contact me at (215) 299-5876 or by e-mail at mike_zucker@fmc.com.

Sincerely,



Michael C. Zucker
Senior Registration & Label Specialist
FMC Corporation
Agricultural Products Group

Enclosures:
Cover Letter
EPA Form 8570-1
One copy of revised label with changes in red text
Electronic Pesticide Label CD-ROM for Echelon 0.3% Granular Herbicide



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ECHELON™

0.16% Granular Herbicide on Fertilizer

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

Active Ingredient:	By Wt.
Sulfentrazone: N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]phenyl]methanesulfonamide	0.053%
Prodiamine: [N3,N3-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine	0.107%
Other Ingredients:.....	99.84%
	100.0%

Contains 0.0016 pounds of active ingredient per pound of product
U. S. Patent No. 4,818,275

Guaranteed Analysis XX-X-XX

Total Nitrogen (N)	XX.XX%
XX.XX% Urea Nitrogen	
Soluble Potash (K ₂ O)	XX.XX%
Sulfur (S) Total	XX.XX%
X.XX% Free Sulfur (S)	
X.XX% Combined Sulfur (S)	
Iron (Fe) Total	XX.XX%
X.XX% Soluble Iron (Fe)	
Derived From: Poly Coated Sulfur Coated Urea, Sulfate Of Potash, Iron Sulfate	
Chlorine (Cl) Max	X.XX%

KEEP OUT OF REACH OF CHILDREN
CAUTION

See additional precautionary information contained inside label booklet.

EPA Reg. No. 279-3325

EPA Est. No.

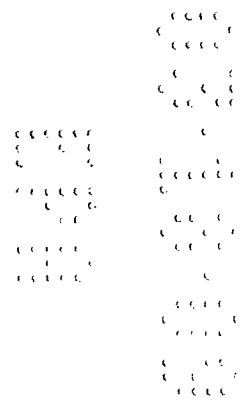
FMC Corporation
Agricultural Products Group
1735 Market Street
Philadelphia PA 19103

NOTIFICATION

APR 24 2009

Net Contents

03-13-09 Notification



FIRST AID	
IF INHALED	<ul style="list-style-type: none"> • 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	<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 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 SWALLOWED	<ul style="list-style-type: none"> • 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.
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 dust. Do not get on skin, in eyes or on clothing. Prolonged or frequently repeated skin contact while mixing or handling may cause allergic reactions in certain individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

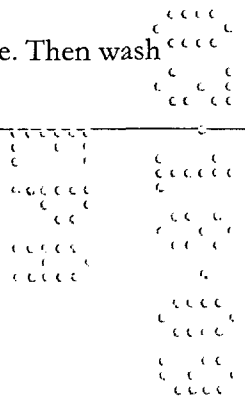
Personal Protective Equipment (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, and 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 terrestrial and aquatic plants in neighboring areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

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

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

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

DIRECTIONS FOR USE

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

Do not apply this product through any type of irrigation system. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. These requirements only apply to uses of this product that are covered by the Worker Protection Standard.

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

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

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. Reseal open bag by folding top down and securing. Store in a cool, dry place and avoid excess heat.

Spill: In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. **Confine spills. Call FMC: (800) 331-3148.**

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 Disposal:

Paper and Plastic Bags: Non-refillable. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration, or by burning. Do not burn unless allowed by state or local authorities. If burned, stay out of smoke.

GENERAL INFORMATION

Turf Use Instructions

Echelon is a selective pre-emergence and post-emergence herbicide for control of crabgrass, annual grass and broadleaf weeds and sedges 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.

Echelon is a granular formulation containing 0.16 lbs. of active ingredient per pound of formulated product. The mode of action of Echelon herbicide involves uptake by both weed roots and shoots of existing weeds and prevention of growth by newly emerged weed seedlings.

SPECIFIC USE INSTRUCTIONS IN 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.

Broadcast Echelon with suitable application equipment to ensure uniform coverage over the treatment area. A drop or rotary spreader designed to apply granular herbicide or insecticide is the preferred application of this product. Calibrate application equipment prior to application. Consult manufacturer operation manual for proper calibration and operation of application equipment. Apply 3.6 to 16.1 pounds per 1,000 square feet to control broadleaf weeds and grasses. See Table 1 for application rates based on turf grasses

When applied as directed under the conditions described, the following established grasses are tolerant to Echelon herbicide at the recommended use rates in a range from 0.250 to 1.125 lb. ai/acre (157 to 700 pounds/acre or 3.6 to 16.1 pounds/1,000 sq. ft.). Do not exceed 1.125 lb. ai/acre (700 pounds/acre) per calendar year.

Table 1. Tolerant grasses.

<i>Grass Type</i>	<i>Recommended Use Rates</i> <i>Do not exceed maximum use rates per turf species in a single application</i>		
	Lb. ai. per acre	Pounds per 1000 ft²	Pounds per acre
Cool Season Grasses			
Bentgrass, creeping ¹ Fescue, fine ² (<i>Festuca rubra</i>) Ryegrass, perennial (<i>Lolium perenne</i>)	0.25-0.375 ³ lb. ai.	3.60 – 5.40 lbs	157 - 235 lbs
Bluegrass, Kentucky (<i>Poa pratensis</i>) Fescue, tall ² (<i>Festuca arundinacea</i>)	0.57-0.75 ³ lb. ai.	8.15 – 10.80 lbs	355 - 470 lbs
Sequential Application for Mixed Cool Season Turf/Cool Season Blends consisting of:			
Fescue, fine ² (<i>Festuca rubra</i>), Ryegrass, perennial (<i>Lolium perenne</i>), Bluegrass, Kentucky (<i>Poa pratensis</i>) Fescue, tall ² (<i>Festuca arundinacea</i>)	0.375 lbs ai Follow by 0.25 - 0.375 lbs ai/a 30-60 days later	5.40 lbs. Follow by 3.60 to 5.40 lbs 30- 60 days later	235 lbs. Follow by 157 to 235 lbs 30 – 60 days later
Warm Season Grasses			
Bahiagrass (<i>Paspalum notatum</i>) Buffalograss (<i>Buchloe dactyloides</i>) Carpetgrass (<i>Axonopus affinis</i>) Centipedegrass (<i>Eremochloa ophiuroides</i>) Kikuyugrass (<i>Pennisetum clandestinum</i>) Seashore Paspalum (<i>Paspalum vaginatum</i>) Zoysiagrass (<i>Zoysia japonica</i>)	0.57-0.75 ³ lb. ai.	8.15 – 10.80 lbs	355 - 470 lbs
Bermudagrass (<i>Cynodon dactylon</i>) & hybrids	0.75-1.125 ³ lb. ai.	10.80 – 16.10 lbs	470 - 700 lbs

1 If bentgrass is mowed lower than 0.5 inches do not apply Echelon.

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

3 Echelon 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 or 1.125 lbs. ai/acre (700 pounds/acre), whichever is lower.

- Use of this product on certain cultivars of Chewings Fescue, Fine Fescue or Tall Fescue cultivars may result in undesirable injury.
- Echelon 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 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 has demonstrated tolerance on both cool and warm season turfgrasses. However, not all varieties and cultivars have been evaluated. Turfgrass managers desiring to treat newly released varieties should first apply Echelon to a small area prior to treatment of larger areas.

Table 1A. Applications for St Augustine Grass - Application of Echelon to St. Augustine Grass may cause temporary discoloration to exposed leaf surfaces of St. Augustine grass. Treated turfgrass will recover with new growth and discolored leaf tissue will be removed with mowing.

Do not apply Echelon to St Augustine grass if temporary discoloration cannot be accepted.

Warm Season Grass	Lb.ai per acre	Pounds per 1000ft ²	Pounds per acre
<i>St. Augustine</i>	0.57 lbs ai Follow by 0.57 lbs ai 45-60 days later	8.15 lbs Follow by 8.15 lbs 45- 60 days later	355 lbs. Follow by 355 lbs 45 - 60 days later

Weed Controlled With Preemergence Application

Table 2.

Common Name	Scientific Name
Barnyardgrass	<i>(Echinochloa crus-galli)</i>
Bluegrass annual ¹	<i>(Poa annua)</i>
Carpetweed	<i>(Mollugo verticillata)</i>
Carolina Geranium	<i>Geranium carolinianum</i>
Chickweed, common ²	<i>(Stellaria media)</i>
Chickweed,mouseear (from seed)	<i>(Cerastium vulgatum)</i>
Crabgrass (large, Smooth) ³	<i>(Digitaria spp.)</i>
Crowfootgrass	<i>(Dactyloctenium aegyptium.)</i>
Cupgrass, Woolly	<i>(Eriochloa villosa)</i>
Foxtails, Annual	<i>(Setaria spp..)</i>
Goosegrass ⁴	<i>(Eleusine indica)</i>
Hairy Bittercress	<i>Cardamine hirsute</i>
Henbit ²	<i>(Lamium amplexicaule)</i>
Itchgrass	<i>(Rottboellia exaltata)</i>
Knotweed, prostrate	<i>(Polygonum aviculare)</i>
Kochia	<i>(Kochia scoparia)</i>
Kyllinga, green	<i>(Kyllinga brevifolia)</i>
Kyllinga, false	<i>(Kyllinga gracillima)</i>
Lambsquarters, common	<i>(Chenopodium album)</i>
Lovegrass	<i>(Eragrostis spp.)</i>
Nutsedge, yellow	<i>(Cyperus esculentus)</i>
Panicum (Texas,Fall)	<i>(Panicum spp.)</i>
Pigweed, Redroot	<i>(Amaranthus retroflexus)</i>
Purslane, Common	<i>(Portulaca oleracea)</i>
Pusley, Florida	<i>(Richardia scabra L.)</i>

Sedge, globe	(<i>Cyperus globulosus</i>)
Sedge, cylindrical	(<i>Cyperus retrorsus</i>)
Sedge, Surinam	(<i>Cyperus surinamensis</i>)
Sedge, Texas	(<i>Cyperus polytachyos</i>)
Shephardspurse ²	(<i>Capsella bursa-pastoris</i>)
Signalgrass, broadleaf	(<i>Brachiaria platyphylla</i>)
Speedwell	(<i>Veronica spp.</i>)
Sprangletop	(<i>Leptochola spp.</i>)
Spurge, prostrate	(<i>Euphorbia humistrata</i>)
Witchgrass	(<i>Panicum capillare L.</i>)
Woodsorrel, yellow (from Seed)	(<i>Oxalis stricta</i>)

1. Poa annua is a winter annual. Applications of Echelon 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.
2. Apply Echelon 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, Echelon may be applied in the fall at rates listed in Table 1 (157 - 470 pounds 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 second application of Echelon 60-90 days after initial application

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

Echelon herbicide will control or suppress the weeds listed in Table 3 when applied shortly after weeds have emerged. Do not exceed the application rate specified for the turf species in Table 1.

Weeds Controlled or Suppressed When Application Made Postemergence to Weeds
Table 3

Common Name	Scientific Name	Controlled	Suppressed
Bittercress	(<i>Cardamine spp.</i>)		X
Black medic	(<i>Medicago lupulina</i>)		X
Buttercups	(<i>Ranunculus spp.</i>)		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 spp.</i>)		X
Clover	(<i>Trifolium spp.</i>)		X
Crabgrass (Large and Smooth)	(<i>Digitaria spp.</i>)	2	
Cudweed	(<i>Gnaphalium spp.</i>)		X
Dandelion	(<i>Taraxacum officinale</i>)		X
Dock, Curly	(<i>Rumex crispus</i>)		X
Evening primrose	(<i>Oenothera biennis</i>)		X
Fiddleneck	(<i>Amsinckia spp.</i>)		X
Filaree	(<i>Erodium spp.</i>)		X
Goldenrod	(<i>Solidago spp.</i>)	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
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
Mallow, common	(<i>Malva neglecta</i>)		X
Nutsedge, Yellow	(<i>Cyperus esculentus</i>)	C	
Parsley pier	(<i>Alchemilla arvensis</i>)	1	
Pigweed, Redroot	(<i>Amaranthus retroflexus</i>)	1	
Pigweed, Tumble	(<i>Amaranthus albus</i>)	1	

Pineapple weed	(<i>Matricaria matricarioides</i>)		X
Plantain, buckhorn	(<i>Plantago lanceolata</i>)	1	
Puncture weed	(<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
Rocket, London	(<i>Sisymbrium irio</i>)		X
Smartweed, Pennsylvania	(<i>Polygonum pennsylvanicum</i>)	1	
Sorrel, Red	(<i>Rumex acetosella</i>)		X
Speedwell	(<i>Veronica spp.</i>)	1	
Spurge, (annuals)	(<i>Euphorbia spp.</i>)	1	
Spurge, prostrate	(<i>Euphorbia humistrata</i>)	1	
Spurge, spotted	(<i>Euphorbia maculata</i>)	1	
Star of Bethlehem	(<i>Ornithogalum umbellatum</i>)	1	
Velvetleaf	(<i>Abutilon theophrasti</i>)		X
Violet, wild	(<i>Viola pratensis</i>)		X
Wild garlic	(<i>Alium vineale</i>)		X
Wild onion	(<i>Alium 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 (<470 lbs/acre). For optimum control apply rates of at least 470 lbs per acre in a single application. Do not exceed the application rate specified for the turf species in Table 1.
2. Echelon controls crabgrass and goosegrass when applied postemergent to newly emerged weeds in 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 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.

Overseeding Intervals after Echelon Applications

Table 4

Total Amount of Echelon 4SC Applied Pounds Product/Acre	Interval (Months Before Overseeding)		
	North	Transition	South
157 - 355	3	3	3
470	4	4	4
700	6	5	5

Sod Production

It is recommended that sod be established for at least six (6) months before an application of Echelon herbicide.

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

Other 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 herbicide.
- Do not apply directly to landscape ornamentals or ornamental beds.
- 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 adjuvants or surfactants.

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 RATE OF APPLICATION FOR ADDITIONAL USES

For residual control of germinating weeds in non-crop land, apply as a broadcast treatment using 470 to 700 pounds (0.75 to 1.125 pounds active ingredient) per acre by ground in a suitable granular applicator.

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

Timing

For best results, apply Echelon 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 when applied postemergence at 470 to 700 pounds 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.

Weeds Controlled from Preemergence Application to Bare Ground Prior to Weed Seed germination

Table 5

Common Name	Scientific Name
Barnyardgrass	<i>(Echinochloa crus-galli)</i>
Bluegrass annual	<i>(Poa annua)</i>
Carpetweed	<i>(Mollugo verticillata)</i>
Carolina Geranium	<i>Geranium carolinianum</i>

Chickweed, common	<i>(Stellaria media)</i>
Chickweed,mouseear (from seed)	<i>(Cerastium vulgatum)</i>
Crabgrass (large, Smooth)	<i>(Digitaria spp.)</i>
Crowfootgrass	<i>(Dactyloctenium aegyptium.)</i>
Cupgrass, Woolly	<i>(Eriochloa villosa)</i>
Foxtails, Annual	<i>(Setaria spp.)</i>
Goosegrass	<i>(Eleusine indica)</i>
Hairy Bittercress	<i>Cardamine hirsuta</i>
Henbit	<i>(Lamium amplexicaule)</i>
Itchgrass	<i>(Rottboellia exaltata)</i>
Knotweed, prostrate	<i>(Polygonum aviculare)</i>
Kochia	<i>(Kochia scoparia)</i>
Kyllinga, green	<i>(Kyllinga brevifolia)</i>
Kyllinga, false green	
Lambsquarters, common	<i>(Chenopodium album)</i>
Lovegrass	<i>(Eragrostis spp.)</i>
Nutsedge, yellow	<i>(Cyperus esculentus)</i>
Nutsedge, purple	<i>(Cyperus rotundus)</i>
Panicum (Texas,Fall)	<i>(Panicum spp.)</i>
Pigweed, Redroot	<i>(Amaranthus retroflexus)</i>
Purslane, Common	<i>(Portulaca oleracea)</i>
Pusley, Florida	<i>(Richardia scabra L.)</i>
Sedge, globe	<i>(Cyperus globulosus)</i>
Sedge, cylindrical	<i>(Cyperus retrorsus)</i>
Sedge, Surinam	<i>(Cyperus surinamensis)</i>
Sedge, Texas	<i>(Cyperus polytachyos)</i>
Shephardspurse	<i>(Capsella bursa-pastoris)</i>
Signalgrass, broadleaf	<i>(Brachiaria platyphylla)</i>
Speedwell	<i>(Veronica spp.)</i>
Sprangletop	<i>(Leptochola spp.)</i>
Spurge, prostrate	<i>(Euphorbia humistrata)</i>
Witchgrass	<i>(Panicum capillare L.)</i>
Woodsorrel, yellow (from Seed)	<i>(Oxalis stricta)</i>

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