228-534 2/26/2014 1/28

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Matthew Granahan
Nufarm Americas Inc.
11901 S. Austin Avenue
Alsip, IL 60803

FEB 26 2014

Subject: Notification; Per PR-Notice 98-10
Nufarm Polaris Herbicide
EPA Reg. No. 228-534
Date Submitted: February 21, 2014

Dear Mr. Granahan:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated February 21, 2014 for the product referenced above. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls 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 regarding this letter, please contact me at (703) 306-0415 or davis.kable@epa.gov.

Sincerely,

Kable Bo Davis
Product Manager 25
Herbicide Branch
Registration Division (7505P)

2/28

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060

United States
Environmental Protection Agency
Washington, DC 20460

- [ ] Registration
- [ ] Amendment
- [X] Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
228-534	Bo Davis	[X] None [ ] Restricted
4. Company/Product (Name)	**PM#**	
Nufarm Polaris Herbicide	25	

5. Name and Address of Applicant *(Include ZIP Code)*
Nufarm Americas Inc.
11901 S. Austin Ave.
Alsip, IL 60803
[ ] *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:
EPA Reg. No. _____
NOTIFICATION
FEB 2 6 2014
Product Name _____

Section - II

- [ ] Amendment - Explain below.
- [ ] Resubmission in response to Agency letter dated _____
- [X] Notification - Explain below.
- [ ] Final printed labels in repsonse to Agency letter dated _____
- [ ] "Me Too" Application.
- [ ] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Label Notification consistent and 98-10, see cover letter for detailed explanation. 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 18 U.S.C. Sec. 1001 to willfully make false statements 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	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes [X] No	[ ] Yes [X] No	[ ] Yes [X] No	[X] Metal [X] Plastic [ ] Glass [ ] Paper [ ] 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	4. Size(s) Retail Container	5. Location of Label Directions
[X] Label [X] Container	1, 2.5, 5, 20, 30, 55, 220, 250 gal., Bulk	[X]

6. Manner in Which Label is Affixed to Product: [X] Lithograph [X] Paper glued [ ] Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Matthew Granahan	Regulatory Manager	(703) 377-1421

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 knowlingly 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
Matthew Granahan	Regulatory Manager
4. Typed Name	**5. Date**
Matthew Granahan matthew.granahan@us.nufarm.com	02/21/2014

EPA Form 8570-1 (Rev. 3-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

Nufarm Americas Inc.
11901 South Austin Avenue
Alsip, IL 60803
Telephone: (708) 377.1330 Facsimile: (708) 377.1333
www.us.nufarm.com

3/28

February 21, 2014

Via Overnight Courier

Bo Davis (PM-25)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U. S. Environmental Protection Agency
Room S4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

Subject: **EPA Reg. No. 228-534**
Nufarm Polaris Herbicide
Notification per PR N 98-10

Dear Mr. Davis,

Nufarm Americas Inc. would like to make a change to subject product's label. On the submitted label Nufarm has added a NY State restriction statement in two locations – one on the front of the label and a second under Restrictions section. A similar NY state restriction statement is already found on the EPA Accepted label, under Aquatic Section.

To process this request please find enclosed the following:

- 8570-1 Form
- Certification with Respect to Label Integrity
- Highlighted Copy of the Proposed Label
- Clean Version of the Proposed Label
- CD Containing Clean Version of the Proposed Label

If you should have any questions regarding this matter, please feel free to contact at matthew.granahan@us.nufarm.com or at (708) 377-1421.

Sincerely,

Matthew Granahan
Regulatory Manager
Nufarm Americas Inc.

4/28

GROUP 2 HERBICIDE

Nufarm

POLARIS®

Herbicide

NOTIFICATION

FEB 2 6 2014

Applications may be made for the control of undesirable emergent and floating aquatic vegetation in estuarine marine surface water. For the control of undesirable vegetation in fencerows, non-irrigation ditch banks, for establishment and maintenance of wildlife openings, grass pastures and rangeland, unimproved industrial noncropland Bermudagrass and Bahiagrass, under certain paved areas, and industrial noncropland areas including railroad, utility, pipeline and highway rights-of-way, utility plant sites, petroleum tank farms, pumping installations, storage areas, non-irrigation ditchbanks, roads, transmission lines, and industrial bareground areas.

ACTIVE INGREDIENT:	
Isopropylamine salt of Imazapyr: (2-[4,5-dihydro-4-methyl-4-(1 -methylethyl)-5-oxo-1 H-imidazol-2-yl] -3-pyridinecarboxylic acid)*	27.7%
OTHER INGREDIENTS:	72.3%
TOTAL	100.0%

* Equivalent to 22.62% 2-[4,5-dihydro-4-methyl-4-(1 -methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridinecarboxylic acid or 2 pounds acid per gallon.

In the State of New York, Aquatic Uses are Not Allowed.

KEEP OUT OF REACH OF CHILDREN

CAUTION / PRECAUCION

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

SEE INSIDE BOOKLET FOR PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300
For Medical Emergencies Only, Call (877) 325-1840
Have the product container label with you when calling a poison control center or doctor or going for treatment.

EPA REG. NO. 228-534
EPA EST. NO.

MANUFACTURED FOR
NUFARM AMERICAS INC.
11901 S. AUSTIN AVE.
ALSIP, IL 60803

Nufarm

NET CONTENTS
[Designation as "NONREFILLABLE" or "REFILLABLE" for containers > 5 GAL]

000228-00534.20140221.Notification

5/28

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION / PRECAUCION

No human or domestic animal hazard statements are required. Follow instructions for Personal Protective Equipment and User Safety Recommendations.

PERSONAL PROTECTIVE EQUIPMENT (PPE):
Some materials are chemical resistant to this product are natural rubber ≥14 mils. If you want more options, follow the instructions for category A on the EPA chemical resistance category selection chart.

Mixers, loaders, applicators and other handlers must wear:
- Long-sleeved shirt and long pants,
- Shoes plus socks
- Chemical-resistant gloves for mixers and loaders, plus applicators using handheld equipment.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them.

Pilots must use an enclosed cockpit that meet the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (6)].

USER SAFETY RECOMMENDATIONS

Users Should:
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of this product should be mixed, stored and applied only in stainless steel, fiberglass, plastic and plastic-lined steel containers.

DO NOT mix, store or apply this product or spray solutions of this product in unlined steel (except stainless steel) containers or spray tanks.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to plants. Drift and run off may be hazardous to plants in water adjacent to treated areas. DO NOT apply directly to water except as specified on the label. Treatment of aquatic weeds may result in oxygen depletion or loss due to decomposition of dead plants. DO NOT treat more than one half the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas. DO NOT contaminate water when disposing of equipment washwater or rinsate. See Directions for Use for additional precautions and requirements.

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

DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 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
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material
- Protective eyewear

6/28

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 (WPS) 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.

Noncrop weed control is not within the scope of the Worker Protection Standard. See the PRODUCT INFORMATION section of this label for a description of noncrop sites.

DO NOT enter or allow others to enter treated areas until sprays have dried.

RESTRICTIONS

DO NOT use on food or feed crops.

DO NOT apply this product within 0.5 miles upstream of an active potable water intake in flowing water (i.e. river, stream, etc.) or within 0.5 miles of an active potable water intake in a standing body of water, such as a lake, pond or reservoir.

DO NOT apply to water used for irrigation except as described in USE PRECAUTIONS AND RESTRICTIONS section of this label.

Keep from contact with fertilizers, insecticides, fungicides and seeds.

DO NOT drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the treated soil may be washed or moved into contact with their roots.

DO NOT side trim desirable vegetation with this product unless severe injury and plant death can be tolerated. Prevent drift of spray to desirable plants.

Clean application equipment after using this product by thoroughly flushing with water.

Noncropland Sites

- DO NOT apply more than 1.5 pounds acid equivalent Imazapyr (equivalent to 6 pints) per acre per year.

Pasture/Rangeland Sites

- DO NOT apply more than 0.75 pound acid equivalent Imazapyr (equivalent to 3 pints) per acre per year.
- DO NOT treat more than 1 /10 of the available area to be grazed or cut for hay.
- For spot treatment only.

Aquatic Sites

- DO NOT apply more than 1.5 pounds acid equivalent Imazapyr (equivalent to 6 pints) per acre per year.
- **No Application to Aquatic Sites in New York State.**

Aerial application - Aerial application to aquatic sites is restricted to helicopter only.

Irrigation water - Application to water used for irrigation that results in residues greater than 1.0 part per billion (ppb) MUST NOT be used for irrigation purposes for 120 days after application or until residue levels of this product are determined by laboratory analysis or other appropriate means of analysis to be 1.0 ppb or less. When applications are made within 500 feet of an active irrigation intake, DO NOT irrigate for at least 24 hours following application to allow for dissipation.

Restrictions for potable water intakes. DO NOT apply this product directly to water within 0.5 miles upstream of an active potable water intake in flowing water (i.e. river, stream, etc.) or within 0.5 miles of an active potable water intake in a standing body of water such as a lake, pond or reservoir. To make aquatic applications around and within 0.5 miles of active potable water intakes, the water intake must be turned off during application and for a minimum of 48 hours after the application. These aquatic applications may be made only in the cases where there are alternative water sources or holding ponds that would permit the turning off of an active potable water intake for a minimum period of 48 hours after the applications.
NOTE: Existing potable water intakes that are no longer in use, such as those replaced by connections to wells or a municipal water system, are not considered to be active potable water intakes. This restriction does not apply to intermittent, inadvertent overspray of water in terrestrial use sites.

PRECAUTIONS

Applications may be made for the control of undesirable vegetation growing within specified aquatic, pasture/rangeland, industrial noncropland sites, and railroad, utility, and highway rights-of-way, fence rows and other noncropland sites as listed on the label. Aquatic sites consist of standing and flowing water, estuarine/marine, wet-land and riparian areas. Industrial noncropland sites include utility plant sites, petroleum tank farms, pumping installations, fence rows, storage areas, and nonirrigation ditchbanks. This product may also be used for the establishment and maintenance of wildlife openings, for the release of unimproved Bermudagrass and Bahiagrass, for bareground weed control, for use under certain paved surfaces and other locations specified on this label.

Aquatic Sites

Permitting - Consult local state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.

Public waters - Application of this product to water can only be made by federal or state agencies, such as Water Management District personnel, municipal officials, and the U.S. Army Corps of Engineers, or those applicators who are licensed or certified as aquatic pest control applicators and are authorized by the state or local government. Treatment to other than non-native invasive species is limited to only those plants that have been determined to be a nuisance by a federal or state government entity.

Private waters - Applications may be made to private waters that are still, such as ponds, lakes and drainage ditches where there is minimal or no outflow to public waters.

Recreational use of water in treatment area. There are no restrictions on the use of water in the treatment area for recreational purposes, including swimming and fishing.

Livestock use of water in/from treatment area. There are no restrictions on livestock consumption of water from the treatment area.

Quiescent or Slow-moving Waters. In lakes and reservoirs, DO NOT apply this product within 1 mile of an active irrigation water intake during the irrigation season. Applications less than 1 mile from an active irrigation water intake may be made during the off-season, provided that the irrigation intake will remain inactive for a minimum of 120 days after application or until residue levels of this product are determined by laboratory analysis or other appropriate means of analysis to be 1.0 ppb or less.

PRODUCT INFORMATION

This product is an aqueous solution to be mixed with water and a surfactant and applied as a spray solution to control undesirable vegetation growing within specified aquatic, pasture/rangeland, industrial noncropland sites, and railroad, utility, and highway rights-of-way, and fence rows. Aquatic sites consist of standing and flowing water, estuarine/marine, wetland, and riparian areas. Industrial noncropland sites include utility plant sites, petroleum tank farms, pumping installations, fence rows, storage areas, and nonirrigation ditchbanks. This product may also be used for the establishment and maintenance of wildlife openings, for the release of unimproved Bermudagrass and Bahiagrass, for bareground weed control, for use under certain paved surfaces and other locations specified on this label.

Herbicidal Activity: This product will control most annual and perennial grasses and broadleaf weeds in addition to many brush and vine species with some residual control of undesirable species that germinate above the waterline. This product is readily absorbed through emergent leaves and stems and is translocated rapidly throughout the plant, with accumulation in the meristematic regions. Treated plants stop growing soon after spray application. Chlorosis appears first in the newest leaves, and necrosis spreads from this point. In perennials, the herbicide is translocated into, and kills, underground or submerged storage organs, which prevents regrowth. Chlorosis and tissue necrosis may not be apparent in some plant species until two or more weeks after application. Complete kill of plants may not occur for several weeks. Applications of this product are rainfast one hour after treatment.

This product does not control plants which are completely submerged or have a majority of their foliage under water.

Application Methods: This product may be applied to the emergent foliage of the target vegetation and has little to no activity on submerged aquatic vegetation. Product concentrations resulting from direct application to water are not expected to be of sufficient concentration or duration to provide control of target vegetation. Application should be made in such a way as to maximize spray interception by the target vegetation while minimizing the amount of overspray that enters the water. For maximum activity, weeds should be growing vigorously at the time of application and the spray solution should include a surfactant (See ADJUVANTS section for specific recommendations). This product may be selectively applied by using low-volume directed application techniques or may be broadcast-applied by using ground equipment, watercraft or aircraft (aerial applications to aquatic sites must be made by helicopter). In addition, this product may also be used for cut stump, cut stem and frill and girdle treatments within aquatic sites (see AERIAL APPLICATIONS and GROUND APPLICATIONS sections for additional details).

This product must be applied with surface or helicopter application equipment in a minimum of 5 gallons of water per acre. When applying by helicopter, follow directions under the AERIAL APPLICATIONS section of this label, otherwise refer to section on GROUND APPLICATIONS when using surface equipment.

Applications made to moving bodies of water should be made while traveling upstream to prevent concentration of this herbicide in water. DO NOT apply to bodies of water or portions of bodies of water where emergent and/or floating weeds do not exist.

When application is to be made to target vegetation that covers a large percentage of the surface area of impounded water, treating the area in strips may avoid oxygen depletion due to decaying vegetation. Oxygen depletion may result in the suffocation of some sensitive aquatic organisms. DO NOT treat more than one half of the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas.

Avoid wash-off of sprayed foliage by spray boat or recreational boat backwash for one hour after application.

Apply this product at 2 to 6 pints per acre depending on species present and weed density. DO NOT exceed the maximum label rate of 1.5 pounds acid equivalent Imazapyr (equivalent to 6 pints) per acre per year. Use the higher labeled rates for heavy weed pressure. Consult the AQUATIC WEEDS CONTROLLED section and the ADDITIONAL WEEDS CONTROLLED section of this label for specific rates.

This product may be applied as a draw down treatment in areas described above. Apply this product to weeds after water has been drained and allow 14 days before reintroduction of water.

Terrestrial Use Sites: This product is an aqueous solution to be mixed with water and a surfactant and applied as a spray solution to grass pasture and rangeland and noncropland areas such as railroad, utility, pipeline and highway rights-of-way, utility plant sites, petroleum tank farms, pumping installations, fence rows, storage areas, non-irrigation ditchbanks, including grazed or hayed areas within these sites. This product is used for the establishment and maintenance of wildlife openings. This product may also be used for the release of unimproved Bermudagrass (see specific directions) and for use under certain paved surfaces (see specific directions).

Application Methods: This product will control most annual and perennial grasses and broadleaf weeds in addition to many brush and vine species and this product will provide residual control of labeled weeds which germinate in the treated areas. This product

8/28

may be applied either preemergence or post-emergence to the weeds; however, post-emergence application is the method of choice in most situations, particularly for perennial species. For maximum activity, weeds should be growing vigorously at the time of post-emergence application and the spray solution should include a surfactant (See Adjuvant Section for specific recommendations). These solutions may be applied selectively by using low-volume techniques or may be applied broadcast by using ground equipment or aerial equipment. In addition, this product may also be used for stump and cut stem treatments (see specific directions).

PRECAUTIONS FOR AVOIDING INJURY TO NON-TARGET PLANTS

Untreated desirable plants can be affected by root uptake of this product from treated soil. Injury or loss of desirable plants may result if this product is applied on or near desirable plants, on areas where their roots extend, or in locations where the treated soil may be washed or moved into contact with their roots. When making applications along shorelines where desirable plants may be present, caution should be exercised to avoid spray contact with their foliage or spray application to the soil in which they are rooted. Shoreline plants that have roots that extend into the water in an area where this product has been applied generally will not be adversely affected by uptake of the herbicide from the water.

RESTRICTION: If treated vegetation is to be removed from the application site, DO NOT use the vegetative matter as mulch or compost on or around desirable species.

Untreated trees can occasionally be affected by root uptake of this product through movement into the top soil. Injury or loss of desirable trees or other plants may result if this product is applied on or near desirable trees or other plants, on areas where their roots extend, or in locations where the treated soil may be washed or moved into contact with their roots.

MANAGING OFF-TARGET MOVEMENT

The following information is provided as general guidance for managing off-target movement. Specific use for this product may differ depending on the application technique used and the vegetation management objective.

Spray Drift: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the entity authorizing spraying are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications: 1) The distance of the outer most operating nozzles must not exceed 3/4 the length of the rotor. 2) Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they must be observed.

Spray drift from applying this product may result in damage to sensitive plants adjacent to the treatment area. Only apply this product when the potential for drift to these and other adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal. DO NOT apply when the following conditions exist that increase the likelihood of spray drift from intended targets: high or gusty winds, high temperatures, low humidity, temperature inversions.

To minimize spray drift, the applicator should be familiar with and take into account the following drift reduction advisory information. Additional information may be available from state enforcement agencies or the Cooperative Extension on the application of this product.

The best drift management strategy and most effective way to reduce drift potential are to apply large droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS).

CONTROLLING DROPLET SIZE

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - DO NOT exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift. DO NOT use nozzles producing a mist droplet spray.

APPLICATION HEIGHT

Making applications at the lowest possible height (helicopter, ground driven spray boom) that is safe and practical reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the treatment area, the applicator must compensate for this displacement by adjusting the path of the application equipment (e.g. aircraft, ground) upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

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 speed. Application should be avoided below 3 mph due to variable wind direction and high

9/28

inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they 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
Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud, which can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

WIND EROSION
Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

ADJUVANTS

Post-emergence applications of this product require the addition of a spray adjuvant for optimum herbicide performance. Only spray adjuvants that are approved or appropriate for aquatic use can be utilized. The addition of a Chemical Producers and Distributors Associations (CPDA) certified adjuvant can increase control. A CPDA certified drift control agent may also be used.

Nonionic Surfactants: Use a nonionic surfactant at the rate 0.25% v/v or higher (see manufacturer's label) of the spray solution (0.25% v/v is equivalent to 1 quart in 100 gallons). For best results, select a nonionic surfactant with a HLB (hydrophilic to lipophilic balance) ratio between 12 and 17 with at least 70% surfactant in the formulated product (alcohols, fatty acids, oils, ethylene glycol or diethylene glycol should not be considered as surfactants to meet the above requirements).

Methylated Seed Oils or Vegetable Oil Concentrates: Instead of a surfactant, a methylated seed oil or vegetable-based seed oil concentrate may be used at the rate of 1.5 to 2 pints per acre. When using spray volumes greater than 30 gallons per acre, methylated seed oil or vegetable based seed oil concentrates should be mixed at a rate of 1 % of the total spray volume, or alternatively use a nonionic surfactant as described above. Research indicates that these oils may aid in product deposition and uptake by plants under moisture or temperature stress.

Silicone Based Surfactants: See manufacturer's label for specific rate recommendations. Silicone-based surfactants may reduce the surface tension of the spray droplet, allowing greater spreading on the leaf surface as compared to conventional nonionic surfactants. However, some silicone-based surfactants may dry too quickly, limiting herbicide uptake.

Invert emulsions: This product can be applied as an invert emulsion. The spray solution results in an invert (water-in-oil) spray emulsion designed to minimize spray drift and spray run-off, resulting in more herbicide on the target foliage. The spray emulsion may be formed in a single tank (batch mixing) or injected (in-line mixing). Consult the invert chemical label for proper mixing directions.

Fertilizer/Surfactant Blends: Nitrogen based liquid fertilizers such as 28%N, 32%N, 10-34-0 or ammonium sulfate, may be added at the rate of 2 to 3 pints per acre in combination with the recommended rate of nonionic surfactant, methylated seed oil or vegetable/seed oil concentrate. The use of fertilizers in a tank mix without a nonionic surfactant, methylated seed oil or vegetable/seed oil concentrate is not recommended.

Other: An antifoaming agent, spray pattern indicator or drift reducing agent may be applied at the product labeled rate if necessary or desired.

TANK MIXES

This product may be tank-mixed with other herbicides provided that the label for the tank mix product does not prohibit such mixing. Consult manufacturer's labels for specific rates and weeds controlled. Always follow the more restrictive label when making an application involving tank-mixes.

AERIAL APPLICATIONS

All restrictions must be taken to minimize or eliminate spray drift. Both helicopter and fixed wing aircraft can be used to apply this product, but applications to aquatic sites are restricted to helicopter only. DO NOT make applications by helicopter or fixed wing aircraft unless appropriate buffer zones can be maintained to prevent spray drift out of the target area, or when spray drift as a result of helicopter application can be tolerated.

Uniformly apply the specified amount of this product in 2 to 30 gallons of water per acre. A foam reducing agent may be added at the specified label rate.

Immediately after each use of this product thoroughly clean application equipment, including landing gear. Uncoated steel surfaces (except stainless steel surfaces) may result in corrosion and failure after prolonged exposure to the product. The maintenance of an paint (organic coating) may prevent corrosion.

Aerial Applications Restrictions:

1. Applicators are required to use a Coarse or Coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer

10/28

nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater for release heights below 10 feet; Applicators are required to use a Very Coarse or coarser droplet size or, if specifically using a spinning atomizer nozzle, applicators are required to use a VMD of 475 microns or greater for release heights above 10 feet; Applicators must consider the effects of nozzle orientation and flight speed when determining droplet size.

2. Applicators are required to use upwind swath displacement.
3. The boom length must not exceed 60% of the wingspan or 90% of the rotor blade diameter to reduce spray drift.
4. Applications with wind speeds less than 3 mph and with wind speeds greater than 10 mph are prohibited.
5. Applications into temperature inversions are prohibited.
6. Aerial equipment designed to minimize spray drift, such as a helicopter equipped with a Microfoil boom, Thru-Valve boom or raindrop nozzles, must be used and calibrated. Except when applying with a Microfoil boom, a drift control agent may be added at the label rate.

GROUND APPLICATION (BROADCAST)

FOLIAR APPLICATIONS

Low Volume Foliar:

Use equipment calibrated to deliver 5 to 20 gallons of spray solution per acre. To prepare the spray solution, thoroughly mix in water 0.5 to 5% of this product plus surfactant (see the ADJUVANTS section of this label for specific recommendations). A foam reducing agent may be applied at the label rate, if needed. For control of difficult species (see AQUATIC WEEDS CONTROLLED section and the TERRESTRIAL WEEDS CONTROLLED section for relative susceptibility of weed species), use the higher concentrations of herbicide and/or spray volumes but DO NOT apply more than 1.5 pounds acid equivalent Imazapyr (equivalent to 6 pints) per acre per year. Excessive wetting of foliage is not recommended. See the MIXING GUIDE below for some suggested volumes of this product and water.

For low volume, select proper nozzles to avoid over-application. Proper application is critical to ensure desirable results. Best results are achieved when the spray covers the crown and approximately 70% of the plant. The use of an even flat fan tip with a spray angle of 40 degrees or less will aid in proper deposition.

Recommended tip sizes include 4004E, or 1504E. For a straight stream and cone pattern, adjustable cone nozzles such as 5500 X3 or 5500 X4 may be used. Attaching a rollover valve onto a Spraying Systems Model 30 gunjet or other similar spray guns allows for the use of both a flat fan and cone tips on the same gun.

Moisten, but DO NOT drench target vegetation causing spray solution to run off.

Low Volume Foliar with Backpacks:

For low-growing species, spray down on the crown, covering crown and penetrating approximately 70% of the plant.

For target species 4 to 8 feet tall, swipe the sides of target vegetation by directing spray to at least two sides of the plant in smooth vertical motions from the crown to the bottom. Make sure to cover the crown whenever possible.

For target species over 8 feet tall, lace sides of the target vegetation by directing spray to at least two sides of the target in smooth zigzag motions from crown to bottom.

Low Volume Foliar with Hydraulic Handgun Application Equipment:

Use same technique as described above for Low Volume Foliar with Backpacks.

For broadcast applications, simulate a gentle rain near the top of target vegetation, allowing spray to contact the crown and penetrate the target foliage without falling to the understory. Herbicide spray solution which contacts the understory may result in severe injury or death of plants in the understory.

16/28

SPRAY SOLUTION MIXING GUIDE FOR LOW-VOLUME FOLIAR APPLICATIONS

AMOUNT OF SPRAY SOLUTION BEING PREPARED	DESIRED CONCENTRATION (fluid volume)				
	0.5%	0.75%	1%	1.5%	5%
	(amount of product to use)				
1 gallon	0.6 fl. oz.	0.9 fl. oz.	1.3 fl. oz.	1.9 fl. oz.	6.5 fl. oz.
3 gallons	1.9 fl. oz.	2.8 fl. oz.	3.8 fl. oz.	5.8 fl. oz.	1.2 pint
4 gallons	2.5 fl. oz.	3.8 fl. oz.	5.1 fl. oz.	7.7 fl. oz.	1.6 pint
5 gallons	3.2 fl. oz.	4.8 fl. oz.	6.5 fl. oz.	9.6 fl. oz.	2 pints
50 gallons	2 pints	3 pints	4 pints	6 pints	10 quarts
100 gallons	4 pints	6 pints	8 pints	6 quarts	5 gallons
2 Tablespoons = 1 fluid ounce					

High Volume Foliar:
For optimum performance when spraying medium to high-density vegetation and brush, use equipment calibrated to deliver up to 100 gallons of spray solution per acre (GPA). Spray solutions exceeding 100 GPA may result in excessive spray run-off, causing increased ground cover injury, and injury to desirable species. To prepare the spray solution, thoroughly mix this product in water and add a surfactant (see ADJUVANT section for specific recommendations and rates of surfactants). A foam-reducing agent may be added at the label rate, if needed. For control of difficult species (see AQUATIC WEEDS CONTROLLED section and the ADDITIONAL WEEDS CONTROLLED section for relative susceptibility of weed species), use the higher concentrations of herbicide and/or spray volumes, but DO NOT apply more 1.5 pounds acid equivalent Imazapyr (equivalent to 6 pints) per acre per year in aquatic and non-cropland sites and 0.75 pounds acid equivalent Imazapyr (equivalent to 3 pints) per acre per year in pasture and rangeland sites. Uniformly cover the foliage of the vegetation to be controlled but DO NOT apply to run-off. Excessive wetting of foliage is not recommended.

Side Trimming:
DO NOT side trim with this product unless severe injury or death of the treated tree can be tolerated. This product is readily translocated and can result in death of the entire tree.

Ground Boom Applications Restrictions:

1. Applicators are required to use a nozzle height below 4 feet above the plant canopy or the ground and coarse or Coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater.
2. Applications with wind speeds greater than 10 mph are prohibited.
3. Applications into temperature inversions are prohibited.

CUT SURFACE TREATMENTS

This product may be used to control undesirable woody vegetation by applying the product solution to the cambium area of freshly cut stump surfaces or to fresh cuts on the stem of the target woody vegetation. Applications can be made at any time of the year except during periods of heavy sap flow in the spring. DO NOT over apply solution causing run-off from the cut surface.

Injury may occur to desirable woody plants if the shoots extend from the same root system or their root systems are grafted to those of the treated tree.

Mixing: This product may be mixed as either a concentrated or dilute solution for stump and cut stem treatments. The dilute solution may be used for applications to the surface of the stump or to cuts on the stem of the target woody vegetation. Concentrated solutions may be used for applications to cuts on the stem. Use of the concentrated solution permits application to fewer cuts on the stem, especially for large diameter trees. Follow the application instructions to determine proper application techniques for each type of solution.

- To prepare a dilute solution, mix 8 to 12 fluid ounces of this product with one gallon of water. If temperatures are such that freezing of the spray mixture may occur, antifreeze (ethylene glycol) may be used according to manufacturer's label to prevent freezing. The use of a surfactant or penetrating agent may improve uptake through partially callused cambiums.
- To prepare a concentrated solution, mix 2 quarts of this product with no more than 1 quart of water.

Cut stump treatments:

- Dilute Solution - Spray or brush the solution onto the cambium area of the freshly cut stump surface. Insure that the solution thoroughly wets the entire cambium area (the wood next to the bark of the stump).

Cut stem (injection, hack & squirt) treatments:

- Dilute Solutions- Using standard injection equipment, apply 1 milliliter of solution at each injection site around the tree with no more than one-inch intervals between cut edges. Insure that the injector completely penetrates the bark at each injection site.
- Concentrate Solutions- Using standard injection equipment, apply 1 milliliter of solution at each injection site. Make at least one injection cut for every 3 inches of Diameter at Breast Height (DBH) on the target tree. For example, a 3-inch DBH tree will receive 1 injection cut and a 6-inch DBH tree will receive 2 injection cuts. On trees requiring more than one injection site place the injection cuts at approximately equal intervals around the tree.

Frill or girdle treatments:

- Using a hatchet, machete, or chain saw, make cuts through the bark and completely around the tree to expose the cambium. The cut should angle downward extending into the cambium enough to expose at least two growth rings. Using a spray applicator or brush, apply a 25% to 100% solution of this product into each cut until thoroughly wet. Avoid applying so much herbicide that runoff to the ground or water occurs.

BASAL APPLICATION

This product is an aqueous formulation that requires mixing with **basal oil containing at least 15% emulsifier or will require the addition of an emulsifier, for application to the basal area** of brush and trees to control undesirable vegetation in the following noncropland areas: access roads; airfields; airports; along forest roads; around commercial or industrial structures or outbuildings; around farm and ranch structures and outbuildings; bare ground; construction sites; ditch banks; dry ditches & canals; fences & fencerows; firebreaks; gravel yards; habitat restoration & management areas; highways & roadsides (including aprons, medians, guardrails & right of ways); industrial plant sites; industrial areas; lumber yards; natural areas; paved areas; petroleum & other tank farms; pumping installations; pipeline, power, telephone & utility rights-of-way; power stations; railroad rights-of way; refineries; resorts; storage areas; substations; uncropped farmstead areas; uncultivated non-agricultural areas; vacant lots; walkways; wastelands; & wildlife habitat areas.

Thinline Basal and Stem Application

- This product may be applied as a thinline basal or arcing application to the stems of susceptible species such as big leaf maple (*Acer macrophyllum*), willow (*Salix* spp.) and Eucalyptus (*Eucalyptus* spp.) with a stem ground line diameter of 3 inches or less. Mix 24 to 48 ounces of this product in one gallon of **basal oil containing at least 15% emulsifier**. Maintain uniform mixtures with frequent agitation. Direct a thin line of the spray solution to the stems beginning a few feet from the ground and descending toward the base of the tree making a zig-zag motion. Do not over apply causing puddling.

Low Volume Basal Bark Treatments

- This product, at the rate of 8 to 12 ounces per gallon, may be applied for low volume basal bark treatments. This product at 3.0 to 5.0% is recommended to be tank mixed with Relegate™ or Garlon® 4 or other basal products to broaden the spectrum of control. Consult the herbicide labels for rates and susceptible brush species. Mixing with basal requires compatibility tests prior to mixing large quantities. Mixing aids (such as emulsifiers, etc.) and ongoing agitation are required to attain a homogenous tank mix.
- Basal application should be made to the lower 12" to 18" of the target brush and go to the soil. Care should be taken to not puddle or over treat the stem. Basal application is best suited for low density brush sites, where stems do not exceed 700 stems per acre.

For Basal Application – It is advisory to mix only the intended amount of mixture that is to be sprayed that day. Adequate agitation must be maintained with all emulsion mixtures to prevent phase separation. Prior to tank mixing with other products, herbicides and oils, you must determine the compatibility of the proposed mixture (See **COMPATIBILITY** section).

SPRAY SOLUTION MIXING GUIDE FOR BASAL BARK APPLICATIONS

AMOUNT OF SPRAY SOLUTION BEING PREPARED	NUFARM POLARIS		NUFARM POLARIS WHEN TANK MIXING		RELEGATE or GARLON 4	
	8.0 oz	12.0 oz.	3.0%	5.0%	15%	20%
1 Gallon	8.0 oz.	12.0 oz.	3.8 oz.	6.4 oz.	1.2 pts.	1.6 pts.
3 Gallons	1.5 pts.	2.25 pts.	11.5 oz.	1.2 pts.	1.8 qts.	2.4 qts.
4 Gallons	1.0 qt.	1.5 qts.	15.4 oz.	1.6 pts.	2.4 qts.	3.2 qts.
5 Gallons	1.25 qts.	1.0 qt. + 28.0 oz.	1.2 pts.	1.0 qt.	3.0 qts.	1.0 gal.
50 Gallons	3.0 gals. + 1.0 pt.	4.0 gals. + 2.75 qts.	1.5 gals.	2.5 gals.	7.5 gals.	10.0 gals.
100 Gallons	6.0 gals. + 1.0 qt.	9.0 gals. + 1.5 qts.	3.0 gals.	5.0 gals.	15.0 gals.	20.0 gals.
16 ounces = 1 pint : 2 pints = 1 quart : 4 quarts = 1 gallon						

COMPATIBILITY

Before full-scale mixing of this product with other pesticides, emulsifiers, fertilizers, surfactants or oils, determine the compatibility of the proposed mixture. Use proportionate quantities of each ingredient and mix in a small container. Always mix one product thoroughly with the diluent before adding another product. If no incompatibility is evident after 30 minutes, the mixture is generally compatible for spraying. To evaluate potential short term effects of applying the mixture, test the tank mix combination on a few plants or a small area before larger-scale treatments. Wait at least 2 to 3 days for problems to become apparent.

IMPORTANT: MIXING WITH OTHER SUBSTANCES MAY INCREASE THE RISK OF MIXING INCOMPATIBILITIES, REDUCED

EFFECTIVENESS AND/OR CAUSE CROP INJURY OR LOSS. ANY LIABILITY FOR LOSS, INJURY OR DAMAGE RESULTING FROM A MIXTURE NOT SPECIFIED ON THIS LABEL OR IN MANUFACTURER'S SUPPLEMENTAL LABELING DISTRIBUTED FOR THIS PRODUCT IS SPECIFICALLY DISCLAIMED BY MANUFACTURER.

NONCROPLAND USES

When applied as directed and under the conditions described applications may be made for the control of undesirable vegetation growing in the following areas: airfields; airports; alleys, lanes, trails & access roads; around commercial or industrial structures or outbuildings; around farm and ranch structures and outbuildings; around ornamental gardens; around ornamental trees & shrubs; bare ground; beaches; campgrounds; construction sites; ditch banks; drive-in theaters; driveways & ramps; dry ditches & canals; fences & fencerows; firebreaks; gravel yards; habitat restoration & management areas; highways & roadsides (including aprons, medians, guardrails & right of ways); industrial plant sites; industrial areas; lumber yards; mulched areas; natural areas; paths and trails; parking areas; parks; paved areas; petroleum & other tank farms; pumping installations; pipeline, power, telephone & utility rights-of-way; power stations; preplant to turf & ornamental plants; railroad rights-of way; recreation areas; refineries; resorts; schools; sidewalks; sports areas; storage areas; substations; tennis courts; uncropped farmstead areas; uncultivated non-agricultural areas; vacant lots; walkways; wastelands; & wildlife habitat areas.

This product may also be used for the establishment and maintenance of wildlife openings, for the release of unimproved Bermudagrass and Bahiagrass, for bareground weed control, and for under certain paved surfaces. Applications to noncropland areas are not applicable to treatment of commercial timber or other plants grown for sale or other commercial use, or for commercial seed production, or for research purposes.

14/28

TANK-MIXES AND APPLICATION RATES FOR LOW VOLUME FOLIAR CONTROL*

Target Vegetation	Rate of this product	Tank Mix
Mixed hardwoods without elm, locust, or pine	1.0- 1.5% by volume	Surfactant
Mixed hardwoods containing elm, locust, and pine	0.5- 1.0% by volume	Accord™ or AquaNeat™ at 2 - 3% by volume plus surfactant
Mixed hardwoods with locust and pine but no elm	0.5- 1.0% by volume	Krenite at 2 - 5% by volume plus surfactant
Mixed hardwoods with locust and elm but no pine	0.5- 1.0% by volume	Escort™ at 2 oz./Acre or 2.3 grams/gal. plus surfactant

* Tank-Mixes with 2,4-D or products containing 2,4-D have resulted in reduced efficacy of this product.

MIXING CHART

% Solution	Amount of this product per Gallon of Mix	Amount of this product per 4 Gallon Backpack
0.5 %	0.6 fl. oz.	2.6 fl. oz.
1.0%	1.3 fl. oz.	5.1 fl. oz..
2.0%	2.6 fl. oz.	10.2 fl. oz.
3.0%	3.8 fl. oz.	15.4 fl. oz.
5.0%	6.4 fl. oz.	25.6 fl. oz.

MEASURING CHART		
128 fluid ounces	=	1 gallon
16 fluid ounces	=	1 pint
8 pints	=	1 gallon
4 quarts	=	1 gallon
2 pints	=	1 quart

15/28

FOR CONTROL OF UNDESIRABLE WEEDS IN UNIMPROVED BERMUDAGRASS AND BAHIAGRASS AND OTHER NON-CROPLAND INDUSTRIAL SITES

This product may be used on unimproved industrial noncropland Bermudagrass and bahiagrass turf, roadsides and utility rights-of-way. The application of this product on established common and coastal Bermudagrass and bahiagrass provides control of labeled broadleaf and grass weeds. Competition from these weeds is eliminated, releasing the Bermudagrass and bahiagrass. Treatment of Bermudagrass with this product results in a compacted growth habit and seedhead inhibition.

Uniformly apply with properly calibrated ground equipment using at least 10 gallons of water per acre with a spray pressure 20 to 50 psi. IMPORTANT: Temporary yellowing of grass may occur when treatment is made after growth commences. DO NOT add surfactant in excess of the recommended rate (1 fluid ounces per 25 gallons of spray solution). DO NOT apply to grass during its first growing season. DO NOT apply to grass that is under stress from drought, disease, insects, or other causes.

DOSAGE RATES AND TIMING:

Bermudagrass - Apply this product at 6 to 12 fluid ounces per acre when the Bermudagrass is dormant. Apply this product at 6 to 8 fluid ounces per acre after the bermudagrass has reached full green-up. Applications made during green-up will delay green-up. Include a surfactant in the spray solution (See IMPORTANT statement above).

For additional pre-emergence control of annual grasses and small seeded broadleaf weeds, add Pendulum® Aquacap™ herbicide at the rate of 3.1 to 6.3 pints per acre. Consult the Pendulum® label for weeds controlled and for other use directions and precautions.

For control of Johnsongrass in bermudagrass turf, apply this product at 8 fluid ounces per acre plus Roundup® or Razor® at 12 fluid ounces per acre plus surfactant. For additional control of broadleaves and vines, Tahoe®3A or Garlon®3A may be added to the above mix at the rate of 1-2 pints per acre. Observe all precautions and restrictions on the Tahoe®3A, Garlon®3A and Roundup® labels.

Bahiagrass - Apply this product at 4 to 8 fluid ounces per acre when the bahiagrass is dormant or after the grass has initiated green-up but has not exceeded 25% green-up. Include in the spray solution a surfactant (See Adjuvant section for specific recommendations on surfactants).

WEEDS CONTROLLED

Bedstraw (*Galium* spp.)	Little barley (*Hordeum pusillum*)
Bishopweed (*Ptilimnium capillaceum*)	Seedling Johnsongrass (*Sorghum halepense*)
Buttercup (*Ranunculus parviflorus*)	Wild carrot (*Daucus carota*)
Carolina geranium (*Geranium carolinianum*)	White clover (*Trifolium repens*)
Fescue (*Festuca* spp.)	Yellow woodsorrel (*Oxalis stricta*)
Foxtail (*Setaria* spp.)	

GRASS GROWTH AND SEEDHEAD SUPPRESSION

This product may be used to suppress growth and seedhead development of certain turfgrass in unimproved areas. When applied to desirable turf, this product may result in temporary turf damage and/or discoloration. Effects to the desirable turf may vary with environmental conditions. For optimum performance, application should be made prior to culm elongation. Applications may be made before or after mowing. If applied prior to mowing, allow at least three days of active growth before mowing. If following a mowing, allow sufficient time for the grasses to recover before applying this product or injury may be amplified.

DO NOT apply to turf under stress (drought, cold, insect damaged, etc.) or severe injury or death may occur.

Bermudagrass - Apply this product at 6 to 8 fluid ounces per acre from early green-up to prior to seed head initiation. DO NOT add a surfactant for this application.

Cool Season Unimproved Turf - Apply this product at 2 fluid ounces per acre plus 0.25% nonionic surfactant. For increased suppression, this product may be tank-mixed with such products as Campaign® (24 fluid ounces per acre) or Embark® (8 fluid ounces per acre).

Tank-mixes may increase injury to desired turf. Consult each product label for recommended turf species and other use directions and precautions. Tank mixes with 2,4-D or products containing 2,4-D may decrease the effectiveness of this product.

TOTAL VEGETATION CONTROL WHERE BAREGROUND IS DESIRED

This product is an effective herbicide for preemergence or post-emergence control of many annual and perennial broadleaf and grass weeds where bareground is desired .This product is particularly effective on hard-to-control perennial grasses. This product at 1.5 to 6 pints per acre can be used alone or in tank-mix with herbicides approved for use in bare ground. The degree and duration of control are dependent on the rate of this product used, tank-mix partner, the volume of carrier, soil texture, rainfall and other conditions.
Consult manufacturer's labels for specific rates and weeds controlled. Always follow the more restrictive label when making an application involving tank-mixes.

TANK MIX RECOMMENDATIONS FOR BAREGROUND

Herbicide Rates per Acre*		
This product in Pints	Pendulum® 3.3 EC in Quarts	Diuron in Pounds a.i.
1.5-3	4.8	4-6
2-4	4.8	6-10
3-6	4.8	8-12

* Use higher rates for fall applications and in areas that have not been previously treated or that feature heavy infestations.

Applications of this product may be made anytime of the year. Use equipment calibrated to deliver desired gallons per acre spray volume and uniformly distribute the spray pattern over the treated area.

Post-emergence Applications: Always use a spray adjuvant (See Adjuvant section of this label) when making a post-emergence application. For optimum performance on tough to control annual grasses, applications should be made at a total volume of 100 gallons per acre or less. For quicker burndown or brown-out of target weeds, this product may be tank-mixed with products such as Razor®, or Roundup®. Tank mixes with 2,4-D or products containing 2,4-D may reduce the performance of this product. Always follow the more restrictive label when tank-mixing.

Spot Treatments: This product may be used as a follow-up treatment to control escapes or weed encroachment in a bareground situation. To prepare the spray solution, thoroughly mix in each gallon of water 0.5 to 5% of this product plus an adjuvant. For increased burndown, include Razor®, Roundup®. or similar products. For added residual weed control or to increase the weed spectrum, add Pendulum® Aquacap™ herbicide, Overdrive® herbicide or diuron. Always follow the more restrictive label when tank-mixing.

FOR CONTROL OF UNDESIRABLE WEEDS UNDER PAVED SURFACES

This product can be used under asphalt, pond liners and other paved areas, ONLY in industrial sites or where the pavement has a suitable barrier along the perimeter that prevents encroachment of roots of desirable plants.

This product should be used only where the area to be treated has been prepared according to good construction practices. If rhizomes, stolons, tubers or other vegetative plant parts are present in the site, they should be removed by scalping with a grader blade to a depth sufficient to insure their complete removal.

IMPORTANT: Paving should follow applications of this product as soon as possible. DO NOT apply where the chemical may contact the roots of desirable trees or other plants.

Injury or death of desirable plants may result if this product is applied where roots are present or where they may extend into the treated area. Roots of trees and shrubs may extend a considerable distance beyond the branch extremities or so-called drip line.

APPLICATION DIRECTIONS FOR PAVED SURFACES:

Applications should be made to the soil surface only when final grade is established. DO NOT move soil following application of this product. Apply this product in sufficient water (at least 100 gal. per acre) to ensure thorough and uniform wetting of the soil surface, including the shoulder areas. Add this product at a rate of 6 pints per acre (2.2 fluid ounce per 1000 square feet) to clean water in the spray tank during the filling operation. Agitate before spraying.

If the soil is not moist prior to treatment, incorporation of this product is needed for herbicide activation. This product can be incorporated into the soil to a depth of 4 to 6 inches using a rototiller or disc. Rainfall or irrigation of 1 inch will also provide uniform incorporation. DO NOT allow treated soil to wash or move into untreated areas.

SPOT TREATMNETS AND CRACK –AND-CREVICE TREATMENTS:

Use this product as a follow up or initial treatment to control weed escapes or weed encroachment in bareground situations, including cracks and crevices in paved surfaces such as parking lots, paths, sidewalks, runways and roadways.

FOR SPOT TREATMENT WEED CONTROL IN GRASS PASTURE AND RANGELAND

For the control of undesirable vegetation in grass pasture and rangeland, this product may be applied as a spot treatment at a rate of 2 to 48 fluid ounces of product per acre using any of the ground application methods as described in this label. Spot applications may not exceed more than one tenth of the area to be grazed or cut for hay in grass pasture and rangeland. See appropriate sections of this label for specific use directions for the application method and vegetation control desired.

DO NOT apply more than 48 fluid ounces per acre per year.

Grazing and Haying Restrictions:

- DO NOT cut forage grass for hay for 7 days after application of this product.
- There are no grazing restrictions following application of this product.

Rangeland Use Instructions:

This product may be applied to rangeland for the control of undesirable vegetation to achieve one or more of the following vegetation management objectives:

- Control of undesirable (noxious, invasive and non-native) plant species.

17/28

- Control of undesirable vegetation for wildlife habitat improvement.
- Control of undesirable vegetation to aid in the establishment of desirable rangeland plant species.
- Release of existing desirable rangeland plant communities from the competitive pressure of undesirable plant species.
- Control of undesirable vegetation to aid in the establishment of undesirable vegetation following a fire.
- Control of undesirable vegetation to reduce wildfire fuel.

To ensure the protection of threatened and endangered plants, when applying this product to rangeland:

- Federal agencies must follow NEPA regulations to ensure protection of threatened and endangered plants.
- Other organizations or individuals must operate under a habitat conservation plan if threatened or endangered plants are known to be present on the land to be treated.
- State agencies must work with the Fish and Wildlife Service or the Service's designated state conservation agency to ensure protection of threatened and endangered plants.

See appropriate sections of this label for specific use directions for the desired rangeland vegetation management control desired.

This product must only be applied to a given rangeland acre as specific weed problems arise. Long-term control of undesirable weeds ultimately depends on the successful use of the land management practices that promote the sustainability and growth of desirable rangeland plant species.

ROTATIONAL CROP GUIDELINE

Rotational crops may be planted 12 months after applying this product at the specified pasture and rangeland rate. Twelve months after an application of this product, and before planting any crop, a successful field bioassay must be completed. The field bioassay consists of a test strip of the intended rotational crop planted in the previously treated area in the grass pasture and rangeland once grown to maturity. The test strip should include low areas and knolls, and include variations in soil type and pH within the treated area. If no crop injury is evident in the test strip, the intended rotational crop may be planted the following year.

Use of this product in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various agronomic factors and environmental factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

TERRESTRIAL WEEDS CONTROLLED

In terrestrial sites, this product will provide preemergence or post-emergence control with residual control of the following target vegetation species at the rates listed. Residual control refers to control of newly germinating seedlings in both annuals and perennials. In general, annual weeds may be controlled by preemergence or postemergence applications of this product. For established biennials and perennials postemergence applications of this product are recommended.

The rates shown below pertain to broadcast applications and indicate the relative sensitivity of these weeds. The relative sensitivity should be referenced when preparing low volume spray solutions (see "Low Volume" section of "Ground Applications"); low volume applications may provide control of the target species with less product per acre than is shown for the broadcast treatments. This product must be used only in accordance with the Directions for Use on this label.

The relative sensitivity of the species listed below can also be used to determine the relative risk of causing non-target plant injury if any of the below listed species are considered to be desirable within the area to be treated.

Resistant Biotypes: Naturally occurring biotypes (a plant within a given species that has a slightly different, but distinct genetic makeup from other plants of the same species) of some weeds listed on this label may not be effectively controlled. If naturally occurring resistant biotypes are present in an area, this product should be tank-mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

TERRESTRIAL WEEDS CONTROLLED		
COMMON NAME	SCIENTIFIC NAME	GROWTH HABIT[2]
GRASS WEEDS		
Apply 2 to 3 pints per acre[1]		
Annual bluegrass	*Poa annua*	A
Broadleaf signalgrass	*Brachiaria platyphylla*	A
Canada bluegrass	*Poa compressa*	P
Downy brome	*Bromus tectorum*	A
Fescue	*Festuca* spp.	A/P
Foxtail	*Setaria* spp.	A
Italian ryegrass	*Lolium multiflorum*	A
Johnsongrass[4]	*Sorghum halepense*	P
Kentucky bluegrass	*Poa pratensis*	P
Napier grass[5]	*Pennisetum purpureum*	P
Orchardgrass	*Dactylis glomerata*	P
Paragrass	*Brachiaria mutica*	P
Quackgrass	*Agropyron repens*	P
Sandbur	*Cenchrus* spp.	A
Smooth brome	*Bromus inermis*	P
Vaseygrass	*Paspalum urvillei*	P
Wild oats	*Avena fatua*	A
Witchgrass	*Panicum capillare*	A
Apply 3 to 4 pints per acre[1]		
Barnyardgrass	*Echinochloa crus-galli*	A
Beardgrass	*Andropogon* spp.	P
Bluegrass, annual	*Poa annua*	A
Bulrush[5]	*Scirpus validus*	P
Cheat	*Bromus secalinus*	A
Cogongrass	*Imperata cylindrica*	P
Crabgrass	*Digitaria* spp.	A
Crowfootgrass	*Dactyloctenium aegyptium*	A
Fall panicum	*Panicum dichotomiflorum*	A
Goosegrass	*Eleusine indica*	A
Itch grass	*Rottboellia exaltata*	A
Lovegrass[4]	*Eragrostis* spp.	P
Maidencane[5]	*Panicum hemitomon*	A
Panicum, browntop	*Panicum fasciculatum*	A
Panicum, Texas	*Panicum texanum*	A
Prairie threeawn	*Aristida oligantha*	P
Sandbur, field	*Cenchrus incertus*	A
Signalgrass	*Brachiaria platyphylla*	A
Wild barley	*Hordeum* spp.	A
Woolly cupgrass	*Eriochloa villosa*	A
Apply 4 to 6 pints per acre[1]		
Bahiagrass	*Paspalum notatum*	P
Bermudagrass[3,4]	*Cynodon dactylon*	P
Big bluestem	*Andropogon gerardii*	P
Dallisgrass	*Paspalum dilatatum*	P
Feathertop	*Pennisetum villosum*	P
Guineagrass	*Panicum maximum*	P
Saltgrass[3]	*Distichlis stricta*	P
Sand dropseed	*Sporobolus cryptandrus*	P
Sprangletop	*Leptochloa* spp.	A
Timothy	*Phleum pratense*	P
Wirestem muhly	*Muhlenbergia frondosa*	P

[1] Use higher rate where heavy or well-established infestations occur.

[2] Growth Habit: A = Annual, P = Perennial

[3] Use a minimum of 75 GPA.

[4] Use higher labeled rates.

[5] Use not permitted in California unless otherwise directed by supplemental labeling.

TERRESTRIAL WEEDS CONTROLLED (continued)		
COMMON NAME	SCIENTIFIC NAME	GROWTH HABIT[2]
BROADLEAF WEEDS		
	Apply 2 to 3 pints per acre[1]	
Burdock	*Arctium* spp.	B
Carolina geranium	*Geranium carolinianum*	A
Carpetweed	*Mollugo verticillata*	A
Clover	*Trifolium* spp.	A/P
Common chickweed	*Stellaria media*	A
Common ragweed	*Ambrosia artemisiifolia*	A
Dandelion	*Taraxacum officinale*	P
Dogfennel	*Eupatorium capillifolium*	A
Filaree	*Erodium* spp.	A
Fleabane	*Erigeron* spp.	A
Hoary vervain	*Verbena stricta*	P
Indian mustard	*Brassica juncea*	A
Kochia	*Kochia scoparia*	A
Lambsquarters	*Chenopodium album*	A
Lespedeza[3]	*Lespedeza* spp.	P
Miners lettuce	*Montia perfoliata*	A
Mullein	*Verbascum* spp.	B
Nettleleaf goosefoot	*Chenopodium murale*	A
Oxeye daisy	*Chrysanthemum leucanthemum*	P
Pepperweed	*Lepidium* spp.	A
Pigweed	*Amaranthus* spp.	A
Puncturevine	*Tribulus terrestris*	A
Russian thistle	*Salsola kali*	A
Smartweed	*Polygonum* spp.	A/P
Sorrell	*Rumex* spp.	P
Sunflower	*Helianthus* spp.	A
Sweet clover	*Melilotus* spp.	A/B
Tansymustard	*Descurainia pinnata*	A
Western ragweed	*Ambrosia psilostachya*	P
Wild carrot	*Daucus carota*	B
Wild lettuce	*Lactuca* spp.	A/B
Wild parsnip	*Pastinaca sativa*	B
Wild turnip	*Brassica campestris*	B
Woollyleaf bursage	*Franseria tomentosa*	P
Yellow woodsorrel	*Oxalis stricta*	P

[1] Use higher labeled rate where heavy or well-established infestations occur.

[2] Growth Habit: A = Annual, B = Biennial, P = Perennial

[3] Use not permitted in California unless otherwise directed by supplemental labeling.

[4] For best results, early postemergence applications are required

TERRESTRIAL WEEDS CONTROLLED (continued)		
COMMON NAME	SCIENTIFIC NAME	GROWTH HABIT[2]
BROADLEAF WEEDS (continued)		
Apply 3 to 4 pints per acre[1]		
Broom snakeweed	*Gutierrezia sarothrae*	P
Bull thistle	*Cirsium vulgare*	B
Burclover	*Medicago* spp.	A
Chickweed mouseear	*Cerastium vulgatum*	A
Clover hop	*Trifolium procumbens*	A
Cocklebur	*Xanthium strumarium*	A
Cudweed	*Gnaphalium* spp.	A
Desert camelthorn	*Alhagi pseudalhagi*	P
Dock	*Rumex* spp.	P
Fiddleneck	*Amsinckia intermedia*	A
Goldenrod	*Solidago* spp.	P
Henbit	*Lamium amplexicaule*	A
Knotweed, prostrate	*Polygonum aviculare*	A/P
Pokeweed	*Phytolacca americana*	P
Purslane	*Portulaca* spp.	A
Pusley, Florida	*Richardia scabra*	A
Rocket London	*Sisymbrium irio*	A
Rush skeletonweed[4]	*Chondrilla juncea*	B
Saltbush	*Atriplex* spp.	A
Shepherdspurse	*Capsella bursa-pastoris*	A
Spurge, annual	*Euphorbia* spp.	A
Stinging nettle[4]	*Urtica dioica*	P
Velvetleaf	*Abutilon theophrasti*	A
Yellow starthistle	*Centaurea solstitialis*	A
Apply 4 to 6 pints per acre[1]		
Arrowwood	*Pluchea sericea*	A
Canada thistle	*Cirsium arvense*	P
Giant ragweed	*Ambrosia trifida*	A
Gray rabbitbrush	*Chrysothamnus nauseosus*	P
Little mallow	*Malva parviflora*	B
Milkweed	*Asclepias* spp.	P
Primrose	*Oenothera kunthiana*	P
Silverleaf nightshade	*Solarium elaeagnifolium*	P
Sowthistle	*Sonchus* spp.	A
Texas thistle	*Cirsium texanum*	P

[1] Use higher rate where heavy or well-established infestations occur.

[2] Growth Habit: A = Annual, B = Biennial, P = Perennial

[3] Use not permitted in California unless otherwise directed by supplemental labeling.

[4] For best results, early postemergence applications are required

TERRESTRIAL WEEDS CONTROLLED (continued)		
COMMON NAME	SCIENTIFIC NAME	GROWTH HABIT[2]
VINES AND BRAMBLES		
Apply 1 pint per acre		
Field bindweed	*Convolvulus arvensis*	P
Hedge bindweed	*Calystegia sepium*	A
Apply 2 to 3 pints per acre[1]		
Wild buckwheat	*Polygonum convolvulus*	P
Apply 3 to 4 pints per acre[1]		
Greenbriar	*Smilax* spp.	P
Honeysuckle[3]	*Lonicera* spp.	P
Morningglory	*Ipomoea* spp.	A/P
Poison ivy	*Rhus radicans*	P
Redvine	*Brunnichia cirrhosa*	P
Wild rose[3]	*Rosa spp.*	P
Including:		
Multiflora rose	*Rosa multiflora*	P
Macartney rose	*Rosa bracteata*	P
Apply 4 to 6 pints per acre[1]		
Trumpetcreeper	*Campsis radicans*	P
Virginia creeper	*Parthenocissus quinquefolia*	P
Wild grape	*Vitis* spp.	P

[1] Use higher labeled rate where heavy or well-established infestations occur.
[2] Growth Habit: A = Annual, B = Biennial, P = Perennial
[3] Use higher labeled rate

TERRESTRIAL WEEDS CONTROLLED (continued)		
COMMON NAME	SCIENTIFIC NAME	GROWTH HABIT[2]
BRUSH SPECIES		
Apply 2 to 4 pints per acre[1]		
Brazilian peppertree	*Schinus terebinthifolius*	P
Chinese tallow tree Popcorn tree	*Sapium sebiferum*	P
Russian olive	*Elaeagnus angustifolia*	P
Sumac	*Rhus* spp.	P
Willow	*Salix* spp.	P
Apply 4 to 6 pints per acre[1]		
Alder	*Alnus* spp.	P
American beech	*Fagus grandifolia*	P
Ash[3]	*Fraxinus* spp.	P
Aspen	*Populus* spp.	P
Autumn olive	*Elaeagnus umbellata*	P
Bald cypress	*Taxodium distichum*	P
Bigleaf maple	*Acer macrophyllum*	P
Birch[3]	*Betula* spp.	P
Black gum[4]	*Nyssa sylvatica*	P
Black oak	*Quercus kelloggii*	P
Boxelder	*Acer negundo*	P
Ceanothis	*Ceanothis* spp.	P
Cherry[3, 4]	*Prunus* spp.	P
Chinaberry	*Melia azedarach*	P
Chinquapin	*Castanopsis chrysophylla*	P
Cottonwood	*Populus trichocarpa* *P deltoides*	P
Cypress	*Taxodium* spp.	P
Dogwood[3]	*Cornus* spp.	P
Elm	*Ulmus* spp.	P

TERRESTRIAL WEEDS CONTROLLED (continued)		
COMMON NAME	SCIENTIFIC NAME	GROWTH HABIT[2]
BRUSH SPECIES (continued)		
Apply 4 to 6 pints per acre[1] (continued)		
Eucalyptus	*Eucalyptus* spp.	P
Hawthorn	*Crataegus* spp.	P
Hickory[3]	*Carya* spp.	P
Huckleberry	*Gaylussacia* spp.	P
Lyonia spp.		
Including:		
Fetterbush	*Lyonia lucida*	P
Staggerbush	*Lyonia mariana*	P
Madrone	*Arbutus menziesii*	P
Maple	*Acer* spp.	P
Melaleuca	*Melaleuca quinquenervia*	P
Mulberry[3, 6]	*Morus* spp.	P
Oak[7]	*Quercus* spp.	P
Persimmon[4]	*Diospyros virginiana*	P
Poison oak	*Rhus diversiloba*	P
Poplar	*Populus* spp.	P
Privet	*Ligustrum vulgare*	P
Red alder	*Alnus rubra*	P
Red maple	*Acer rubrum*	P
Saltcedar	*Tamarix pentandra*	P
Sassafras	*Sassafras albidum*	P
Sourwood[4]	*Oxydendrum arboreum*	P
Sweetgum	*Liquidambar styraciflua*	P
Sycamore	*Platanus occidentals*	P
Tanoak[3]	*Lithocarpus densiflorus*	P
Titi[8]	*Cyrilla racemiflora*	P
Tree of heaven	*Ailanthus altissima*	P
Vaccinium spp.		
Including:		
Blueberry	*Vaccinium* spp.	P
Sparkleberry	*Vaccinium arboreum*	P
Water willow[9]	*Justicia americana*	P
Yellow poplar[3]	*Liriodendron tulipifera*	P

[1] Use higher labeled rate where heavy or well-established infestations occur.

[2] Growth Habit: A = Annual, B = Biennial, P = Perennial

[3] Use higher labeled rate

[4] Best control with applications before formation of fall leaf color.

[5] Tank mix with glyphosate.

[6] Degree of control may be species dependent

[7] For water oak (*Quercus nigia*) laurel oak (*Quercus laurifloria*) willow oak(*Quercus phellos*) and live oak (*Quercus virginiana*) use higher labeled rates.

[8] Suppression only.

[9] Use not permitted in California unless otherwise directed by supplemental labeling.

AQUATIC WEEDS CONTROLLED

This product may be applied for control of floating and emergent weeds (see Aquatic Weeds Controlled and Terrestrial Weeds Controlled) in or near bodies of water that may be nonflowing, flowing, or transient. This product may be applied to aquatic sites that include rivers, lakes, streams, seeps, drainage ditches, ponds, reservoirs, canals, bogs, marshes, swamps, estuaries, bays, brackish water, transitional areas between terrestrial and aquatic sites, riparian sites and seasonal wet areas. See Use Precautions and Restrictions section of this label for instructions, directions, precautions and restrictions on aquatic uses.

Read and observe the following directions if aquatic sites are present in noncrop areas and are part of the intended treatment area.

This product must be applied to the emergent foliage of the target vegetation and little to no activity on submerged aquatic weeds. Concentration of this product, resulting from direct application to water, are not expected to be of sufficient concentration nor duration to control target vegetation. Application should be made in such a way as to maximize spray interception by the target vegetation while minimizing the amount of overspray that enters the water.

This product does not control plants that have a majority of their foliage underwater or plants that are completely submerged.

Product Application: This product should be applied with helicopter or surface application equipment in a minimum of 2 gallons of water per acre. When applying by helicopter, follow directions under Aerial Application section of this label; when using surface equipment refer to the Ground Application section.

When applying this product to moving bodies of water applications should be made while traveling upstream to prevent concentration of this herbicide in water. DO NOT apply to bodies of water or portions of bodies of water where emergent and/or floating weeds do not exist.

Large Application Areas / O^2 Depletion: When application is to be made to target vegetation that covers a large percentage of surface area of impounded water, treating area in strips may avoid oxygen depletion from vegetation decay. Oxygen depletion may result in the suffocation of some sensitive aquatic organisms. If oxygen depletion is a concern, treat no more than 1/2 of the surface area of the water at a time. Wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms ability to move into untreated areas.

Avoid washoff of sprayed foliage by recreational boat backwash or spray boat for 1 hour after application.

Apply this product at 2 to 6 pits per acre depending on weed density and species present. DO NOT exceed the maximum label rate of 1.5 pounds acid equivalent Imazapyr (equivalent to 6 pints) per acre per year. Use the higher labeled rate for heavy weed pressure. See Aquatic Weeds Controlled and Terrestrial Weeds Controlled sections for specific rates.

This product may be applied as a draw-down treatment in areas described in this label. Apply this product to weeds after water has been drained and allow 14 days before reintroduction of water.

AQUATIC WEEDS CONTROLLED

This product will control the following target species as specified in the Use Rates and Application Directions section of the table. Rate instructions are expressed in terms of product volume for broadcast applications and as a percent solution for directed applications including spot treatments. For percent solution applications, DO NOT apply more than 1.5 pounds acid equivalent Imazapyr (equivalent to 6 pints) per acre per year. Not for aquatic use sites in the states of Massachusetts and New York.

COMMON NAME	SCIENTIFIC NAME	USE RATES AND APPLICATION DIRECTIONS
Floating Species		
~~*Duckweed~~	~~*Lemna minor*~~	~~2-3 pints/acre (1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.~~
~~*Duckweed, Giant~~	~~*Spirodela polyriza*~~	~~2-3 pints/acre (1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.~~
*Floating heart	*Nymphodes* spp.	2-4 pints/acre (0.5% to 1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.
*Frogbit	*Limnobium spongia*	1-2 pints/acre (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.
*Spatterdock	*Nuphar luteum*	Apply a tank-mix of 2-4 pints/acre of this product + 4-6 pints/acre glyphosate (0.5% this product + 1.5% glyphosate) in 100 GPA water for best control. Ensure 100% coverage of actively growing, emergent foliage.
*Water Hyacinth	*Eichhornia crassipes*	1-2 pints/acre (0.5% solution) applied in 100 GPA water to actively growing foliage.
*Water Lettuce	*Pistia stratiotes*	1-2 pints/acre (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.

*Use not permitted in California unless otherwise directed by supplemental labeling.

(continued)

COMMON NAME	SCIENTIFIC NAME	USE RATES AND APPLICATION DIRECTIONS
Emerged Species		
*Alligatorweed	*Alternanthera philoxeroides*	1-4 pints/acre (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Arrowhead, duck-potato	*Sagittaria* spp.	1-2 pints/acre (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.
*Bacopa, lemon	*Bacopa* spp.	1-2 pints/acre (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.
*Parrot feather	*Myriophyllum aquaticum*	Foliage above water for sufficient product uptake. Apply 2 -4 pints to actively growing emergent foliage.
*Pennywort	*Hydrocotyle* spp.	1-2 pints/acre (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.
*Pickerelweed	*Pontederia cordata*	2-3 pints/acre (1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.
*Taro, wild; Dasheen; Elephant's Ear; Coco Yam	*Colocasia esculentum*	4-6 pints/acre (1.5% solution) applied in 100 GPA with a high quality 'sticker' adjuvant. Ensure good coverage of actively growing, emergent foliage.
*Water chestnut	*Trappa natans*	2-4 pints/acre (0.5 to 1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.
*Water lily	*Nymphaea odorata*	2-3 pints/acre (1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing, emergent foliage.
*Water primrose	*Ludwigia uruguayensis*	4-6 pints/acre (1.5% solution), ensure 100% coverage of actively growing, emergent foliage.
Terrestrial/Marginal		
*Aquatic nightshape Soda apple	*Solanum tampicense*	2 pints/acre applied to foliage
*Bamboo, Japanese	*Phyllostachys* spp.	3-4 pints/acre applied to the foliage when plant is actively growing. Before setting seed head. More foliage will result in greater herbicide uptake, resulting in greater root kill.
*Beach, vitex	*Vitex rotundifolia*	5% solution + 1% MSO foliar spray / 17% solution stem injection (hack and squirt)
Brazilian pepper; Christmasberry	*Schinus terebinthifolius*	2-4 pints/acre applied to foliage
Cattail	*Typha* spp.	2-4 pints (1% solution) applied to actively growing, green foliage after full leaf elongation. Lower rates will control cattail in the north; higher rates are needed in the south.
Chinese tallow tree	*Sapium sebiferum*	16-24 fluid ounces applied to foliage
Cogongrass	*Imperata cylindrica*	Burn foliage, till area, that fall spray 2 quarts/acre this product + MSO applied to new growth.
Cordgrass, prairie	*Spartina* spp.	4-6 pints applied to actively growing foliage
*Cutgrass	*Zizaniopsis miliacea*	4-6 pints applied to actively growing foliage
*Elephant grass; Napier grass	*Pennisetum purpureum*	3 pints/acre applied to actively growing foliage

*Use not permitted in California unless otherwise directed by supplemental labeling. (continued)

COMMON NAME	SCIENTIFIC NAME	USE RATES AND APPLICATION DIRECTIONS
Terrestrial/Marginal *(continued)*		
*Flowering rush	*Butumu umbellatus* L.	2-3 pints applied to actively growing foliage
Giant reed, Wild cane	*Arundo donax*	4-6 pints/acre applied in spring to actively growing foliage
*Golden bamboo	*Phytostachys aurea*	3-4 pints/acre applied to the foliage when plant is actively growing. Before setting seed head. More foliage will result in greater herbicide uptake, resulting in greater root kill.
Junglerice	*Echinochloa colonum*	3-4 pints applied to actively growing foliage
Knapweeds	*Centaurea species*	Russian Knapweed - 2 to 3 pints + 1 quart/acre MSO fall applied after senescence begins
Knotweed, Japanese	*Polygonum cuspidatum*	3-4 pints/acre applied postemergence to actively growing foliage
Melaleuca; Paperbark Tree	*Melaleuca quinquenervia*	**For established stands,** apply 6 pints/acre this product+ 6 pints/acre glyphosate + spray adjuvant. For best results use 4 quarts/A methylated seed oil as an adjuvant. **For ground foliar application,** uniformly apply to ensure 100% coverage. **For broadcast foliar control,** apply aerially in a minimum of two passes at 10 gallons/acre applied cross treatment. **For spot treatment,** use a 25% this product + 25% solution of + glyphosate + 1.25% MSO in water applied as a frill or stump treatment.
*Nutgrass; Kili'p'opu	*Cyperus rotundus*	2 pints this product + 1 quart/acre MSO applied early postemergence
*Nutsedge	*Cyperus*spp.	2-3 pints postemergence to foliage or pre-emergence incorporated, non-incorporated preemergence applications will not control
Phragmites; Common Reed	*Phragmites australis*	4-6 pints/acre applied to actively growing, green foliage after full leaf elongation, ensure 100% coverage. If stand has a substantial amount of old stem tissue, mow or burn, allow to regrow to approximately 5' tall before treatment. Lower rates will control phragmites in the north; higher rates are needed in the south.
*Poison Hemlock	*Conium maculatum*	2 pints this product + 1 quart/acre MSO applied preemergence to early postemergence to rosette, prior to flowering
Purple Loosestrife	*Lythrum salicaria*	1 pint/acre applied to actively growing foliage
Reed canarygrass	*Phalaris arundinacea*	3-4 pints/acre applied to actively growing foliage
Rose, swamp	*Rosa palustris*	2-3 pints/acre applied to actively growing foliage
Russian-Olive	*Elaeagnus angustifolia*	2-4 pints/acre or a 1% solution, applied to foliage
Saltcedar; Tamarisk	*Tamarix species*	Aerial apply 2 quarts this product + 0.25%v/v NIS applied to actively growing foliage during flowering. For spot spraying use 1% solution of this product + 0.25%v/v NIS and spray to wet foliage. After application wait at least two years before disturbing treated saltcedar. Earlier disturbance can reduce overall control.
Smartweed	*Polygonum* spp.	2 pints/acre applied early postemergence
Sumac	*Rhus* spp.	2-3 pints/acre applied to foliage
Swamp Morning Glory; Water Spinach; Kangkong	*Ipomoea aquatica*	1-2 pints/acre this product + 1 quart/acre MSO applied early postemergence
Torpedo Grass	*Panicum repens*	4 pints/acre (1 - 1.5% solution), ensure good coverage to actively growing foliage.
*White Top; Hoary Cress	*Cardaria draba*	1-2 pints/acre applied in spring, to foliage, during flowering.
Willow	*Salix* spp.	2-3 pints/acre of this product applied to actively growing foliage, ensure good coverage.

*Use not permitted in California unless otherwise directed by supplemental labeling.

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: DO NOT store below 10° F.

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

CONTAINER DISPOSAL [HANDLING]:

[**Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size."

[**Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

[Nonrefillable Containers 5 Gallons or Less:]

Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** 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 or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

[Nonrefillable containers larger than 5 gallons:]

Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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. Turn the container over onto its other 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. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

[Refillable containers larger than 5 gallons:]

Refillable container. 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 from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities If burned stay out of smoke.

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BYWAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR

SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS.TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.

(RV022114)

LABEL HISTORY

FILE NAME	REVISION MARK	COMMENTS
000228-00534.20100427.EPA_N_RV042710-N	RV042710-N	PRN2007-4 - Updated Storage & Disposal
000228-00534.20100628.MASTER	RV060410	EPA Approved Notification
000228-00534.20101221.MASTER w RED Changes	RV060410	Incorporated RED changes per EPA SAL 12/02/09
000228-00534.20110121.MASTER	RV012111	Master Label
000228-00534.20110624.EPA Amendment	RV062411	EPA Amendment
000228-00534.20110718.EPA Amendment	RV071811	EPA E-mailed changes
000228-00534.20110720.MASTER	RV072011	EPA SAL w Comments
000228-00534.20110809.SLITS	RV080911	EPA Change to Descriptor per SLITS
000228-00534.20110818.MASTER	RV081811	EPA MASTER
000228-00534.20111018.Amendment	RV101811	EPA Amendment
000228-00534.20111116.MASTER	RV111611	EPA SAL
000228-00534.20111215.EPA Not	RV121511	EPA Not (CA Restriction Omit)
000228-00534.20120104.MASTER	RV010412	EPA Accepted Notification
000228-00534.20121010.EPA Amendment	RV101012	EPA Amendment – Aquatic Weeds
000228-00534.20130103.EPA Amendment	RV010313	EPA Reviewed Amendment
000228-00534.20130104.MASTER	RV010413	EPA SAL
000228-00534.20130524.EPA Amendment	RV052413	EPA Amendment
000228-00534.20130819.EPA Amendment	RV081913	EPA Review
000228-00534.20130829.MASTER	RV082913	EPA SAL
000228-00534.20140221.Notification	RV022114	EPA Notification – NY Restriction