GROUP 2 HERBICIDE

Revarian™

Contains imazapyr, the active ingredient used in Arsenal® Herbicide.

For control of undesirable vegetation growing within certain aquatic sites, forestry sites, pasture/rangeland, nonagricultural lands, establishment and maintenance of wildlife openings, release of unimproved Bermudagrass and Bahiagrass, bareground weed control, for use under certain paved areas, and industrial noncropland.

ACTIVE INGREDIENT:	**(% by weight)**
isopropylamine salt of imazapyr (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid)*	27.8%
OTHER INGREDIENTS:	72.2%
TOTAL	100.0%

*Equivalent to 22.67% 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl] -3- pyridinecarboxylic acid or 2.0 pounds acid per gallon.

EPA Reg. No.: 91234-367

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

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCIÓN

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 label booklet for additional Precautionary Statements, and Directions for Use.

HOT LINE NUMBER
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at **1-844-685-9173** for emergency medical treatment information.

For Chemical Emergency: Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

Revarian™ is not manufactured, or distributed by BASF Professional and Specialty Solutions, seller of Arsenal® Herbicide.

Atticus

Manufactured for:
Atticus, LLC
940 NW Cary Parkway, Suite 200
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION / PRECAUCIÓN

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

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material

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.

Engineering Controls

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.

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. This pesticide is toxic to vascular plants and must be used strictly in accordance with the drift precautions of the label.

PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of this product must be mixed, stored and applied only in stainless steel, fiberglass, plastic and plasticlined steel containers. **DO NOT** mix or allow coming in contact with Oxidizing agents. Hazardous Chemical reaction may occur.

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

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.

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, including plants, soil, or water, is:

- Coveralls
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material
- Protective eyewear

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.

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

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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 certain aquatic sites, forestry sites, pasture/rangeland, and nonagricultural lands. Aquatic sites consist of standing and flowing water, estuarine/marine, wetland, and riparian areas. Nonagricultural lands include private, public and military land as follows: uncultivated nonagricultural areas (including airports, highway, railroad and utility rights of way and sewage disposal areas), uncultivated agricultural areas – noncrop producing (including farmyards, fuel storage areas, fence rows, nonirrigation ditch banks and barrier strips), industrial sites – outdoor (including lumber yards, pipeline and tank farms) and natural areas (including wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads, and trails). This product may also be used for the release of unimproved Bermudagrass and Bahiagrass, for bareground weed control, and for use under certain paved surfaces.

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. For maximum activity, weeds should be growing robustly at the time of application, and the spray solution must include a surfactant (see **ADJUVANTS** section for specific use directions). 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.

RESTRICTIONS

- **DO NOT** use on food or feed crops.
- **DO NOT** apply this product 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.
- **DO NOT** apply to water used for irrigation except as described in the **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** use on lawns, walks, driveways, tennis courts or similar areas.
- **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.

NONAGRICULTURAL LANDS AND FORESTRY SITES

- **DO NOT** apply more than 6 pints (1.5 lb. (ae) Imazapyr) of **Revarian** per acre per year.

PASTURE/RANGELAND SITES

- **DO NOT** apply more than 3 pints/48 fl. oz. (0.75 lb. (ae) Imazapyr) per acre or 1.1 fl. oz. (0.17 lb. (ae) Imazapyr) per 1000 sq. ft of **Revarian** per year.
- **DO NOT** apply more than 3 pints/48 fl. oz. (0.75 lb. (ae) Imazapyr) per acre or 1.1 fl. oz. (0.17 lb. (ae) Imazapyr) per 1000 sq. ft. per single application.
- **DO NOT** treat more than 1/10 of the available area to be grazed or cut for hay.
- **DO NOT** cut forage grass for hay for 7 days after application of this product.
- For spot treatment only.

AQUATIC SITES

- **DO NOT** apply more than 6 pints (1.5 lb. (ae) Imazapyr) of **Revarian** 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.

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.

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 including 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, including 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.

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, including 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, including 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.

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PRECAUTIONS FOR AVOIDING INJURY TO NONTARGET 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 must 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. 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.

MANDATORY SPRAY DRIFT

Aerial Application

- Applicators are required to use 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 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.
- Applicators are required to use upwind swath displacement.
- The boom length must not exceed 60% of the wingspan or 90% of the rotor blade diameter to reduce spray drift.
- Applications with wind speeds less than 3 mph and with wind speeds greater than 10 mph are prohibited. These requirements **DO NOT** apply to forestry applications, public health uses or to applications using dry formulations.
- Applications into temperature inversions are prohibited.

Ground Boom Application

- 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.
- Applications with wind speeds greater than 10 mph are prohibited.
- Applications into temperature inversions are prohibited.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles – Follow nozzle manufacturers directions for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

Boom Height – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom must remain level with the crop and have minimal bounce.

Release Height – Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, **DO NOT** release spray at a height greater than 10 ft. above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

WIND EROSION

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

Boom-less Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

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WEED RESISTANCE MANAGEMENT

For resistance management, this product is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 2 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same area. Appropriate resistance management strategies must be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of this product or other Group 2 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and that considers mechanical control methods, cultural (e.g., timing to favor the turf and not the weeds), biological (weed competitive varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method including hoeing or tillage. Prevent movement of resistant weed seeds to other areas by cleaning equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report non-performance or suspected resistance, contact Atticus, LLC 984-465-4800.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. **DO NOT** assume that each listed weed is being controlled by this mechanism of action. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

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 must 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 must 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 directions. 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. **DO NOT** apply more than 3 pints of this product per acre in an invert emulsion.

FERTILIZER/SURFACTANT BLENDS

Nitrogen based liquid fertilizers including 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 advised 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 advised.

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

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TANK MIXES

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product label involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

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.

APPLICATION METHODS

This product may be selectively applied by using low volume directed application techniques or may be broadcast applied using ground equipment, watercraft, or aircraft. Aerial applications to aquatic sites must be made by helicopter. In addition, this product may also be applied using cut stump, cut stem, and frillor girdle treatment techniques within nonagricultural lands, pasture/rangeland and aquatic sites. See AERIAL APPLICATION and GROUND APPLICATION sections for additional details.

AERIAL APPLICATION

All precautions 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. Aerial equipment designed to minimize spray drift including 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 specified label rate. **DO NOT** side trim with this product unless death of treated tree 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.

GROUND APPLICATION

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 directions). 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. Excessive wetting of foliage is not necessary.

For low volume foliar application, 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.

Appropriate tip sizes include 4004E, or 1504E. For a straight stream and cone pattern, adjustable cone nozzles including 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.

High Volume Foliar

For optimum performance when spraying medium to high-density vegetation, 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 directions 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 **TERRESTRIAL WEEDS CONTROLLED** section for relative susceptibility of weed species), use the higher concentrations of herbicide and/or spray volumes. Uniformly cover the foliage of the vegetation to be controlled but **DO NOT** apply to run-off. Excessive wetting of foliage is not necessary.

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.

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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. This product may be mixed as either a concentrate or dilute solution. The dilute solution may be used for application to the cut surface of the stump or to cuts on the stem of 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 (0.13 - 0.19 lb (ae) imazapyr) 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 4 pints (1.0 lb (ae) imazapyr) of this product with no more than 1 quart of water.

Cut Stump Treatment

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

Cut Stem Treatment (Injection, Hack-And-Squirt)

Dilute Solution- 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. Ensure that the injector completely penetrates the bark at each injection site.

Concentrate Solution- 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.

Cut Stubble

This product can be applied within 2 weeks after mechanical mowing or cutting of brush. To suppress or control resprouting, uniformly apply a spray solution of this product at the rate of 1.0 to 2.0 pints per acre to the cut area. This product may be tank-mixed with picloram, or equivalent labeled product for this use, to aid in control or suppression of brush. The addition of 5% (v/v) or more of a penetrating agent can aid in uptake through the bark or exposed roots.

Cut stubble applications are made to the soil and cut brush stumps. This type of application may increase ground cover injury. However, vegetation will recover. Making applications of this product directly to the soil can increase potential root uptake causing injury or death of desirable trees.

Efficacy can be increased and root uptake by desirable vegetation can be decreased if the brush is allowed to regrow and the foliage is treated. See the **Brush Control** section of this label.

Frill Or Girdle Treatment

Using a hatchet, machete, or chain saw, make cuts through the bark and completely around the tree to expose the cambium. The cut must 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.

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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 including 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 fluid ounces (0.38 – 0.75 lb (ae) imazapyr) 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 fluid ounces (0.13 - 0.19 lb (ae) imazapyr) per gallon may be applied for low volume basal bark treatments. This product at 3.0 to 5.0% is advised to be tank mixed with triclopyr 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 (including emulsifiers, etc.) and ongoing agitation are required to attain a homogenous tank mix.
- Basal application must be made to the lower 12" to 18" of the target brush and go to the soil. Care must be taken not to 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				
			TANK MIXING	
AMOUNT OF SPRAY SOLUTION BEING PREPARED	**Revarian ALONE**		**REVARIAN WHEN TANK MIXING**	
	6%	9%	3.0%	5.0%
1 Gallon	8.0 fl oz	12.0 fl oz	3.8 fl oz	6.4 fl oz
3 Gallons	1.5 pts	2.25 pts	11.5 fl oz	1.2 pts
4 Gallons	1.0 qt	1.5 qts	15.4 fl oz	1.6 pts
5 Gallons	1.25 qts	1.0 qt + 28.0 fl oz	1.2 pts	1.0 qt
50 Gallons	3.0 gals + 1.0 pt	4.0 gals + 2.75 qts	1.5 gals	2.5 gals
100 Gallons	6.0 gals + 1.0 qt	9.0 gals + 1.5 qts	3.0 gals	5.0 gals
16 fluid ounces = 1 pint : 2 pints = 1 quart : 4 quarts = 1 gallon				

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FORESTRY USE

This product may be used in forestry sites for site preparation treatment, herbaceous weed control, conifer release treatment, spot treatment of undesirable hardwood vegetation, late rotation vegetation control in Western conifers, and bag and spray application for conifer release. See appropriate sections of this label for specific use directions for the application method and vegetation control desired.

Restrictions:

- **DO NOT** apply more than 6 pints/96 fl. oz. (1.5 lb ae) of **Revarian** per acre per year.
- **DO NOT** apply more than 6 pints/96 fl. oz. (1.5 lb ae) of **Revarian** per single application.
- **DO NOT** make more than 1 application per year when using maximum application rate.
- **DO NOT** make more than 12 applications per year when using reduced application rates.

Site Preparation Treatment

This product may be used to control labeled grasses, broadleaf weeds, vines and brambles, and woody brush and trees on forest sites in advance of regeneration for the following conifer crop species:

Common Name	**Scientific Name**	**Rate** (fl ozs/A)
Loblolly pine	*Pinus taeda*	48 - 80 (0.75 – 1.25 lb ae)
Loblolly x pitch hybrid		
Longleaf pine	*Pinus palustris*	
Shortleaf pine	*Pinus echinate*	
Virginia pine	*Pinus virginiana*	
Slash pine	*Pinus elliottii*	40 – 64 (0.63 – 1.0 lb ae)
Coastal redwood	*Sequoia sempervirens*	24 – 48 (0.38 – 0.75 lb ae)
Douglas fir	*Pseudotsuga menziesii*	
Incense cedar	Libocedrus decurrens	
Western hemlock	*Tsuga heterophylla*	
California red fir	*Abies magnifica*	24 – 40 (0.38 – 0.63 lb ae)
California white fir	*Abies concolor*	
Jack pine	*Pinus banksiana*	24 – 32 (0.38 – 0.5 lb ae)
Lodgepole pine	*Pinus contorta*	
Pitch pine	*Pinus rigida*	
Ponderosa pine	*Pinus ponderosa*	
Sugar pine	*Pinus lambertiana*	
White pine	*Pinus strobus*	
Black spruce	*Picea mariana*	
Red spruce	*Picea rubens*	
White spruce	*Picea glauca*	

Use the specified rate of this product per acre applied as a broadcast foliar spray for long-term control of labeled woody plants and residual control of herbaceous weeds. Within 4 to 6 weeks of treatment, grass and other herbaceous weeds will be controlled and may provide fuel to facilitate a site preparation burn if desired to control conifers or other species tolerant to the herbicide.

Apply the specified rate of this product per acre in 5 to 30 gallons total spray solution for helicopter applications or 5 to 100 gallons total spray solution for mechanical ground spray and backpack applications. Use a minimum of 0.5% by volume nonionic surfactant (NIS). Use the higher label rate of this product and higher spray volumes when controlling particularly dense or multilayered canopies of hardwood stands or difficult to control species.

In certain cases, tank mixes may be necessary for chemical control of conifers and other species tolerant to this product. Observe all precautions and restrictions on the product labels. Always follow the most restrictive label. Combinations with other products labeled for forest site preparation may kill certain plants including legumes and blackberry which are desirable for wildlife habitat.

Where quick initial brownout (deadening of foliage) is desired for burning, apply a tank mixture of 32 to 64 fl. oz. of this product with glyphosate or triclopyr ester per acre. For control of seedling pines, apply 32 to 64 fl. oz. of this product with glyphosate. For site preparation, rates less than 48 fl. oz of this product will provide suppression of hard wood brush and trees, some resprouting may occur.

DO NOT plant seedlings of black spruce (*Picea mariana*) or white spruce (*Picea glauca*) on sites broadcast treated with this product or into the treated zone of spot or banded applications for 3 months following application or injury may occur.

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Herbaceous Weed Control

Use this product for selective weeding in the following conifer crop species:

Common Name	Scientific Name	Rate (fl ozs/A)
Loblolly pine	*Pinus Taeda*	12 – 20 (0.19 – 0.31 lb ae)
Loblolly x pitch hybrid		
Virginia pine	*Pinus virginiana*	
Longleaf pine[1]	*Pinus palustris*	8 – 12 (0.13 – 0.19 lb ae)
Slash pine[1]	*Pinus elliottii*	
Douglas fir[1]	*Pseudotsuga menziesii*	

[1]Use of surfactant is not advised.

This product may be applied as a broadcast treatment, banded over tree rows, or as a directed spray for release of young conifers from herbaceous weeds. To prevent possibility of conifer injury, **DO NOT** apply this product when conifers are under stress from drought disease, animal or winter injury, planting shock, or other stresses reducing conifer vigor. Broadcast applications may be made by helicopter, ground, or backpack sprayer. For difficult to control weeds, use the higher labeled rates. Where herbaceous weeds have overtopped conifer seedlings, a nonionic surfactant may be added to improve weed control (except for slash pine, long leaf pine, and Douglas fir) at a rate not to exceed 0.5% of spray solution volume. Some minor conifer growth inhibition may be observed when herbaceous weed control treatments are made during periods of active conifer growth.

This product may also be applied using backpack or handheld sprayers to control herbaceous weeds around individual conifer seedlings. Mix 0.8 to 1.2 fl. oz. (0.013 – 0.019 lb ae) of this product + 0.2 oz. nonionic surfactant per gallon of water. Direct the spray to the weeds and minimize the amount applied to conifer foliage for best conifer tolerance. Ensure that maximum labeled rates per acre for previously listed crop species are not exceeded.

This product may be tank mixed with sulfometuron to broaden the spectrum of weeds controlled. For loblolly pine, apply 8 to 12 fl. oz. (0.13 – 0.19 lb ae) of this product plus labeled rates of sulfometuron per acre. The application of this product plus sulfometuron on other conifer species may cause growth suppression.

Conifer Release Treatment

This product may be applied as a broadcast or directed spray application for suppression of labeled brush, tree, and herbaceous weed species. Directed spray applications may be made with low volume applications in conifer stands of all ages by targeting unwanted vegetation and avoiding direct application to the conifer. Ensure that maximum labeled rates per acre listed for the following crop species are not exceeded.

Broadcast Applications for Release of the Following Conifers from Hardwood Competition

Common Name	Scientific Name	Rate (fl ozs/A)
Loblolly pine[3]	*Pinus taeda*	24 – 40 (0.38 – 0.63 lb ae)
Loblolly x pitch hybrid[3]		
Virginia pine[3]	*Pinus virginiana*	
Longleaf pine	*Pinus palustris*	24 – 32 (0.38 – 0.5 lb ae)
Pitch pine	*Pinus rigida*	
Shortleaf pine	*Pinus echinate*	
Slash pine	*Pinus elliottii*	
White pine[1]	*Pinus strobus*	16 - 32 (0.25 – 0.5 lb ae)
California red fir	*Abies magnifica*	16 – 24 (0.25 – 0.38 lb ae)
California white fir	*Abies concolor*	
Lodgepole pine[2]	*Pinus contorta*	
Douglas fir[2]	*Pseudotsuga menziesii*	

(continued)

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Broadcast Applications for Release of the Following Conifers from Hardwood Competition *(continued)*

Common Name	Scientific Name	Rate (fl ozs/A)
Jack pine[2]	*Pinus banksiana*	12 – 24 (0.19 – 0.38 lb ae)
Black spruce[2]	*Picea mariana*	
Red spruce[2]	*Picea rubens*	
White spruce[2]	*Picea glauca*	

[1]**DO NOT** make applications to white pine stands younger than three years old. To minimize potential white pine injury, release treatments must not be made prior to July 15.

[2]Applications must be made after formation of final conifer resting buds in the fall or height growth inhibitor may occur.

[3]**Mid-rotation release:** For broadcast applications below the pine canopy in established stands of loblolly pine, loblolly X pitch hybrid, and Virginia pine, use 32 to 64 fl oz (0.5 – 1.0 lb ae) of this product per acre. For mid-rotation release of other species, use rates listed in the chart above.

For slash pine and longleaf pine, broadcast release treatments over the top of pines for the purpose of woody plant control must be made after August 15 and only in stands 2 through 5 years old. For applications over the top of slash pine and longleaf pine, DO NOT add surfactant and use lower labeled rates on sandy soils.

For the Aerial Release to Slash Pine (*Pinus Elliortii*) Stands Over The Age of 5 Years

This product may be applied as an aerial application for release of slash pine stands over the age of 5 years. In addition to reading and following all directions in this product, the following precautions and restrictions are required:

- Make applications in the fall after slash pine height growth has stopped and buds have set.
- **DO NOT** apply before September 15 even if height growth has stopped and buds have set.
- A maximum of 12 to 14 fl. oz./A (0.19 – 0.22 lb ae) of this product may be applied. Use the 12 fl. oz./A (0.19 lb ae) rate on sandier sites.

Apply the label rate of this product per acre when making broadcast applications with helicopter or ground spray equipment. Refer to mixing and application instructions for proper spray volumes. A nonionic surfactant may be added at no more than 0.25% by volume.

Use the higher label rates of this product when controlling particularly dense stands or difficult to control species.

Some minor conifer growth inhibition may be observed when release treatments are made during periods of active conifer growth. To minimize potential conifer height growth inhibition, **DO NOT** make broadcast applications to conifer stands except loblolly pine before the end of the second growing season. To minimize potential confer height growth inhibition, broadcast release treatments may be made late in the growing season. To prevent possibility of conifer injury, **DO NOT** apply this product when conifers are under stress from drought, disease, animal or winter injury, or other stresses reducing conifer vigor.

This product may be used to release loblolly pine seedlings during the first growing season following planting or for one year old natural loblolly pine regeneration. For one year old loblolly pine release, apply 24 to 40 fl. oz. (0.38 – 0.63 lb ae) per acre of this product after July 15. Rates below 32 fl. oz. (0.5 lb ae) per acre are intended for hardwood growth suppression expect hardwood resprouting.

Spot Treatment of Undesirable Hardwood Vegetation

This product may be used as a directed foliar or cut stem application to control undesirable brush and hardwoods in the management of stands of all ages for the conifer species listed in the **Broadcast Application** section above. Refer to the **Mixing and Application Instructions** in the **Foliar** or **Cut Stem** sections for proper use rates, equipment, and application techniques. **DO NOT** exceed maximum labeled rates per acre listed for crop species. Cut stem applications may be used for spot treatment of undesirable hardwoods in Ponderosa pine stands using 24 fl. oz. (0.38 lb. ae) or less of this product per acre.

Avoid direct application to desired plant species or injury may occur. Injury may occur to nontarget or desirable hardwoods or conifers if they extend from the same root system or their root systems are grafted to those of the treated tree or their roots extend into the treated zone.

Late Rotaton Vegetation Control in Western Conifer

In California, the Pacific Northwest, and Inland Northwest, broadcast aerial applications of this product up to 48 fl. oz. (0.75 lb. ae) per acre are permissible in conifer stands that are targeted for harvesting the year following treatment. Use minimum spray volume of 15 gallons per acre. Significant conifer injury or mortality must be expected. **DO NOT** use this treatment if conifer injury or mortality cannot be tolerated.

Bag and Spray Application for Conifer Release

In Douglas fir and Ponderosa pine stands, broadcast applications of this product up to 32 fl. oz. (0.5 lb ae) per acre are permissible when the trees are covered by bags prior to the application. The bags must prevent the spray mix from contacting the conifer foliage. On sites with coarse textured soils (e.g., decomposed granite, pumice, sandy or rocky sites) or low levels of soil organic matter (generally 5% or less) significant conifer growth inhibition and mortality is possible. **DO NOT** use this treatment on these types of sites if conifer growth inhibition and mortality cannot be tolerated.

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NONAGRICULTURAL LAND USE

This product may be used for woody and herbaceous weed control in nonagricultural lands including private, public, and military lands. Nonagricultural lands include private, public and military land as follows: uncultivated nonagricultural areas (including airports, highway, railroad and utility rights of way and sewage disposal areas), uncultivated agricultural areas – noncrop producing (including farmyards, fuel storage areas, fence rows, nonirrigation ditch banks and barrier strips), industrial sites – outdoor (including lumber yards, pipeline and tank farms) and natural areas (including wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads, and trails). Applications 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.

Restrictions:

- **DO NOT** apply more than 6 pints/96 fl. oz. (1.5 lb ae) of **Revarian** per acre per year.
- **DO NOT** apply more than 6 pints/96 fl. oz. (1.5 lb ae) of **Revarian** per single application.
- **DO NOT** make more than 1 application per year when using the maximum application rate.
- **DO NOT** make more than 24 applications per year when using reduced application rates.

Brush Control

Use the specified rate of this product with the preferred application technique for control of undesirable brush.

Tank Mixes and Application Rates for Low-Volume Foliar Brush Control*

Target Vegetation	Revarian Rate (% by volume)	Tank Mix
Mixed hardwoods without elm, locust, or pine	1.0 to 1.5	Surfactant
Mixed hardwoods containing elm, locust, and pine	0.5 to 1.0	Glyphosate plus surfactant
Mixed hardwoods with locust and pine but no elm		Fosamine plus surfactant
Mixed hardwoods with locust and elm but no pine		Metsulfuron plus surfactant
*Tank mixes with 2,4-D or products containing 2,4-D could result in reduced product efficacy.		

Backpack and Handheld Spray Mixing Guide

% Solution	Product per gallon of mix (fl ozs)	Product per 4-gallon backpack (fl ozs)
0.25	0.3 (0.005 lb ae)	1.3 (0.02 lb ae)
0.5	0.6 (0.009 lb ae)	2.6 (0.04 lb ae)
1.0	1.3 (0.02 lb ae)	5.1 (0.08 lb ae)
2.0	2.6 (0.04 lb ae)	10.2 (0.16 lb ae)
3.0	3.8 (0.059 lb ae)	15.4 (0.24 lb ae)
5.0	6.4 (0.1 lb ae)	25.6 (0.4 lb ae)

Measuring Chart

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

For Selective Control of Undesirable Weeds in Unimproved Bermudagrass and Bahiagrass

This product may be used on unimproved industrial noncropland Bermudagrass and bahiagrass turf, such as roadsides, utility rights-of-way and other nonagricultural lands. 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. Temporary yellowing of grass may occur when treatment is made after growth begins. **DO NOT** add surfactant in excess of the specified rate (1 fl. oz. 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.

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Dosage Rates And Timing:

Bermudagrass - Apply this product at 6 to 12 fl. oz. (0.09 – 0.19 lb ae) per acre when the Bermudagrass is dormant. Apply this product at 6 to 8 fl. oz. (0.09 – 0.13 lb ae) 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.

For additional pre-emergence control of annual grasses and small seeded broadleaf weeds, add pendimethalin. Consult the pendimethalin product label for weeds controlled and for other use directions and precautions.

For control of Johnsongrass in bermudagrass turf, apply this product at 8 fl. ozs. (0.13 lb ae) per acre plus glyphosate plus surfactant. For additional control of broadleaves and vines, triclopyr may be added to the above mix. Observe all precautions and restrictions on the glyphosate and triclopyr product labels.

Bahiagrass - Apply this product at 4 to 8 fl. oz. (0.06 - 0.13 lb. ae) 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 use directions for surfactants).

Weeds Controlled in Unimproved Bermudagrass and Bahiagrass

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

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 must 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 fl. oz. (0.09 – 0.13 lb ae) 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 fl. oz. (0.03 lb ae) per acre plus 0.25% nonionic surfactant. For increased suppression, this product may be tank-mixed with such products containing glyphosate and 2,4-D.

Tank-mixes may increase injury to desired turf. Consult each product label for advised 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 (0.38 – 1.5 lb ae) 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 most restrictive directions for use and precautionary statements of each product when making an application involving tank-mixes.

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 postemergence application. For optimum performance on tough to control annual grasses, applications must 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 including glyphosate. Tank mixes with 2,4-D or products containing 2,4-D may reduce the performance of this product. Always follow the most restrictive directions for use and precautionary statements of each product 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 glyphosate. For added residual weed control or to increase the weed spectrum, add dicamba. Always follow the most restrictive directions for use and precautionary statements of each product when tank-mixing.

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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 must 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 must be removed by scalping with a grader blade to a depth sufficient to insure their complete removal.

Paving must follow applications of this product as soon as possible. **DO NOT** apply where the product may contact the roots of desirable trees or other plants.

This product is not to be used under pavement on residential properties including driveways or parking lots or for use in recreational areas including under bike or jogging paths, golf cart paths, or tennis courts, or where landscape plantings could be anticipated.

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 (drip line).

Applications must 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 (1.5 lb ae) per acre (2.2 fl. oz. (0.034 lb ae) per 1,000 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 Treatments and Crack-and-Crevice Treatments

Use this product as an initial or follow up treatment to control weed escapes or weed encroachment in bareground situations, including cracks and crevices in paved surfaces including parking lots, 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 fl. oz. (0.03 – 0.75 lb ae) 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.

Restrictions

- **DO NOT** apply more than 3 pints/48 fl oz (0.75 lb ae) per acre, or 1.1 fl oz (0.17 lb (ae) Imazapyr) per 1,000 sq. ft. of **Revarian** per year.
- **DO NOT** apply more than 3 pints/48 fl oz (0.75 lb ae) per acre, or 1.1 fl oz (0.17 lb (ae) Imazapyr) per 1,000 sq. ft. of **Revarian** per single application.
- **DO NOT** treat more than 1/10 of the available area to be grazed or cut for hay.

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.
- 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 desirable vegetation following a fire.
- Control of 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 and grown to maturity. The test strip must 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.

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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 advised.

The rates shown below pertain to broadcast applications and indicate the relative sensitivity of these weeds. The relative sensitivity must 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 must 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 pts/A[1] (0.5 – 0.75 lb ae)		
Annual bluegrass	*Poa annua*	A
Broadleaf signalgrass	*Urochloa 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 pts/A[1] (0.75 – 1.0 lb ae)		
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
Itchgrass	*Rottboellia exaltata*	A

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TERRESTRIAL WEEDS CONTROLLED		
Common Name	**Scientific Name**	**Growth Habit[2]**
Grass Weeds *(continued)*		
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	*Urochloa platyphylla*	A
Wild barley	*Hordeum* spp.	A
Woolly cupgrass	*Eriochloa villosa*	A
Apply 4 to 6 pts/A[1] (1.0 – 1.5 lb ae)		
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 frondose*	P

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

Common Name	Scientific Name	Growth Habit[2]
Broadleaf Weeds		
Apply 2 to 3 pts/A[1] (0.5 – 0.75 lb ae)		
Burdock	*Arctium* spp.	B
Carolina geranium	*Geranium carolinianum*	A
Carpetweed	*Mollugo verticillate*	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

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Common Name	Scientific Name	Growth Habit[2]
Broadleaf Weeds *(continued)*		
Kochia	*Kochia scoparia*	A
Lambsquarters	*Chenopodium album*	A
Lespedeza[3]	*Lespedeza* spp.	P
Miner's 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
Broom snakeweed	*Gutierrezia sarothrae*	P
Bull thistle	*Cirsium vulgare*	B
Burclover	*Medicago* spp.	A
Apply 3 to 4 pts/A[1] (0.75 – 1.0 lb ae)		
Chickweed, mouseear	*Cerastium vulgatum*	A
Clover, hop	*Trifolium procumbens*	A
Cocklebur	*Xanthium strumarium*	A
Cudweed	*Gnaphalium* spp.	A
Desert camelthorn	*Alhagi maurorum*	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

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Common Name	Scientific Name	Growth Habit[2]
Broadleaf Weeds *(continued)*		
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 pts/A[1] (1.0 – 1.5 lb ae)		
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	*Solanum 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] Not registered for use in California.
[4] For best results, early postemergence applications are required.

Common Name	Scientific Name	Growth Habit[2]
Vines and Brambles		
Apply 1 pt/A (0.25 lb ae)		
Field bindweed	*Convolvulus arvensis*	P
Hedge bindweed	*Calystegia sepium*	A
Apply 2 to 3 pts/A[1] (0.5 – 0.75 lb ae)		
Wild buckwheat	Polygonum convolvulus	P
Apply 3 to 4 pts/A[1] (0.75 – 1.0 lb ae)		
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] Including: Multiflora rose, Macartney rose	*Rosa* spp. *Rosa multiflora, Rosa bracteate*	P P
Apply 4 to 6 pts/A[1] (1.0 – 1.5 lb ae)		
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 rates.

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Common Name	Scientific Name	Growth Habit[2]
Brush Species		
Apply 2 to 4 pts/A[1] (0.5 – 1.0 lb ae)		
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 pts/A[1] (1.0 – 1.5 lb ae)		
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[5]	*Ulmus* spp.	P
Eucalyptus	*Eucalyptus* spp.	P
Hawthorn	*Crataegus* spp.	P
Hickory[3]	*Carya* spp.	P
Huckleberry	*Gaylussacia* spp.	P
Lyonia spp. Including: Fetterbush, Staggerbush	*Lyonia lucida, 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 occidentalis*	P

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Common Name	Scientific Name	Growth Habit[2]
Brush Species *(continued)*		
Tanoak[3]	*Lithocarpus densiflorus*	P
Titi[8]	*Cyrilla racemiflora*	P
Tree of heaven	*Ailanthus altissima*	P
Vaccinium spp. Including: Blueberry, Sparkleberry	*Vaccinium* spp., *Vaccinium arboretum*	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 nigra*), laurel oak (*Q. laurifloria*), willow oak (*Q. phellos*), and live oak (*Q. virginiana*), use higher labeled rates.

[8] Suppression only.

[9] Not registered for use 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 **Restrictions** section of this label for instructions, directions, precautions and restrictions on aquatic uses.

Restrictions

- **DO NOT** apply more than 6 pints/96 fl. oz. (1.5 lb (ae) Imazapyr) of **Revarian** per acre per year.
- **DO NOT** apply more than 6 pints/96 fl. oz. (1.5 lb (ae) Imazapyr) of **Revarian** per acre per application.
- **DO NOT** make more than 6 applications per acre per year when using reduced application rates.
- Wait at least 10 to 14 days between treatments.
- **DO NOT** apply to bodies of water or portions of bodies of water where emergent and/or floating weeds do not exist.
- **No Application to Aquatic Sites in New York State.**

Read and observe the following directions if aquatic sites are present in nonagricultural lands 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. Concentrations of this product, resulting from direct application to water, are not expected to be of sufficient concentration nor duration to control target vegetation. Application must 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 must 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 must be made while traveling upstream to prevent concentration of this herbicide in water.

Large Application Areas / Oxygen 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. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms ability to move into untreated areas.

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

Apply this product at 2 to 6 pints (0.5 – 1.5 lb ae) per acre depending on weed density and species present. 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.

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.

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Mixing Guide

% Solution	Product per gallon of mix (fl ozs)
0.25	0.3 (0.005 lb ae)
0.5	0.6 (0.009 lb ae)
1.0	1.3 (0.02 lb ae)
2.0	2.6 (0.04 lb ae)
3.0	3.8 (0.059 lb ae)
5.0	6.4 (0.1 lb ae)

Measuring Chart

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

Common Name	Scientific Name	Use Rates and Application Directions
Floating Weeds		
·Floating heart	*Nymphodes* spp.	2 to 4 pints/A (0.5 – 1.0 lb ae) applied in 100 GPA water mix. (0.5 to 1.0% solution) Ensure 100% coverage of actively growing emergent foliage.
·Frogbit	*Limnobium spongia*	1 to 2 pints/A (0.25 – 0.5 lb ae) applied in 100 GPA water mix (0.5% solution). Ensure 100% coverage of actively growing emergent foliage.
·Spatterdock	*Nuphar luteum*	Apply a tank mix of: 2 to 4 pints/A (0.5 – 1.0 lb ae) **Revarian** + Labeled rate glyphosate (0.5% **Revarian** + 1.5% glyphosate) in 100 GPA water for best control. Ensure 100% coverage of actively growing emergent foliage.
·Water hyacinth	*Eichhornia crassipes*	1 to 2 pints/A (0.25 – 0.5 lb ae) applied in 100 GPA water to actively growing foliage (0.5% solution).
·Water lettuce	*Pistia stratiotes*	1 to 2 pints/A (0.25 – 0.5 lb ae) applied in 100 GPA water mix (0.5% solution). Ensure 100% coverage of actively growing emergent foliage.
Emerged Weeds		
·Alligatorweed	*Alternanthera philoxeroides*	1 to 4 pints/A (0.25 – 1.0 lb ae) applied in 100 GPA water mix (0.5% solution). Ensure 100% coverage of actively growing emergent foliage.
·Arrowhead, duck-potato	*Sagittaria* spp.	1 to 2 pints/A (0.25 – 0.5 lb ae) applied in 100 GPA water mix (0.5% solution). Ensure 100% coverage of actively growing emergent foliage.
·Bacopa, lemon	*Bacopa* spp.	1 to 2 pints/A (0.25 – 0.5 lb ae) applied in 100 GPA water mix (0.5% solution). Ensure 100% coverage of actively growing emergent foliage.
·Parrot feather	*Myriophyllum aquaticum*	Foliage must be above water for sufficient **Revarian** uptake. Apply 2 to 4 pints/A (0.5 – 1.0 lb ae) **Revarian** to actively growing emergent foliage.
·Pennywort	*Hydrocotyle* spp	1 to 2 pints/A (0.25 – 0.5 lb ae) applied in 100 GPA water mix (0.5% solution). Ensure 100% coverage of actively growing emergent foliage.
·Pickerelweed	*Pontederia cordata*	2 to 3 pints/A (0.5 – 0.75 lb ae) applied in 100 GPA water mix (1% solution). Ensure 100% coverage of actively growing emergent foliage.
·Taro, wild Coco yam Dasheen Elephant's ear	*Colocasia esculentum*	4 to 6 pints/A (1.0 – 1.5 lb ae) applied in 100 GPA with a high-quality sticker adjuvant (1.5% solution). Ensure good coverage of actively growing emergent foliage.
·Water chestnut	*Trappa natans*	4 to 6 pints/A (1.0 – 1.5 lb ae) applied in 100 GPA with a high quality sticker adjuvant (1.5% solution). Ensure good coverage of actively growing emergent foliage.
·Water lily	*Nymphaea odorata*	2 to 3 pints/A (0.5 – 0.75 lb ae) applied in 100 GPA water mix (1% solution). Ensure 100% coverage of actively growing emergent foliage.
·Water primrose	*Ludwigia uruguayensis*	4 to 6 pints/A (1.0 – 1.5 lb ae) (1.5% solution). Ensure 100% coverage of actively growing emergent foliage.

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Common Name	Scientific Name	Use Rates and Application Directions
Terrestrial/Marginal Weeds		
•Aquatic nightshade Soda apple	*Solanum tampicense*	2 pints/A (0.5 lb ae) applied to foliage.
•Bamboo, Japanese	*Phyllostachys* spp.	3 to 4 pints/A (0.75 – 1.0 lb ae) applied to foliage when plant is actively growing; before setting seedhead. 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 to 4 pints/A (0.5 – 1.0 lb ae) applied to foliage
Cattail	*Typha* spp.	2 to 4 pints/A (0.5 – 1.0 lb ae) applied to actively growing green foliage after full leaf elongation (1% solution). Lower rates will control cattail in the North; higher rates are needed in the South.
Chinese tallow tree	*Sapium sebiferum*	16 to 24 fl ozs/A (0.25 – 0.38 lb ae) applied to foliage.
Cogongrass	*Imperata cylindrica*	Burn foliage, till area; then fall-spray 4 pints/A (1.0 lb ae) **Revarian** + MSO applied to new growth.
Cordgrass, prairie	*Spartina* spp.	4 to 6 pints/A (1.0 – 1.5 lb ae) applied to actively growing foliage.
•Cutgrass	*Zizaniopsis miliacea*	4 to 6 pints/A (1.0 – 1.5 lb ae) applied to actively growing foliage.
•Elephant grass Napier grass	*Pennisetum purpureum*	3 pints/A (0.75 lb ae) applied to actively growing foliage.
•Flowering rush	*Butomus umbellatus L.*	2 to 3 pints/A (0.5 – 0.75 lb ae) applied to actively growing foliage.
Giant reed Wild cane	*Arundo donax*	4 to 6 pints/A (1.0 – 1.5 lb ae) applied in spring to actively growing foliage.
•Golden bamboo	*Phyllostachys aurea*	3 to 4 pints/A (0.75 – 1.0 lb ae) applied to foliage when plant is actively growing; before setting seedhead. More foliage will result in greater herbicide uptake, resulting in greater root kill.
Junglerice	*Echinochloa colonum*	3 to 4 pints/A (0.75 – 1.0 lb ae) applied to actively growing foliage.
Knapweed	*Centaurea* spp.	**Russian knapweed:** 2 to 3 pints/A (0.5 – 0.75 lb ae) + 1 quart/A MSO fall-applied after senescence begins.
Knotweed, Japanese	*Polygonum cuspidatum* *Fallopia japonica*	3 to 4 pints/A (0.75 – 1.0 lb ae) applied postemergence to actively growing foliage.
Melaleuca Paperbark tree	*Melaleuca quinquenervia*	• **Established stands** - Apply 6 pints/A (1.5 lb ae) **Revarian** + glyphosate + spray adjuvant. For best results, use 4 quarts/A MSO as an adjuvant. • **Broadcast foliar control** - Apply aerially in a minimum of 2 passes at 10 gallons/A applied cross treatment. • **Spot treatment** - Use a 25% **Revarian** + 25% solution of glyphosate + 1.25% MSO in water applied as a frill or stump treatment.
•Nutgrass Kili'p'opu	*Cyperus rotundus*	2 pints/A (0.5 lb ae) **Revarian** + 1 quart/A MSO applied early postemergence.
•Nutsedge	*Cyperus* spp.	2 to 3 pints/A (0.5 – 0.75 lb ae) postemergence to foliage or preemergence incorporated; nonincorporated preemergence applications will not control.
Phragmites Common reed	*Phragmites australis*	4 to 6 pints/A (1.0 – 1.5 lb ae) 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 feet tall before treatment. Lower rates will control phragmites in the North; higher rates are needed in the South.
•Poison hemlock	*Conium maculatum*	2 pints/A (0.5 lb ae) **Revarian** + 1 quart/A MSO applied preemergence to early postemergence to rosette before flowering.
Purple loosestrife	*Lythrum salicaria*	1 pint/A (0.25 lb ae) applied to actively growing foliage.
Reed canarygrass	*Phalaris arundinacea*	3 to 4 pints/A (0.75 – 1.0 lb ae) applied to actively growing foliage.
Rose, swamp	*Rosa palustris*	2 to 3 pints/A (0.5 – 0.75 lb ae) applied to actively growing foliage.
Russian olive	*Elaeagnus angustifolia*	2 to 4 pints/A (0.5 – 1.0 lb ae) applied to foliage (1% solution).

(continued)

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Common Name	Scientific Name	Use Rates and Application Directions
Terrestrial/Marginal Weeds *(continued)*		
Saltcedar Tamarisk	*Tamarix* spp.	**Aerial application** – 4 pints (1.0 lb ae) **Revarian** + 0.25% v/v NIS applied to actively growing foliage during flowering. **Spot treatment** - Use 1% solution of **Revarian** + 0.25% v/v NIS and spray to wet foliage. After application, wait at least 2 years before disturbing treated saltcedar. Earlier disturbance can reduce overall control.
Smartweed	*Polygonum* spp.	2 pints/A (0.5 lb ae) applied early postemergence.
Sumac	*Rhus* spp.	2 to 3 pints/A (0.5 – 0.75 lb ae) applied to foliage.
Swamp morningglory Kangkong Water spinach	*Ipomoea aquatica*	1 to 2 pints/A (0.25 – 0.5 lb ae) **Revarian** + 1 quart/A MSO applied early postemergence.
Torpedo grass *White top, Hoary cress	*Panicum repens* *Cardaria draba*	4 pints/A (1.0 lb ae) (1.0 to 1.5% solution). Ensure good coverage to actively growing foliage. 1 to 2 pints/A (0.25 – 0.5 lb ae) applied in spring to foliage during flowering.
Willow	*Salix* spp.	2 to 3 pints/A (0.5 – 0.75 lb ae) **Revarian** 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: Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

PESTICIDE DISPOSAL: Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

For plastic containers ≤ 5 gallons: Nonrefillable Container: DO NOT reuse or refill this container. 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.

For plastic containers > 5 gallons: Nonrefillable container: DO NOT reuse or refill this container. Triple 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. Recap 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.

LIMITATION OF WARRANTY AND LIABILITY

IMPORTANT: READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability. **CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

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