LANDSCAPE MANAGEMENT
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Notice of Weed Control Application

Date of Application: November 2nd-13th, 2026

Locations:

- Charleston Blvd.- 215 to Town Center Dr.
- Town Center Dr.- Charleston Blvd. to Sahara Ave.
- Griffith Peak Dr.- Town Center Dr. to Pavilion Center Dr.
- Spruce Goose St.- Charleston Blvd. to Sahara Ave.
- Pavilion Center Dr.- Charleston Blvd. to Sahara Ave.

Reason for Application: Target weed control in planters, rock areas, tree wells, and cracks of sidewalks.

Product Manufacturer Name: Ranger Pro Herbicide.

-EPA registration no. 524-517

-Active ingredients: glyphosate

-Signal word: Caution

-Precautionary statement: Harmful if swallowed or inhaled. Causes eye irritation.

Product Manufacturer Name: Pendulum Aqua Cap.

-EPA registration no. 241-416

-Active ingredients: pendimethalin: N-(1-ethylpropyl)-3,4-dimethyl-2,6dinitrobenzenamine

-Signal word: Caution

-Precautionary statement: Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing

ATTENTION:

This specimen label is provided for general information only.

- This pesticide product may not yet be available or approved for sale or use in your area.
- It is your responsibility to follow all Federal, state and local laws and regulations regarding the use of pesticides.
- Before using any pesticide, be sure the intended use is approved in your state or locality.
- Your state or locality may require additional precautions and instructions for use of this product that are not included here.
- Monsanto does not guarantee the completeness or accuracy of this specimen label. The information found in this label may differ from the information found on the product label. You must have the EPA approved labeling with you at the time of use and must read and follow all label directions.
- You should not base any use of a similar product on the precautions, instructions for use or other information you find here.
- Always follow the precautions and instructions for use on the label of the pesticide you are using.

21225H2-13

Ranger PRO® Herbicide

Ranger PRO herbicide is a complete broad-spectrum postemergence professional herbicide for industrial, turf and ornamental weed control.

Complete Directions for Use

EPA Reg. No. 524-517 2010-1

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION IS LIKELY TO RESULT.

Read the entire label before using this product.

Use only according to label instructions.

Not all products listed in this label are registered for use in California. Check the registration status of each product in California before using.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

1.0 INGREDIENTS

ACTIVE INGREDIENT:	
*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	41.0%
OTHER INGREDIENTS (including surfactant):	59.0%
	100.0%

*Contains 480 grams per liter or 4 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per liter or 3 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT,
CALL TOLL-FREE, 1-800-332-3111.

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL ASSISTANCE,
CALL COLLECT, DAY OR NIGHT, (314)-694-4000.

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES EYE IRRITATION.

Avoid contact with eyes or clothing.

FIRST AID: Call a poison control center or doctor for treatment advice.	
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. • Remove contact lenses if present after the first 5 minutes then continue rinsing eye.

- Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
- You may also contact **(314) 694-4000**, collect day or night, for emergency medical treatment information.
- This product is identified as **Ranger PRO® herbicide, EPA Registration No. 524-517.**

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment. If there are no such instructions for washables, 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.

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

3.2 Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

3.3 Physical or Chemical Hazards

Mix, store and apply spray solutions of this product using only stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling or Fact Sheets. Supplemental labeling can be found on the Internet at www.agrian.com, www.cdms.net or www.greenbook.net websites or obtained by contacting your Authorized Monsanto Retailer or Monsanto Company Representative.

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

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 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is: coveralls, chemical resistant gloves greater than 14 mils in thickness composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber, shoes plus socks.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (40 CFR Part 170) for agricultural pesticides. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried.

4.0 STORAGE AND DISPOSAL

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container, including rinsate, by application in accordance with label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable Federal, State and local procedures.

See container label for container handling and disposal instructions and for refilling limitations.

5.0 PRODUCT INFORMATION

Product Description: This product is a postemergence, systemic herbicide with no residual soil activity. It gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid containing surfactant and no additional surfactant is needed or recommended. It may be applied through standard equipment after dilution and mixing with water or other carriers according to label instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts. Effects are visible on most annual weeds within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. See the "WEEDS CONTROLLED" sections of this label for specific weed rates.

Always use the higher product application rate in the range when weed growth is heavy or dense, or when weeds are growing in an undisturbed (non-cultivated) area. Reduced weed control may result from treating weeds with disease or insect damage, weeds heavily covered with dust, or weeds under poor growing conditions.

Mode of Action in Plants: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed or cut, and have not been allowed to regrow to the appropriate stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, ensure spray coverage is uniform and complete. Do not spray foliage to the point of runoff.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or rootstocks of perennials will not be affected by the herbicide and will continue to grow.

Maximum Application Rates: The maximum application or use rates stated throughout this label are given in units of volume (fluid ounces or quarts) of this product per acre. However, the maximum allowed application rates apply to this product combined with the use of any and all other herbicides containing the active ingredient glyphosate, whether applied separately or as tank mixtures, on a basis of total pounds of glyphosate (acid equivalents) per acre. If more than one glyphosate-containing product is applied to the same site within the same year, you must ensure that the total use of glyphosate (pounds acid equivalents) does not exceed the maximum allowed. The combined total of all treatments must not exceed 10.6 quarts of this product (10.6 pounds of glyphosate acid) per acre per year. See the "INGREDIENTS" section of this label for necessary product information.

ATTENTION

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) that are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

5.1 Weed Resistance Management

GROUP	9	HERBICIDE

Glyphosate, the active ingredient in this product, is a Group 9 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural or mechanical practices.

To minimize the occurrence of glyphosate resistant biotypes observe the following good weed management practices:

- Scout your application site before and after herbicide applications.
- Control weeds early when they are relatively small.
- Incorporate other herbicides and cultural or mechanical practices as part of your weed control system where appropriate.
- Utilize the label rate for the most difficult weed in the site. Avoid tank-mixtures with other herbicides that reduce this product's efficacy (through antagonism) or tank mixtures which encourage rates of this product below the labeled amounts.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from site to site to minimize spread of weed seed.
- Use new commercial seed as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product on a particular weed to your Monsanto representative, local retailer, or county extension agent.

5.2 Management for Glyphosate Resistant Weed Biotypes

NOTE: Appropriate testing is critical in order to confirm weed resistance to glyphosate. Contact your Monsanto representative to determine if resistance has been confirmed to any particular weed biotype in your area. Control instructions for biotypes confirmed as resistant to glyphosate are made available on separately published supplemental

labeling or Fact Sheets for this product and may be obtained from your local retailer or Monsanto representative.

Since the occurrence of new glyphosate resistant weeds cannot be determined until after product use and scientific confirmation, Monsanto Company is not responsible for any losses that may result from the failure of this product to control glyphosate resistant weed biotypes.

The following good weed management practices are encouraged to reduce the spread of confirmed glyphosate resistant biotypes:

- If a naturally occurring resistant biotype is present at your site, this product may be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices may also be used as appropriate.
- Scout treated sites after herbicide applications and control escapes of resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving sites known to contain resistant biotypes.

6.0 MIXING

Mix, store and apply spray solutions of this product using only clean stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.

Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations.

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of clean water. Add the labeled amount of this product near the end of the filling process and mix gently (well). During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

6.2 Tank Mixtures

This product does not provide residual weed control. This product may be tank-mixed with other herbicides to provide residual weed control, a broader weed control spectrum or an alternate mode of action. Always read and follow label directions for all products in the tank mixture. Use according to the most restrictive precautionary statements for each product in the mixture. Any labeled rate of this product may be used in a tank mix.

When this label describes a tank mixture with a generic active ingredient such as diuron, 2,4-D or dicamba, the user is responsible for ensuring the mixture product label allows the specific application.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly listed in this label. Mixing this product with herbicides or other materials not identified on this label may result in reduced performance.

6.3 Tank Mixing Procedure

When tank mixing, read and carefully observe label directions, cautionary statements and all information on the labels of all products used. Add the tank-mix product to the tank as directed by the label. Maintain agitation and add the labeled amount of this product.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation may be required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50-mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance. Ensure that the specific tank mixture product is registered for application at the desired site.

Refer to the "Tank Mixtures" section for additional precautions.

6.4 Mixing Percent Solutions

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

Desired Volume	Amount of Ranger PRO Herbicide					
	1/2%	1%	1-1/2%	2%	5%	10%
1 gal	2/3 oz	1-1/3 oz	2 oz	2-2/3 oz	6-1/2 oz	13 oz
25 gal	1 pt	1 qt	1-1/2 qt	2 qt	5 qt	10 qt
100 gal	2 qt	1 gal	1-1/2 gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

For use in backpack, knapsack or pump-up sprayers, it is suggested that the labeled amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.5 Surfactants

Nonionic surfactants which are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, use 0.5 percent surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 70 percent active ingredient or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70 percent active ingredient. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

6.6 Colorants or Dyes

Approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilution. Use colorants or dyes according to the manufacturer's instructions.

6.7 Drift Control Additives

Drift reduction additives may be used with all equipment types, except wiper applicators, and sponge bars. When a drift reduction additive is used, read and carefully observe precautionary statements and all other information appearing on the additive label. The use of drift reduction additives can affect spray coverage which may result in reduced performance.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

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

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

SPRAY DRIFT MANAGEMENT

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE VEGETATION.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and/or the grower is responsible for considering all these factors when making decisions.

7.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Avoid direct application to any body of water.

Use the labeled rates of this herbicide in 3 to 25 gallons of water per acre.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the air stream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application—To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Aircraft Maintenance

PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. The maintenance of an

organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion. To prevent corrosion of exposed parts, thoroughly wash aircraft after each day of spraying to remove residues of this product accumulated during spraying or from spills. Landing gear is most susceptible.

AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

Importance of droplet size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see the **Wind, Temperature and Humidity**, and **Temperature Inversion** sections of this label).

Controlling droplet size

- **Volume:** Use high flow-rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressures labeled for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow-rates are needed, use higher flow-rate nozzles instead of increasing pressure.
- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the air stream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom Length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application Height:** Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

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

Wind

Drift potential is lowest between wind speeds of 2 to 10 miles per hour. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 miles per hour due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

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

Sensitive Areas

This product must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

7.2 Ground Broadcast Equipment

Apply the labeled rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified in this label or in separate supplemental labeling or Fact Sheets published by Monsanto. As density of weeds increases, increase spray volume within the labeled range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat-fan nozzles. Check for even distribution of spray droplets.

7.3 Backpack or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, ensure spray coverage is uniform and complete. Do not spray to the point of runoff. Use coarse sprays only.

Refer to the "Annual Weeds" instructions of "WEEDS CONTROLLED" section for specific rates and restrictions.

7.4 Selective Equipment

This product may be diluted with water and applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars, to listed weeds growing in any site specified on this label.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION. Contact of this product with desirable vegetation may result in unwanted plant damage or destruction.

Recirculating Spray

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

Adjust application equipment used above desired vegetation to the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation is likely to result in discoloration, stunting or destruction.

Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Shielded and Hooded Applicators

A shielded or hooded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide. Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Wiper Applicators and Sponge Bars

A wiper or sponge applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 miles per hour. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced product performance may result from the use of solutions held in storage. Clean wiper parts immediately after using this product by thoroughly flushing with water.

For Rope or Sponge Wick Applicators: Solutions ranging from 33 to 75 percent of this product in water may be used.

For Panel Applicators and Pressure-Feed Systems: Solutions ranging from 33 to 100 percent of this product in water may be used.

When applied as directed, this product CONTROLS the following weeds:

Corn, volunteer
Panicum, Texas
Rye, common
Shattercane
Sicklepod
Spanishneedles
Starbur, bristly

When applied as directed, this product SUPPRESSES the following weeds:

Beggarweed, Florida
Bermudagrass
Dogbane, hemp
Dogfennel
Guineagrass
Johnsongrass
Milkweed
Nightshade, silverleaf
Pigweed, redroot
Ragweed, common
Ragweed, giant
Smutgrass
Sunflower
Thistle, Canada
Thistle, musk
Vaseygrass
Velvetleaf

7.5 Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the undiluted concentrate of other products when using injection systems unless specifically directed.

7.6 CDA Equipment

The rate of this product applied per acre by controlled droplet application (CDA) equipment must not be less than the amount directed in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

CDA equipment produces a spray pattern that is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other tissue of desirable vegetation, as damage or destruction is likely to result.

8.0 SITE AND USE INSTRUCTIONS

Detailed instructions follow alphabetically, by site.

Unless otherwise specified on this label or in separate supplemental labeling or Fact Sheets published by Monsanto, applications may be made to control any weeds listed in the annual, perennial and woody brush tables. Also refer to the "Selective Equipment" section.

8.1 Cut Stump

Cut stump treatments may be made on any site listed on this label. This product will control many types of woody brush and tree species. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50- to 100-percent solution of this product to the freshly-cut surface **immediately after** cutting. Delays in application may result in reduced performance. For best results, make applications during periods of active growth and full leaf expansion.

DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

8.2 Forestry Site Preparation

This product is labeled for the control or partial control of woody brush, trees and herbaceous weeds in forestry sites and for use in preparing or establishing wildlife openings within these sites and maintaining logging roads.

This product is labeled for use in site preparation prior to planting any tree species, including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites.

Use higher rates of this product within the labeled range for control or partial control of woody brush, trees and hard-to-control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Increase rates within the labeled range for control of perennial herbaceous weeds any time after emergence and before seedheads, flowers or berries appear.

Use the lower rates of this product within the labeled range for control of annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to the foliage of actively growing annual herbaceous weeds any time after emergence.

This product has no herbicidal or residual activity in the soil. Where repeat applications are necessary, do not exceed 10.6 quarts of this product per acre per year.

TANK MIXTURES: Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Use according to the most restrictive precautionary statements for each product in the mixture.

NOTE: For forestry site preparation, make sure the tank-mix product is approved for use prior to planting the desired species. Observe planting interval restrictions.

Any labeled rate of this product may be used in a tank mix with the following products for forestry site preparation.

Arsenal Applicators Concentrate	Garlon 3A
Chopper	Garlon 4
Chopper Gen2	Oust XP
Escort	

For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher labeled tank mixture rates.

Do not apply this product as an over-the-top broadcast spray for forestry conifer or hardwood release unless otherwise directed on this label or in separately published Monsanto supplemental labeling or Fact Sheets.

8.3 Non-Crop Areas and Industrial Sites

This product may be used in non-crop areas, airports, apartment complexes, commercial sites, ditch banks, driveways, dry ditches, dry canals, fencerows, forestry sites, golf courses, greenhouses, industrial sites, landscape areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parks, parking areas, petroleum tank farms and pumping installations, railroads, recreational areas, residential areas, rights-of-way, roadsides, schools, shadehouses, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, and wildlife management sites.

This product may also be used in non-food crop sites, Christmas tree farms, plant nurseries, sod or turf seed farms.

Unless otherwise specified, applications may be made to control any weeds listed in the "WEEDS CONTROLLED" section of this label.

Weed Control, Trim-and-Edge, Bare Ground

This product may be used in non-crop and non-food crop areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around objects in non-crop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

TANK MIXTURES: This product may be tank mixed with the following products provided that the specific product is labeled for application at the use site. Refer to the individual product labels for approved sites and application rates.

Arsenal	Pendulum WDG
Barricade 65WG	Plateau
Clarity	Princep DF
diuron	Princep Liquid
Endurance	Ronstar 50 WSP
Escort	Sahara
Garlon 3A	simazine
Garlon 4	Surflan
Karmex	Telar
Krovar I DF	Vanquish
Oust XP	2,4-D
Pendulum 3.3 EC	

This product plus dicamba tank mixtures may not be applied by air in California.

When applied as a tank mixture for bare ground, this product provides control of the emerged annual weeds and control or partial control of emerged perennial weeds, woody brush and trees.

For control or partial control of the following perennial weeds, apply 1 to 2 quarts of this product plus 2 to 8 ounces of Oust XP per acre.

Bahiagrass	Fescue, tall
Bermudagrass	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Quackgrass
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Chemical Mowing - Perennials

This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 8 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, quackgrass or reed canarygrass covers. Use 6 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in 10 to 40 gallons of spray solution per acre.

Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

Chemical Mowing - Annuals

For growth suppression of some annual grasses, annual ryegrass, wild barley and wild oats growing in coarse turf on roadsides or other industrial areas, apply 4 to 5 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Make applications when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments may cause injury to the desired grasses.

***Bromus* Species and Medusahead in Pastures and Rangelands**

***Bromus* species.** This product may be used to treat downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) and cheatgrass (*Bromus secalinus*) found in industrial, rangeland and pasture sites. Apply 8 to 16 fluid ounces of this product per acre on a broadcast basis.

For best results, coincide treatment with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Make applications to the same site each year until seed

banks are depleted and the desirable perennial grasses can become reestablished on the site.

Medusahead. To treat medusahead, apply 16 fluid ounces of this product per acre as soon as plants are actively growing, and prior to the 4-leaf stage. Applications may be made in the fall or spring.

Applications to brome and medusahead may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For applications using ground equipment, apply in 10 to 20 gallons of water per acre. When applied as directed in this label, there are no grazing restrictions.

Dormant Turfgrass

This product may be used to control or suppress many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass turf. Treat only when turf is dormant and prior to spring green-up.

Apply 8 to 64 fluid ounces of this product per acre. Apply the labeled rates in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

Treatments in excess of 16 fluid ounces per acre may result in injury or delayed green-up in highly maintained areas, golf courses and lawns. DO NOT apply tank mixtures of this product plus Oust XP in highly maintained turfgrass areas. For further uses, refer to the "Railroads" section of this label, which gives rates for dormant bermudagrass treatment and the "Roadsides" section of this label, which gives rates for dormant bermudagrass and bahiagrass treatments.

Actively Growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. DO NOT apply more than 16 fluid ounces of this product per acre in highly maintained turfgrass areas. DO NOT apply tank mixtures of this product plus Oust XP in highly maintained turfgrass areas. For further uses, refer to the "Roadsides" section of this label, which gives rates for actively growing bermudagrass treatments. Use only in areas where some temporary injury or discoloration can be tolerated.

Turfgrass Renovation, Seed, or Sod Production

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses like bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques such as vertical mowing, coring or slicing for 7 days after application to allow translocation into underground plant parts.

Desirable turfgrasses may be planted following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

If application rates total 3 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 3 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

8.4 Habitat Management

Habitat Restoration and Management

This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad-spectrum vegetation control requirements. Spot treatments can be made to selectively remove unwanted plants for habitat management and enhancement.

Wildlife Food Plots

This product may be used as a site preparation treatment prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage to allow translocation into underground plant parts.

8.5 Injection and Frill (Woody Brush and Trees)

This product may be used to control or partially control woody brush and trees by injection or frill applications. Apply this product using suitable equipment that must penetrate into the living tissue. Apply the equivalent of 1/25 fluid ounce (1 ml) of this product per each 2 to 3 inches of trunk diameter at breast height (DBH). This is best achieved by applying a 50 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff to occur from frilled or cut areas in species that exude sap freely. In these species, make the frill or cuts at an oblique angle to produce a cupping effect and use a 100 percent concentration of this product. For best results, make application during periods of active growth and after full leaf expansion.

8.6 Ornamentals, Plant Nurseries, and Christmas Trees

Post-Directed and Trim-and-Edge

This product may be used prior to the planting of and as a post-directed spray around established woody ornamental species, arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce and yew, growing in plant nurseries, on Christmas tree farms, or on other non-food tree production sites. This product may also be used to trim and edge around trees, buildings, sidewalks and roads, potted plants and other objects in a nursery setting.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. THIS PRODUCT IS NOT LABELED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES. Care must be exercised to avoid contact of spray, drift or mist with foliage or bark of established ornamental species.

Site Preparation

This product may be used prior to planting any ornamental, nursery or Christmas tree species.

Wiper Applications

This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established eucalyptus or poplar trees. See the "Selective Equipment" section of this label for further information about the proper use of wiper applicators.

Greenhouse/Shadehouse

This product may be used to control weeds growing in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

8.7 Parks, Recreational and Residential Areas

This product may be used in parks, recreational and residential areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around trees, fences, and paths, around buildings, sidewalks, and other objects in these areas. This product may be used for spot treatment of unwanted vegetation. This product may be used to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

All of the instructions in the "Non-Crop Areas and Industrial Sites" section apply to park and recreational areas.

8.8 Railroads

All of the instructions in the "Non-Crop Areas and Industrial Sites" section apply to railroads.

Bare Ground, Ballast and Shoulders, Crossings, and Spot Treatment

This product may be used to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used, as weeds emerge, to maintain bare ground. This product may be used to control tall-growing weeds to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way. For crossing applications, up to 80 gallons of spray solution per acre may be used.

This product may be tank mixed with the following products provided that the specific product is registered for ballast, shoulder, spot, bare ground and crossing treatments:

Arsenal	Krovar I DF
Clarity	Oust XP
diuron	Sahara
Escort	Spike
Garlon 3A	Telar
Garlon 4	Vanquish
Hyvar X	2,4-D

Brush Control

This product may be used to control woody brush and trees on railroad rights-of-way. Apply 4 to 10 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Up to 80 gallons of spray solution per acre may be used. Apply a 3/4- to 2-percent solution of this product when using high-volume spray-to-wet applications. Apply a 5- to 10-percent solution of this product when using low-volume directed sprays

for spot treatment. This product may be mixed with the following products for enhanced control of woody brush and trees:

Arsenal	Garlon 4
Escort	Tordon K
Garlon 3A	

Bermudagrass Release

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 1 to 3 pints of this product in up to 80 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Oust XP. If tank-mixed, use no more than 1 to 3 pints of this product with 1 to 2 ounces of Oust XP per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust XP label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Blackberry	Johnsongrass
Bluestem, silver	Poorjoe
Broomsedge	Raspberry
Dallisgrass	Trumpetcreeper
Dewberry	Vaseygrass
Dock, curly	Vervain, blue
Dogfennel	

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Do not make repeat applications in the same season since severe injury may occur.

8.9 Roadsides

All of the instructions in the "Non-Crop Areas and Industrial Sites" section apply to roadsides.

Shoulder Treatments

This product may be used on road shoulders. It may be applied with boom sprayers, shielded boom sprayers, high-volume off-center nozzles, hand-held equipment, and similar equipment.

Guardrails and Other Obstacles to Mowing

This product may be used to control weeds growing under guardrails and around signposts and other objects along the roadside.

Spot Treatment

This product may be used as a spot treatment to control unwanted vegetation growing along roadsides.

Tank Mixtures

This product may be tank-mixed with the following products for shoulder, guardrail, spot and bare ground treatments provided that the specific product is registered for use on such sites. Read and carefully observe label directions, cautionary statements and all information on the labels of all products used.

Clarity	Princep DF
diuron	Princep Liquid
Endurance	Ronstar 50 WSP
Escort	Sahara
Krovar I DF	simazine
Oust XP	Surflan
Outrider®	Telar
Pendulum 3.3 EC	Vanquish
Pendulum WDG	2,4-D

See the "Tank Mixtures" section of this label for tank-mixing instructions.

Release of Bermudagrass or Bahiagrass

Dormant Applications

This product may be used to control or partially control many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. Treat only when turf is dormant and prior to spring green-up. This product may also be tank-mixed with Outrider or Oust XP for residual control. Tank mixtures of this product with Oust XP may delay green-up.

For best results on winter annuals, treat when plants are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is at or beyond the 4- to 6-leaf stage.

Apply 8 to 64 fluid ounces of this product in a tank mixture with 3/4 to 1-1/3 ounces Outrider herbicide per acre. Read and follow all label directions for Outrider herbicide.

Apply 8 to 64 fluid ounces of this product per acre alone or in a tank mixture with 1/4 to 1 ounce per acre of Oust XP. Apply the labeled rates in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in green-up and minimize injury, add no more than 1 ounce of Oust XP per acre on bermudagrass and no more than 1/2 ounce of Oust XP per acre on bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

Actively Growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 1 to 3 pints of this product in 10 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

This product may be tank mixed with Outrider for control or partial control of Johnsongrass and other weeds listed in the Outrider label. Use 8 to 32 fluid ounces of this product with 3/4 to 1-1/3 ounces of Outrider. Use the higher rates of both products for control of perennial weeds or annual weeds greater than 6 inches in height.

This product may be tank mixed with Oust XP. If tank-mixed, use no more than 1 to 2 pints of this product with 1 to 2 ounces of Oust XP per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust XP label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Bluestem, silver	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Trumpetcreeper
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season causes severe injury.

Actively Growing Bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 6 fluid ounces of this product in 10 to 40 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 4 fluid ounces of this product per acre, followed by an application of 2 to 4 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

This product may be used for control or partial control of Johnsongrass and other weeds listed on the Outrider label in actively growing bahiagrass. Apply 1-1/2 to 4-3/4 ounces of this product with 0.75 to 1.33 ounces of Outrider per acre. Use the higher rates for control of perennial weeds or annual weeds greater than 6 inches in height. Use only on well-established bahiagrass.

A tank mixture of this product plus Oust XP may be used. Apply 6 fluid ounces of this product plus 1/4 ounce of Oust XP per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

8.10 Utility Sites

This product is labeled for use along electrical power, pipeline and telephone rights-of-way, and in other sites associated with these rights-of-way, substations, roadsides, railroads or similar rights-of-way that run in conjunction with utilities.

This product may be used in utility sites and substations for bare ground, trim-and-edge, spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

This product is also labeled for use in preparing or establishing wildlife openings within these sites, maintaining access roads and for side trimming along utility rights-of-way.

Tank Mixtures

Tank mixtures of this product may be used to increase the spectrum of control for herbaceous weeds, woody brush and trees provided that the specific product is registered for application to the desired site. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Use according to the most restrictive precautionary statements for each product in the mixture. Any labeled rate of this product may be used in a tank mix.

For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher labeled rates.

TANK MIXTURES: This product may be tank mixed with the following products for use in utility sites, provided that the specific product used is labeled for use on these sites. Refer to the individual product labels for approved sites and application rates.

Arsenal	Outrider
atrazine[1]	pendimethalin[1]
Barricade 65WG	Plateau
dicamba[1]	Ronstar 50 WP
diuron[1]	Sahara
Endurance	simazine[1]
Escort	Surflan AS
Escort XP	Surflan WDG
Garlon 3A[2]	Telar DF
Garlon 4[3]	Transline
Krenite	Vanquish
Krovar I DF	Velpar DF
Oust	Velpar L
Oust XP	2,4-D [1]

[1] Tank mixtures with product containing this generic active ingredient may be made provided the specific product is labeled for application at the use site.

[2] Ensure that Garlon 3A is thoroughly mixed with water according to label directions before adding this product. Have spray mixture agitating at the time this product is added to avoid spray incompatibility problems.

[3] For side trimming treatments, use this product alone or in a tank mixture with Garlon 4.

Bare Ground and Trim-and-Edge

This product may be used in utility sites and substations for bare ground, trim-and-edge around objects, spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

This product may be tank mixed with the following products. Refer to these products' labels for approved non-crop sites and application rates.

Arsenal	Plateau
Banvel	Princep DF
Barricade 65WG	Princep Liquid
diuron	Ronstar 50 WP
Endurance	Sahara
Escort	simazine
Garlon 3A	Surflan

9.0 WEEDS CONTROLLED

Always use the higher rate of this product per acre within the labeled range when weed growth is heavy or dense or weeds are growing in an undisturbed (non-cultivated) area.

Reduced results may occur when treating weeds heavily covered with dust. For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

For low-volume directed spray applications, use a 5- to 10-percent solution of this product for control or partial control of annual weeds, perennial weeds, or woody brush and trees. Spray coverage must be uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the plant is important for best results. To ensure adequate spray coverage, spray both sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple resprouts.

Refer to the following label sections for labeled rates for the control of annual and perennial weeds and woody brush and trees. For difficult to control perennial weeds and woody brush and trees, where plants are growing under stressed conditions, or where infestations are dense, this product may be used at 5 to 10 quarts per acre for enhanced results.

9.1 Annual Weeds

Use 1 quart per acre if weeds are less than 6 inches in height or runner length and 1.5 quarts to 4 quarts per acre if weeds are over 6 inches in height or runner length or when weeds are growing under stressed conditions.

For spray-to-wet applications, apply a 1/2-percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or for smaller weeds growing under stressed conditions, use a 1- to 2-percent solution. Use the higher rate for tough-to-control species or for weeds over 24 inches tall.

WEED SPECIES

Anoda, spurred	Medusahead*
Barley*	Morningglory (*Ipomoea spp*)
Barley, little*	Mustard, blue*
Barnyardgrass*	Mustard, tansy*
Bassia, fivehook	Mustard, tumble*
Bittercress*	Mustard, wild*
Bluegrass, annual*	Nightshade, black*
Bluegrass, bulbous*	Oats
Brome, downy*	Pancium, browntop*
Brome, Japanese*	Pancium, fall*
Buttercup*	Pancium, Texas*
Castorbean	Pennycress, field*
Cheatgrass*	Pepperweed, Virginia*
Cheeseweed (*Malva parviflora*)	Pigweed*
Chervil*	Puncturevine
Chickweed*	Purslane, common
Cocklebur*	Pusley, Florida
Copperleaf, hophornbeam	Ragweed, common*
Copperleaf, Virginia	Ragweed, giant
Coreopis, plains/tickseed*	Rice, red
Corn*	Rocket, London*
Crabgrass*	Rocket, yellow
Cupgrass, woolly*	Rye*
Dwarfdandelion*	Ryegrass*
Eclipta*	Sandbur, field*
Falsedandelion*	Sesbania, hemp
Falseflax, smallseed*	Shattercane*
Fiddleneck	Shepherd's-purse*
Filaree	Sicklepod
Fleabane, annual*	Signalgrass, broadleaf*
Fleabane, hairy (*Conyza bonariensis*)*	Smartweed, ladysthumb*
	Smartweed, Pennsylvania*
Fleabane, rough*	Sorghum, grain (milo)*
Foxtail*	Sowthistle, annual
Foxtail, Carolina*	Spanishneedles
Geranium, Carolina	Speedwell, corn*
Goatgrass, jointed*	Speedwell, purslane*
Goosegrass	Sprangletop*
Groundsel, common*	Spurge, annual
Henbit	Spurge, prostrate*
Horseweed/Marestail (*Conyza canadensis*)	Spurge, spotted*
	Spurry, umbrella*
Itchgrass*	Starthistle, yellow
Johnsongrass, seedling	Stinkgrass*
Junglerice	Sunflower*
Knotweed	Teaweed/Prickly sida
Kochia	Thistle, Russian
Lamb's-quarters*	Velvetleaf
Lettuce, prickly*	Wheat*
Mannagrass, eastern*	Wild oats*
Mayweed	Witchgrass*

*When using field broadcast equipment (aerial applications or boom sprayers using flat-fan nozzles) these species will be controlled or partially controlled using 1 pint of this product per acre. Applications must be made using 3 to 10 gallons of carrier volume per acre. Use nozzles that ensure thorough coverage of foliage and treat when weeds are in an early growth stage.

9.2 Perennial Weeds

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). For non-flowering plants, best results are obtained when the plants reach a mature stage of growth. In many situations, treatments are required prior to these growth stages. Under these conditions, use the higher application rate within the labeled range.

Use a 2-percent solution on tough-to-control perennials like bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment. When using hand-held equipment for low-volume directed spot treatments, apply a 5- to 10-percent solution of this product.

Allow 7 or more days after application before tillage.

Weed Species	Rate (QT/A)	Hand-Held % Solution
Alfalfa*	1	2
Alligatorweed*	4	1.5
Anise (fennel)	2 - 4	1 - 2
Artichoke, Jerusalem	3 - 5	2
Bahiagrass	3 - 5	2

Weed Species	Rate (QT/A)	Hand-Held % Solution
Beachgrass, European (*Ammophila arenaria*)	—	5
Bentgrass*	1.5	2
Bermudagrass	5	2
Bermudagrass, water (knotgrass)	1.5	2
Bindweed, field	4 - 5	2
Bluegrass, Kentucky	2	2
Blueweed, Texas	4 - 5	2
Brackenfern	3 - 4	1 - 1.5
Bromegrass, smooth	2	2
Bursage, woolly-leaf	—	2
Canarygrass, reed	2 - 3	2
Cattail	3 - 5	2
Clover; red, white	3 - 5	2
Cogongrass	3 - 5	2
Dallisgrass	3 - 5	2
Dandelion	3 - 5	2
Dock, curly	3 - 5	2
Dogbane, hemp	4	2
Fescue (except tall)	3 - 5	2
Fescue, tall	1 - 3	2
Guineagrass	3	1
Hemlock, poison	2 - 4	1 - 2
Horsenettle	3 - 5	2
Horseradish	4	2
Iceplant	2	1.5 - 2
Ivy, German	2 - 4	1 - 2
Johnsongrass	2 - 3	1
Kikuyugrass	2 - 3	2
Knapweed	4	2
Lantana	—	1 - 1.25
Lespedeza	3 - 5	2
Milkweed, common	3	2
Muhly, wirestem	2	2
Mullein, common	3 - 5	2
Napiergrass	3 - 5	2
Nightshade, silverleaf	2	2
Nutsedge; purple, yellow	3	1 - 2
Orchardgrass	2	2
Pampasgrass	3 - 5	1.5 - 2
Paragrass	3 - 5	2
Pepperweed, perennial	4	2
Phragmites*	3 - 5	1 - 2
Quackgrass	2 - 3	2
Redvine*	2	2
Reed, giant	4 - 5	2
Ryegrass, perennial	2 - 3	1
Smartweed, swamp	3 - 5	2
Spurge, leafy*	—	2
Sweet potato, wild*	—	2
Thistle, artichoke	2 - 3	1 - 2
Thistle, Canada	2 - 3	2
Timothy	2 - 3	2
Torpedograss*	4 - 5	2
Trumpetcreeper*	2 - 3	2
Vaseygrass	3 - 5	2
Velvetgrass	3 - 5	2
Wheatgrass, western	2 - 3	2

*Partial control

9.3 Woody Brush and Trees

Apply this product after full leaf expansion, unless otherwise directed in this label or separate supplemental label or Fact Sheet published by Monsanto. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment. When using hand-held equipment for low-volume directed-spray spot treatments, apply a 5- to 10-percent solution of this product.

Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Weed Species	Broadcast Rate (QT/A)	Hand-Held Spray-to-Wet % Solution
Alder	3 - 4	1 - 1.5
Ash*	2 - 5	1 - 2
Aspen, quaking	2 - 3	1 - 1.5
Bearclover (Bearmat)*	2 - 5	1 - 2
Beech*	2 - 5	1 - 2
Birch	2	1
Blackberry	3 - 4	1 - 1.5
Blackgum*	2 - 5	1 - 2
Bracken	2 - 5	1 - 2
Broom: French, Scotch	2 - 5	1.5 - 2
Buckwheat, California*	2 - 4	1 - 2
Cascara*	2 - 5	1 - 2
Catsclaw*	—	1 - 1.5
Ceanothus*	2 - 5	1 - 2
Chamise*	2 - 5	1
Cherry; bitter, black, pin	2 - 3	1 - 1.5
Coyotebrush	3 - 4	1.5 - 2
Creeper, Virginia	2 - 5	1 - 2
Deerweed	2 - 5	1
Dogwood*	2 - 5	1 - 2
Elderberry	2	1
Elm*	2 - 5	1 - 2
Eucalyptus	—	2
Flower, monkey flower*	2 - 4	1 - 2
Gorse*	2 - 5	1 - 2
Hasardia*	2 - 4	1 - 2
Hawthorn	2 - 3	1 - 1.5
Hazel	2	1
Hickory*	2 - 5	1 - 2
Honeysuckle	3 - 4	1 - 1.5
Hornbeam, American*	2 - 5	1 - 2
Ivy, poison	4 - 5	2
Kudzu	4	2
Locust, black*	2 - 4	1 - 2
Madrone resprouts*	—	2
Manzanita*	2 - 5	1 - 2
Maple, red*	2 - 4	1 - 1.5
Maple, sugar	—	1-1.5
Maple, vine*	2 - 5	1 - 2
Oak: black, white*	2 - 4	1 - 2
Oak, post	3 - 4	1 - 1.5
Oak: northern pin	2 - 4	1 - 1.5
Oak, poison	4 - 5	2
Oak, scrub*	2 - 4	1 - 1.5
Oak, southern red	2 - 3	1 - 1.5
Olive, Russian*	2 - 5	1 - 2
Peppertree, Brazilian (Florida holly)*	2 - 5	1 - 2
Persimmon*	2 - 5	1 - 2
Pine	2 - 5	1 - 2
Poplar, yellow*	2 - 5	1 - 2
Redbud, eastern	2 - 5	1 - 2
Rose, multiflora	2	1
Sage, black	2 - 4	1
Sage, white*	2 - 4	1 - 2

Weed Species	Broadcast Rate (QT/A)	Hand-Held Spray-to-Wet % Solution
Sage brush, California	2 - 4	1
Salmonberry	2	1
Saltcedar*	2 - 5	1 - 2
Sassafras*	2 - 5	1 - 2
Sourwood*	2 - 5	1 - 2
Sumac, laurel, poison, smooth, sugarbush, winged *	2 - 4	1 - 2
Sweetgum	2 - 3	1 -1 .5
Swordfern*	2 - 5	1 - 2
Tallowtree, Chinese	—	1
Tanoak resprouts*	—	2
Thimbleberry	2	1
Tobacco, tree*	2 - 4	1 - 2
Toyon*	-	2
Trumpetcreeper	2 - 3	1 - 1.5
Waxmyrtle, southern*	2 - 5	1 - 2
Willow	3	1
Yerba Santa, California*	—	2

*Partial control

10.0 LIMIT OF WARRANTY AND LIABILITY

Monsanto Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Outrider, Ranger PRO, Ranger PRO and Design and Monsanto and Vine Design are registered trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

This product is protected by U.S. Patent Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-517

In case of an emergency involving this product, or for medical assistance, Call Collect, day or night, (314) 694-4000.

Packed For:
MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI, 63167 U.S.A.
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012510

MONSANTO

ATENCIÓN:

Esta etiqueta de muestra se entrega únicamente para información general.

- Este producto pesticida puede no estar todavía disponible o aprobado para la venta o utilización en su localidad.
- Usted tiene la responsabilidad de cumplir todas las leyes federales, estatales y locales, así como todas las reglamentaciones relativas a la utilización de pesticidas.
- Antes de utilizar un pesticida, asegúrese de que esté aprobado en su estado o localidad.
- Su estado o localidad puede exigir precauciones adicionales e instrucciones para la utilización de este producto que no están incluidas aquí.
- Monsanto no garantiza el lo completo ni la certeza de esta etiqueta de la espécimen. La información encontró en esta etiqueta puede diferir de la información encontró en la etiqueta del producto. Usted debe tener consigo la etiqueta aprobada por la agencia EPA cuando utilice el producto y debe leer y respetar todas las instrucciones en la etiqueta.
- No debe basarse sobre las precauciones, las instrucciones de utilización y cualquier otra información en esta etiqueta para utilizar algún otro producto similar.
- Siempre siga las precauciones y las instrucciones para el uso en la etiqueta del pesticida que usted utiliza.

Ranger PRO® Herbicida

El herbicida Ranger PRO es un herbicida profesional completo de postemergencia y de amplia efectividad, para el control de malezas en zonas industriales, céspedes y ornamentales.

Instrucciones completas para el uso

Registro en la EPA Nº 524-517 2010-1

EVITE EL CONTACTO DEL HERBICIDA CON EL FOLLAJE, TALLOS, RAICES NO LEÑOSAS EXPUESTAS O FRUTOS EXPUESTOS DE LAS COSECHAS, PLANTAS Y ARBOLES DESEABLES. EN CASO CONTRARIO ES PROBABLE QUE SUFRAN GRAVES DAÑOS O SEAN DESTRUIDOS TOTALMENTE.

Antes de usar este producto, lea la etiqueta en su totalidad.

Uselo solamente de acuerdo con las instrucciones de la etiqueta.

No todos los productos recomendados en esta etiqueta han sido registrados para su uso en California. Verifique el estado de registro de cada producto en California antes de utilizarlo.

Antes de comprar o usar el producto, lea "LIMITES EN LA GARANTIA Y EN LA RESPONSABILIDAD" en la última sección de la etiqueta. Si las condiciones son inaceptables para usted, devuelva el producto inmediatamente sin abrir el recipiente.

ESTE ES UN PRODUCTO PARA USARSE TAL Y COMO ESTA PREPARADO. MONSANTO NO LO HA DISEÑADO NI LO HA REGISTRADO PARA QUE SEA REFORMULADO. VEA LA ETIQUETA DEL ENVASE INDIVIDUAL PARA ENTERARSE DE LAS LIMITACIONES DE REEMPAQUE.

1.0 INGREDIENTES

INGREDIENTE ACTIVO:	
*Glifosato, N-(fosfonometil)glicina, en forma de su sal de isopropilamina	41.0%
OTROS INGREDIENTES (incluyendo surfactante):	59.0%
	100.0%

*Contiene 480 gramos por litro o 4 libras por galón americano del ingrediente activo glifosato, en forma de su sal de isopropilamina. Equivalente a 356 gramos por litro o 3 libras por galón americano del ácido, glifosato.

Este producto está protegido por la patente de los Estados Unidos Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No se han otorgado licencias bajo ninguna patente que no sea de los Estados Unidos.

2.0 TELEFONOS IMPORTANTES

PARA INFORMACION SOBRE EL PRODUCTO O AYUDA PARA UTILIZAR ESTE PRODUCTO,
LLAME GRATIS AL, 1-800-332-3111.

EN CASO DE QUE SE PRESENTE UNA EMERGENCIA RELACIONADA CON ESTE PRODUCTO, O PARA OBTENER AYUDA MEDICA, **LLAME POR COBRAR A CUALQUIER HORA DEL DIA O DE LA NOCHE, AL TELEFONO, (314)-694-4000.**

3.0 ADVERTENCIAS

3.1 Riesgos para seres humanos y animales domésticos

Manténgase fuera del alcance de los niños.

¡PRECAUCION!

IRRITA LOS OJOS.

Evite el contacto con los ojos y con la ropa.

PRIMEROS AUXILIOS: Llame al centro de envenenamientos o a un médico para que le indique el tratamiento.	
SI ENTRA EN CONTACTO CON LOS OJOS	• Mantenga abiertos los ojos y enjuague lenta y cuidadosamente con agua durante 15 a 20 minutos. • Si usa lentes de contacto, quíteselos después de los primeros 5 minutos, y continúe enjuagando los ojos.

- Tenga a mano el envase o la etiqueta del producto cuando llame al centro de envenenamientos o al médico, o cuando vaya a procurarse tratamiento.
- También puede llamar por cobrar al teléfono **(314) 694-4000**, las 24 horas, para obtener información sobre el tratamiento médico de urgencia.
- Este producto está identificado como **herbicida Ranger PRO®, Registro de la EPA Nº 524-517.**

ANIMALES DOMESTICOS: Este producto se considera relativamente no tóxico para los perros y otros animales domésticos; sin embargo, la ingestión de este producto o de grandes cantidades de vegetación recientemente tratada puede resultar en una irritación gastrointestinal temporal (vómito, diarrea, cólico, etc.). Si se observan dichos síntomas, dé al animal suficiente cantidad de líquidos para evitar la deshidratación. Si los síntomas continúan por más de 24 horas, llame al veterinario.

Equipo de protección personal (PPE)

Las personas que aplican o manejan este producto deben usar: camisas de manga larga, así como pantalones largos, zapatos y calcetin. Siga las instrucciones del fabricante para limpiar y mantener el equipo de protección personal. En caso de no tener dichas instrucciones para piezas lavables, use detergente y agua muy caliente. Mantenga y lave el equipo de protección personal separado de las demás piezas a lavarse.

Deseche la ropa y otros materiales absorbentes que se hayan empapado o se encuentren muy contaminados con el concentrado de este producto. No los vuelva a utilizar.

En los casos en los cuales el personal encargado de manejar el producto lo hace en ambientes cerrados, cabinas cerradas o aviones, de manera tal que se cumplan los requisitos listados en "Worker Protection Standard (WPS) for agricultural pesticides" (Normas para la Protección de los Trabajadores que trabajan con pesticidas usados en la agricultura) [40 CFR 170.240 (d) (4-6)], los requisitos para el equipo de protección personal del trabajador pueden ser reducidos o modificados de acuerdo a lo que se especifica en las normas WPS.

Recomendaciones de seguridad para el usuario

El usuario debe:

- Lavarse las manos antes de comer, beber, mascar goma, usar tabaco o de usar el servicio higiénico.
- Quitarse la ropa inmediatamente en caso de que el pesticida entre dentro de ésta. Luego debe lavarse muy bien y ponerse ropa limpia.

3.2 Riesgos al medio ambiente

No aplique directamente al agua, en áreas donde el agua superficial esté presente o en áreas donde haya mareas altas y bajas por debajo del nivel medio de mareas altas. No contamine el agua cuando lave los equipos ni cuando elimine las aguas de lavado de los mismos.

3.3 Riesgos de orden físico o químico

Para mezclar, almacenar y aplicar la solución de este producto, se deben usar solamente envases de acero inoxidable, fibra de vidrio, plástico o envases de acero recubiertos internamente con plástico.

NO MEZCLE, ALMACENE O APLIQUE ESTE PRODUCTO O SUS SOLUCIONES PARA ROCIAR EN RECIPIENTES O TANQUES ROCIADORES DE ACERO GALVANIZADO O DE ACERO NO RECUBIERTO (EXCEPTO SI ES ACERO INOXIDABLE). Este producto o la solución para rociar reaccionan con el material de dichos recipientes y tanques, lo cual produce hidrógeno, que puede formar una mezcla de gases altamente combustibles. Si esta mezcla de gases entra en contacto con llamas, chispas, el soplete de un soldador, un cigarrillo encendido o cualquier otra fuente de encendido, puede inflamarse o explotar y causar heridas graves a personas.

INSTRUCCIONES PARA EL USO

El uso de este producto de cualquier manera que sea inconsistente con las instrucciones dadas en la etiqueta es una violación de las leyes federales. Este producto sólo puede utilizarse de acuerdo con las indicaciones sobre el modo de empleo que figuran en esta etiqueta o en las etiquetas o fichas técnicas adicionales de Monsanto publicadas por separado. Puede consultar las etiquetas adicionales en Internet en *www.agrian.com, www.cdms.net* o *www.greenbook.net*, o bien puede solicitarlas a su vendedor minorista autorizado de Monsanto o a su representante de Monsanto Company.

No aplique este producto de alguna manera que entre en contacto con los trabajadores u otras personas, ya sea directamente o por medio de alguna corriente de aire. Solamente las personas que los manipulen y que usen equipo protector podrán estar en el área durante su aplicación. Para verificar requisitos específicos de su tribu o estado, consulte con la agencia responsable de la regulación del uso de pesticidas.

Requisitos para el uso en la agricultura

Use este producto siguiendo estrictamente las instrucciones de la etiqueta y de acuerdo con "Worker Protection Standard", 40 CFR Sección 170. Estas normas contienen los requisitos para proteger a los trabajadores agrícolas en haciendas, bosques, viveros e invernaderos, así como a aquellos trabajadores que manejan pesticidas usados en la agricultura. Las normas contienen los requisitos para entrenar, descontaminar, para dar aviso y para asistencia de emergencia. También contienen instrucciones específicas y excepciones que tienen que ver con el contenido de esta etiqueta en lo relacionado con el equipo para la protección personal (PPE) e intervalos de entrada restringida. Los requisitos mencionados en esta sección se aplican únicamente a los usos de este producto que están regulados por las Normas para la Protección de los Trabajadores (WPS).

No entre ni permita la entrada de personal al área tratada durante el intervalo de entrada restringida (REI) de 4 horas.

El equipo de protección personal (PPE) permitido por el Estándar de Protección al Trabajador (WPS) necesario para una entrada prematura a lugares tratados y que implique el contacto con cualquier cosa que haya sido tratada como plantas, suelo o agua, es: overoles /monos, guantes resistentes a los productos químicos de más de 14 mil de espesor, fabricados con materiales como caucho (goma) butílico, caucho natural, neopreno o caucho nitrilo, zapatos y calcetines.

Requisitos para usos no agrícolas

Los requisitos en esta sección son para los usos de este producto que NO están cubiertos por WPS (40 CFR Sección 170) para el uso de pesticidas en la agricultura. Las regulaciones del WPS se aplican cuando el producto se usa para obtener productos agrícolas en haciendas, bosques, viveros e invernaderos.

Mantenga a las personas y a los animales domésticos fuera del área tratada hasta que la solución rociada se haya secado.

4.0 ALMACENAMIENTO Y DESECHO

Son fundamentales el almacenamiento y la eliminación adecuados de los pesticidas para evitar la exposición de las personas y el medio ambiente como consecuencia de pérdidas y derrames del producto, excedentes o desechos y actos de vandalismo. No permita que este producto contamine el agua, los alimentos de las personas y animales o las semillas por medio del almacenamiento y la eliminación.

ALMACENAMIENTO DEL PESTICIDA: Guarde los pesticidas lejos de los alimentos para personas, los alimentos para mascotas, los alimentos para animales, las semillas, los fertilizantes y los materiales de uso veterinario. Mantenga el envase bien cerrado para evitar derramamientos y contaminación.

ELIMINACION DEL PESTICIDA: Para evitar desechos, use todo el material contenido es este envase, incluyendo los residuos del enjuague, aplicándolo según las indicaciones de la etiqueta. Si no es posible evitar los desechos, ofrezca el producto restante a una planta de eliminación de desechos o a un programa de eliminación de pesticidas. Estos programas suelen ser manejados por gobiernos estatales o locales o por la industria. Todos los desechos deben seguir los procedimientos federales, estatales y locales aplicables.

Consulte la etiqueta del envase para las instrucciones sobre la manipulación y eliminación y las limitaciones de relleno del mismo.

5.0 INFORMACION GENERAL

Descripción del producto: Este producto es un herbicida sistémico de aplicación post-emergencia foliar, sin actividad residual en el suelo. Controla un amplio espectro de malezas anuales, malezas perennes, matorrales leñosos y árboles. Está formulado como un líquido soluble en agua que contiene surfactante y no es necesario ni se recomienda el agregado de otro surfactante. Puede aplicarse utilizando equipos convencionales después de su dilución y mezclado con agua o con otros medios de transporte según las instrucciones de la etiqueta.

Aparición de los síntomas: Este producto se mueve dentro de la planta desde el punto de aplicación sobre el follaje hasta las raíces. Los efectos visibles incluyen que la planta se marchite y se vuelva amarilla de forma gradual, hasta que su parte exterior se torne completamente color café; mientras tanto, las partes de la planta que están bajo tierra se deterioran completamente. Los efectos visibles en la mayoría de las malezas anuales se pueden apreciar entre los 2 y los 4 días después de la aplicación, pero en la mayoría de las malezas perennes es posible que no se observen hasta después de 7 días o más. El frío extremo o el cielo muy nublado después de la aplicación pueden retardar la actividad del producto y hacer que el efecto visual se demore.

Etapa de malezas: Las malezas anuales son más fáciles de controlar cuando son pequeñas. Para lograr el mejor control de la mayoría de las malezas perennes, el tratamiento debe realizarse en las últimas etapas de crecimiento, cerca de su etapa de madurez. Vea en las secciones "MALEZAS CONTROLADAS" de esta etiqueta las proporciones específicas para cada tipo de maleza.

Aplique siempre la mayor cantidad de producto dentro del rango indicado cuando las malezas son muy densas o cuando crecen en áreas no tocadas (no cultivadas). Puede haber una disminución de los resultados cuando se traten malezas afectadas por enfermedades o dañadas por los insectos, malezas cubiertas con mucho polvo o malezas en malas condiciones de crecimiento.

Modo de acción en las plantas: El ingrediente activo de este producto inhibe una enzima hallada sólo en las plantas y microorganismos que es esencial para la formación de aminoácidos específicos.

Prácticas culturales: Se podrá observar una reducción en el efecto si se aplica el producto a malezas anuales o perennes que hayan sido segadas, que hayan servido de alimento para animales o hayan sido cortadas, y que no hubiesen crecido nuevamente hasta el nivel recomendado para el tratamiento.

Resistencia a la lluvia: La lluvia torrencial poco después de la aplicación lavará el producto del follaje y se requerirá una nueva aplicación para obtener un control adecuado.

Cobertura de la pulverización: Para obtener mejores resultados, la cobertura del rocío debe ser completa y uniforme. No rocíe el follaje hasta el punto de escurrimiento.

No actividad en el suelo: Las malezas deben haber emergido en el momento de la aplicación para poder ser controladas por este producto. Las malezas que germinen de semillas después de la aplicación no serán controladas. Las plantas no emergidas con rizomas o raíces subterráneas de malezas perennes no conectadas no se verán afectadas por el herbicida y continuarán creciendo.

Cantidades de aplicación máximas: Las cantidades de aplicación o uso máximas especificadas en esta etiqueta están expresadas en unidades de volumen (onzas fluidas o cuartos de galón) de este producto por acre. No obstante, las dosis máximas de aplicación permitidas corresponden al uso de este producto en combinación con otros herbicidas que contienen glifosato como principio activo, tanto si son aplicados como mezclas de tanque o por separado, en función de las libras totales de glifosato (libras de ácido equivalente) por acre. Si se aplica más de un producto que contiene glifosato al mismo sitio dentro del mismo año, debe asegurarse de que el uso total de glifosato (libras de ácido equivalente) no exceda el máximo permitido. El total combinado de todos los tratamientos no debe exceder 10.6 cuartos de galón de este producto (10.6 libras de ácido glifosato) por acre por año. Vea en la sección "INGREDIENTES" de esta etiqueta información importante sobre el producto.

ATENCION

EVITE EL CONTACTO DEL HERBICIDA CON EL FOLLAJE, TALLOS, RAICES NO LEÑOSAS EXPUESTAS O FRUTOS EXPUESTOS DE LAS COSECHAS, PLANTAS Y ARBOLES DESEABLES. EN CASO CONTRARIO ES PROBABLE QUE SUFRAN GRAVES DAÑOS O SEAN DESTRUIDOS TOTALMENTE.

EVITE EL ACARRREO. CUANDO EL PRODUCTO SE APLIQUE, SE DEBE TENER MUCHO CUIDADO PARA PREVENIR EL DAÑO A PLANTAS Y CULTIVOS DESEABLES.

No permita que la solución del herbicida se nebulice, gotee, sea acarreada o salpique sobre la vegetación deseable. Una cantidad pequeña puede ser suficiente para causar daños graves o destruir las cosechas, plantas u otras áreas que no se desea tratar. La probabilidad de que ocurran daños por el uso de este producto aumenta cuando hay muchas ráfagas de viento, a medida que aumenta la velocidad del viento, cuando la velocidad del viento cambia constantemente o cuando existen otras condiciones meteorológicas que favorecen la dispersión del rociado. Cuando se esté aplicando el producto con un rociador, evite la combinación de presiones y tipos de boquilla que puedan dar como resultado salpicaduras o partículas finas (niebla), que tienen muchas probabilidades de que el producto sea acarreado. EVITE LA APLICACION A ALTA VELOCIDAD O PRESION EXCESIVAS.

NOTA: El uso de este producto de cualquier manera contraria a las indicaciones contenidas en esta etiqueta, puede resultar en lesiones a personas, animales o cosechas o pueden ocurrir otras consecuencias no deseadas.

5.1 Gestión de resistencia de malezas

GRUPO	9	HERBICIDA

El glifosato, el principio activo de este producto, es un herbicida del grupo 9 según el sistema de clasificación de efecto de la Weed Science Society of America. Todas las poblaciones de malezas pueden contener plantas naturalmente resistentes a los herbicidas del grupo 9. Las especies de malezas resistentes a los herbicidas del grupo 9 pueden tratarse con buenos resultados utilizando herbicidas de otro grupo o adoptando otras prácticas culturales o mecánicas.

Para reducir al mínimo la incidencia de biotipos resistentes al glifosato, siga las siguientes recomendaciones generales con respecto a la gestión de malezas:

- Haga un reconocimiento del sitio de la aplicación antes y después de haber aplicado herbicidas.
- Comience a controlar las malezas cuanto antes, cuando sean todavía relativamente pequeñas.
- Donde sea apropiado, incorpore otros herbicidas y prácticas culturales o mecánicas como parte del sistema de control de malezas.
- Utilice la cantidad indicada en la etiqueta para las malezas más difíciles de controlar en el sitio. Evite las mezclas de tanque con otros herbicidas que reducen la eficacia de este producto (por antagonismo) o las recomendaciones de mezclas de tanque que alientan la utilización de cantidades de este producto inferiores a las recomendaciones de la etiqueta.
- Controle las malezas omitidas e impida que echen semilla.
- Limpie los equipos antes de trasladarse de un sitio a otro para reducir al mínimo la propagación de semillas de malezas.
- Utilice semillas comerciales nuevas con la menor cantidad posible de semillas de malezas.
- Informe todo incidente por falta de rendimiento reiterado de este producto en una maleza determinada al representante de Monsanto, vendedor minorista de su localidad o agente de extensión del condado.

5.2 Recomendaciones de gestión de biotipos de malezas resistentes al glifosato

NOTA: Es fundamental realizar las pruebas adecuadas para confirmar la resistencia de la maleza al glifosato. Póngase en contacto con su representante de Monsanto para determinar si se confirmó la resistencia de algún biotipo de maleza en particular en su región. Las recomendaciones de control para biotipos confirmados como resistentes al glifosato se dan a conocer con la publicación de etiquetas o fichas técnicas complementarias para este producto y puede solicitarlas al vendedor minorista o a su representante de Monsanto.

Debido a que no es posible determinar la existencia de nuevas malezas resistentes al glifosato hasta que se haya utilizado el producto y se cuente con la confirmación científica correspondiente, Monsanto Company no será responsable de ninguna pérdida que pudiera tener lugar en el caso de que este producto no lograra controlar de forma eficaz los biotipos de malezas resistentes al glifosato.

Siga las prácticas correctas de gestión de malezas para reducir la propagación de biotipos resistentes al glifosato confirmados:

- Si en su zona existe naturalmente un biotipo resistente, para lograr su control puede mezclar este producto en un tanque o aplicarlo secuencialmente con un herbicida debidamente etiquetado con efecto diferente.
- También se pueden utilizar prácticas de control culturales y mecánicas según corresponda.
- Haga un reconocimiento de los lugares tratados después de las aplicaciones de herbicida y controle las omisiones de biotipos resistentes antes de que echen semilla.
- Limpie minuciosamente los equipos antes de abandonar los lugares que se saben que contienen biotipos resistentes.

6.0 MEZCLA

Para mezclar, almacenar y aplicar la solución de este producto, se deben usar solamente envases de acero inoxidable, fibra de vidrio, plástico o envases de acero recubiertos internamente con plástico.

NO MEZCLE, ALMACENE NI APLIQUE ESTE PRODUCTO NI SOLUCIONES PARA ROCIAR DE ESTE PRODUCTO EN ENVASES DE ACERO GALVANIZADO O ACERO NO REVESTIDO (SALVO ACERO INOXIDABLE) NI EN TANQUES DE ROCIO.

Proceda con precaución para evitar el reflujo del líquido a la fuente de transporte. Utilice dispositivos antirreflujo cuando así lo requieran las reglamentaciones estatales o locales.

Limpie las piezas del rociador inmediatamente después de su utilización lavándolas bien con agua.

NOTA: PUEDE OCURRIR UNA DISMINUCION DE LOS RESULTADOS SI SE UTILIZA AGUA QUE CONTENGA TIERRA, TAL COMO AGUA CON BARRO VISIBLE O AGUA DE CHARCAS O ACEQUIAS QUE NO ESTE CLARA.

6.1 Mezcla con agua

Este producto se mezcla fácilmente con agua. La solución para rociar se debe mezclar de la siguiente forma: Ponga la cantidad correcta de agua limpia en el tanque en el cual se va a preparar la mezcla. Agregue la cantidad recomendada de este producto cuando ya está cerca de completarse el llenado con agua y mezcle con cuidado (bien). Es posible que durante la mezcla y rocío, la solución produzca espuma. Para evitar o minimizar la formación de espuma, evite el uso de agitadores mecánicos, cierre las tuberías de derivación y de retorno en el fondo del tanque, y si es necesario, use compuestos aprobados para evitar la formación de espuma o para eliminar la espuma ya formada.

6.2 Mezclas de tanque

Este producto no proporciona control de malezas residuales. Este producto puede mezclarse en un tanque con otros herbicidas para lograr el control de malezas residuales, un espectro de control de malezas más amplio o un efecto alternativo. Lea y siga siempre las indicaciones de las etiquetas de todos los productos utilizados en la mezcla. Use conforme a las precauciones más restrictivas. Para la mezcla en tanque, puede utilizarse cualquier cantidad de este producto que se encuentre dentro del rango indicado en la etiqueta.

Cuando esta etiqueta indique una mezcla de tanque con un ingrediente activo genérico como diurón, 2,4-D o dicamba, el usuario será responsable de asegurarse de que la etiqueta del producto de mezcla permita la aplicación específica.

El comprador y todos los usuarios serán responsables de cualquier pérdida o daño que pudiera ocurrir como consecuencia del uso o manipulación de mezclas de este producto con herbicidas u otros materiales que no estén expresamente recomendados en esta etiqueta. La mezcla de este producto con herbicidas u otros materiales no recomendados en esta etiqueta puede dar como resultado una reducción en su rendimiento.

6.3 Procedimiento para mezclas de tanque

Cuando haga mezclas de tanque, lea y siga cuidadosamente las instrucciones de la etiqueta, las precauciones y toda la información contenida en las etiquetas de todos los productos utilizados. Agregue el producto al tanque de mezcla según las instrucciones de la etiqueta. Agite continuamente y agregue la cantidad indicada en la etiqueta de este producto

Agite continuamente hasta usar totalmente el contenido del tanque. Si se deja que la mezcla para rociar se asiente, agite bien para que la mezcla vuelva a estar en suspensión antes de continuar con el rociado.

A fin de minimizar la formación de espuma, mantenga las tuberías de retorno lo más cerca del fondo del tanque. El tamaño del cernidor en la boquilla o de los cernidores en las tuberías no debe ser menor al número 50.

Siempre determine previamente la compatibilidad de la mezcla de este producto, que viene en tanque rotulado, con agua como vehículo, mezclando cantidades pequeñas proporcionales con anticipación. Asegúrese de que la mezcla en tanque específica esté registrada para su aplicación en el área deseada.

Refiérase a la sección "Mezclas de tanque" para ver las precauciones adicionales.

6.4 Mezcla de soluciones en porcentaje

Prepare la cantidad deseada de la solución para rociar, mezclando las proporciones de este producto con agua, según se muestra en la siguiente tabla:

Solución para rociar

Volumen deseado	Cantidad de Ranger PRO herbicida					
	1/2%	1%	1-1/2%	2%	5%	10%
1 gal	2/3 oz	1-1/3 oz	2 oz	2-2/3 oz	6-1/2 oz	13 oz
25 gal	1 pt	1 qt	1-1/2 qt	2 qt	5 qt	10 qt
100 gal	2 qt	1 gal	1-1/2 gal	2 gal	5 gal	10 gal

2 cucharadas = 1 onza fluida

Cuando se usen rociadores tipo mochila, o para bombeo, se recomienda que la cantidad indicada en la etiqueta de este producto se mezcle con agua en un envase grande. Llene el rociador con la solución mezclada.

6.5 Surfactante

Se pueden emplear surfactantes no iónicos cuyo rótulo indique que pueden usarse con herbicidas. No reduzca las dosis de este producto cuando agregue surfactante. Cuando agregue surfactante adicional, use una concentración de surfactante de 0,5 por ciento (2 cuartos de galón por cada 100 galones de solución de rocío) cuando utilice surfactantes que contengan por lo menos 70 por ciento de ingrediente activo, o una concentración de surfactante de 1 por ciento (4 cuartos de galón por cada 100 galones de solución de rocío) en el caso de aquellos surfactantes que contengan menos de 70 por ciento de ingrediente activo. Lea y cumpla cuidadosamente con las precauciones y toda la información adicional que aparezca en el rótulo del surfactante.

6.6 Colorantes o tinturas

A este producto se le pueden agregar colorantes o tinturas para marcar, que sean aprobados para uso agrícola. Los colorantes o tinturas utilizados en las soluciones en aerosol de este producto pueden reducir su rendimiento, especialmente a bajas concentraciones del producto o a bajas diluciones. Para usar los colorantes y tinturas siga las instrucciones del fabricante.

6.7 Aditivos para controlar el acarreo del producto

Se pueden utilizar aditivos para el control de la deriva en todos los tipos de equipo, a excepción de aplicadores por frotación y barras de esponja. Cuando se use un aditivo para el control de la deriva, lea y cumpla cuidadosamente con las declaraciones preventivas y toda la información adicional que aparezca en la etiqueta del aditivo. El uso de aditivos para el control de la deriva puede afectar la cobertura del rocío, lo que puede dar como resultado una reducción en el rendimiento.

7.0 EQUIPOS Y TECNICAS PARA LA APLICACION

No use ningún sistema de irrigación para aplicar este producto.

APLIQUE ESTAS SOLUCIONES PARA ROCIAR UTILIZANDO EQUIPOS DEBIDAMENTE MANTENIDOS Y CALIBRADOS QUE SEAN CAPACES DE ROCIAR EL VOLUMEN DESEADO.

MANEJO DE LA DERIVA POR ROCIADO

EVITE LA DERIVA. DEBE USARSE EXTREMO CUIDADO EN LA APLICACION DE ESTE PRODUCTO PARA EVITAR DAÑOS A LA VEGETACION DESEADA.

No permita que la solución del herbicida empañe, gotee, se derive o salpique sobre la vegetación deseada, ya que minúsculas cantidades de este producto pueden causar daños graves o destrucción del cultivo, plantas u otras áreas que no se pretendía tratar.

Es la responsabilidad del aplicador evitar la deriva por rocío en el lugar de aplicación. La interacción de varios factores relacionados con el clima y el equipo determina la posibilidad de deriva por rocío. El aplicador y/o el cultivador son responsables de considerar todos estos factores al tomar decisiones.

7.1 Equipo aéreo

NO APLIQUE ESTE PRODUCTO CON EQUIPOS AEREOS EXCEPTO BAJO LAS CONDICIONES QUE SE ESPECIFICAN EN ESTA ETIQUETA.

PARA LA APLICACION AEREA EN CALIFORNIA, CONSULTE LA ETIQUETA EN EL SUPLEMENTO FEDERAL PARA APLICACIONES AEREAS EN DICHO ESTADO, PARA CONOCER LAS INSTRUCCIONES, RESTRICCIONES Y REQUISITOS ESPECIFICOS.

PARA EVITAR DAÑAR LA VEGETACION DESEADA ADJUNTA, SE DEBEN MANTENER ZONAS TAMPON ADECUADAS.

Evite la aplicación directa sobre cualquier cuerpo de agua.

Use las proporciones recomendadas de este producto con 3 a 25 galones de agua por acre.

Los rociadores gruesos tienen menos probabilidades de producir deriva; por lo tanto, no utilice boquillas o configuraciones de boquilla que apliquen el producto en forma de gotitas finas. No incline las boquillas hacia adelante en el flujo de aire y no aumente el volumen de rocío aumentando la presión de la boquilla. Pueden usarse aditivos para el control de la deriva. Cuando se use un aditivo para el control de la deriva, lea y cumpla cuidadosamente con las declaraciones preventivas y toda la información adicional que aparezca en la etiqueta del aditivo.

Asegúrese de que la aplicación sea uniforme—A fin de evitar que queden áreas sin tratar, que la aplicación no sea uniforme o que las aplicaciones se traslapen, se deben usar marcadores adecuados.

Mantenimiento de aviones

EL CONTACTO PROLONGADO DE ESTE PRODUCTO CON PARTES DE ACERO QUE NO ESTA RECUBIERTO CON ALGUN TIPO DE PROTECCION, PUEDE DAR COMO RESULTADO LA CORROSION Y POSIBLEMENTE QUE LAS PARTES FALLEN. Es posible prevenir la corrosión recubriendo las partes con pintura orgánica, que cumpla con las especificaciones aeroespaciales MIL-C-38413. Al final de cada día de trabajo, para evitar la corrosión de las partes expuestas, lave muy bien el avión a fin de remover los residuos de este producto que se acumulan durante el rocío o por derramamientos. Las partes del tren de aterrizaje son extremadamente susceptibles.

MANEJO DE LA DERIVA POR ROCIADO AÉREO

Deben seguirse los siguientes requerimientos de manejo de la deriva para evitar el movimiento de ésta fuera de objetivo en aplicaciones aéreas a campos de cultivo agrícola.

1. La distancia del pulverizador más externo en la barra distribuidora no debe exceder 3/4 del largo de la envergadura o rotor.
2. Los pulverizadores deben siempre apuntar hacia atrás, paralelos a la corriente de aire, nunca hacia abajo más de45 grados. En los estados con reglamentos más estrictos, éstos deben observarse.

Importancia del tamaño de la gotita

La forma más eficaz de reducir la posibilidad de deriva es la aplicación de gotitas grandes. La mejor estrategia de manejo de la deriva es la aplicación de las gotitas más grandes que provean suficiente cobertura y control. La aplicación de gotitas más grandes reduce la posibilidad de deriva, pero no la evitará si las aplicaciones se realizan inadecuadamente o bajo condiciones ambientales desfavorables (vea las secciones de **Viento, Temperatura y humedad**, e **Inversiones de temperatura** en esta etiqueta).

Control del tamaño de la gotita

- **Volumen:** Use pulverizadores de velocidad de flujo alta para aplicar el mayor volumen de rociado práctico. Los pulverizadores con mayores velocidades de flujo producen gotitas más grandes.
- **Presión:** Use las presiones de rocío más bajas recomendadas para la boquilla. La presión más alta reduce el tamaño de la gotita y no mejora la penetración del todo. Cuando sean necesarias velocidades de flujo mayores, use la boquillacon velocidad de flujo mayor en lugar de aumentar la presión.
- **Número de pulverizadores:** Use el número mínimo de pulverizadores que provean cobertura uniforme.
- **Orientación del pulverizador:** Oriente los pulverizadores de modo que el rocío sea liberado hacia atrás, paralelo a la corriente de aire, produzca gotitas más grandes que en otras orientaciones. Una deflexión significativa de la horizontal reducirá el tamaño de la gotita y aumentará la posibilidad de deriva.
- **Tipo de pulverizador:** Use un tipo de pulverizador que esté diseñado para la aplicación prevista. Con la mayoría de los tipos de pulverizadores, los ángulos de rociado más angostos producen gotitas más grandes. Considere el uso de pulverizadores de deriva baja. Los pulverizadores de flujo sólido orientados hacia atrás producen gotitas más grandes que otros tipos de pulverizador.
- **Largo de la barra distribuidora:** Para algunos tipos de uso, la reducción del largo efectivo de la barra distribuidora a menos de 3/4 de la envergadura o el largo del rotor puede reducir más la deriva sin reducir el ancho de la hilera (pasada).
- **Altura de la aplicación:** Las aplicaciones no deben realizarse a una altura mayor que 10 pies por encima de la copa de las plantas más grandes, a menos que se requiera mayor altura por razones de seguridad del aeroplano. La realización de las aplicaciones a la menor altura que sea segura reduce la exposición de las gotitas a la evaporación y el viento.

Ajuste de la hilera (pasada)

Cuando las aplicaciones se lleven a cabo con viento lateral, la banda de aspersión se desplazará a favor del viento. Por ello, en los extremos con o contra el viento del campo, el aplicador debe compensar este desplazamiento ajustando la trayectoria del aeroplano contraria al viento. La distancia de ajuste de la hilera debe aumentar, cuando aumenta la posibilidad de deriva (mayor viento, gotitas más pequeñas, etc.).

Viento

La posibilidad de deriva es menor con velocidades del viento entre 2 y 10 mph. Sin embargo, muchos factores, incluyendo el tamaño de las gotitas y el tipo de equipo determinan la posibilidad de deriva a una velocidad determinada. Debe evitarse la aplicación menos de 2 mph debido a la dirección variable del viento y la posibilidad alta de inversión. NOTA: El terreno local puede influir en los patrones de viento. Cada aplicador debe conocer los patrones (vientos) locales y cómo éstos afectan la deriva.

Temperatura y humedad

Cuando se realizan aplicaciones con humedad relativa baja, fije el equipo para que produzca gotitas más grandes para compensar por la evaporación. La evaporación de gotitas es más grave cuando las condiciones son calurosas y secas.

Inversiones de temperatura

No deben realizarse aplicaciones durante una inversión de temperatura debido a que la posibilidad de deriva es alta. Las inversiones de temperatura restringen la mezcla de aire vertical, lo que causa que pequeñas gotitas suspendidas permanezcan en una nube concentrada. Esta nube puede moverse en direcciones no predecibles debido a los vientos variables leves que son comunes durante las inversiones. Las inversiones de temperatura están caracterizadas por temperaturas en aumento con altitud y son comunes en las noches con cobertura de nubes limitada y poco o ningún viento. Comienzan a formarse cuando se mete el sol y a menudo continúan en la mañana. Su presencia puede indicarse por neblina en el suelo; sin embargo, si la neblina no está presente, las inversiones también pueden identificarse por el movimiento del humo desde una fuente del suelo o por el generador de humo de un aeroplano. El humo en capas que se mueve lateralmente en una nube concentrada (bajo condiciones de poco viento) indica una inversión, mientras que el humo que se mueve hacia arriba y se disipa rápidamente indica buena mezcla de aire vertical.

Áreas sensibles

Este producto sólo se debe aplicar cuando la posibilidad de deriva hacia zonas adyacentes susceptibles (como por ejemplo, áreas residenciales, masas de agua, hábitat conocido de especies amenazadas o en peligro de extinción, cultivos que no sean el objetivo) sea mínima, (como por ejemplo, cuando el viento sople lejos de las áreas susceptibles).

7.2 Equipo de aplicación terrestre

Use las proporciones indicadas en la etiqueta de este producto con 3 a 40 galones de agua por acre para aplicaciones al voleo, a menos que se indique de otra manera en esta etiqueta en otras etiquetas o fichas técnicas complementarias publicadas por Monsanto. A medida que la densidad de las malezas aumenta, el volumen de rocío se

debe aumentar también para conseguir una cobertura completa, pero siempre dentro de los límites indicados en la etiqueta. A fin de evitar un rocío muy fino, seleccione la boquilla cuidadosamente. Para obtener mejores resultados con equipo a nivel del terreno, use boquillas tipo abanico plano. Asegúrese de que las gotas del rocío se distribuyan uniformemente.

7.3 Mochila o equipo de alto volumenn

Aplique el producto al follaje de la vegetación que se desea controlar. En aplicaciones de rocío para mojar, la cobertura del follaje debe ser completa y uniforme. No rocíe hasta el punto de escurrimiento. Use rociadores gruesos solamente.

Refiérase a las instrucciones "Malezas anuales" de la sección "MALEZAS CONTROLADAS" para ver las proporciones y restricciones específicas.

7.4 Equipo especializado

Este producto puede ser diluido con agua y aplicado usando rociadores de recirculación, aplicadores con pantalla, rociadores con capucha, aplicadores por frotación o barras de esponja, sobre las malezas indicadas que crecen en cualquier lugar indicado en esta etiqueta.

EVITE EL CONTACTO DEL HERBICIDA CON LA VEGETACION DESEABLE. El contacto con este producto con la vegetación deseable, podría resultar en daños o en una destrucción de la planta.

Recirculación del rocío

Los rociadores de recirculación dirigen la solución hacia los tipos de malezas que crecen sobre vegetación deseable, mientras que la solución que no ha sido interceptada por las malezas se recoge y se retorna al tanque para volverla a usar.

Los aplicadores utilizados por encima de la vegetación deseable deben ser calibrados de tal manera que el rocío o el punto de contacto más bajo esté por lo menos a 2 pulgadas arriba de la vegetación deseable. Gotas, niebla, espuma o salpicaduras del herbicida en contacto con la vegetación deseable pueden causar con mucha probabilidad descoloración, atrofia o destrucción.

Se obtienen mejores resultados cuando una mayor cantidad de la maleza entra en contacto con el herbicida. Las malezas que no entran en contacto con la solución herbicida no serán afectadas. Esto puede ocurrir en lugares donde las malezas están muy concentradas, cuando la infestación es grave o donde la altura de las malezas es variada, lo que no permite que todas sean tocadas por el herbicida. En estos casos puede hacerse necesario repetir el tratamiento.

Aplicadores con pantalla y con capucha

Los rociadores con pantalla o con capucha aplican la solución del herbicida directamente sobre las malezas, al mismo tiempo que protegen la vegetación deseable, para que no sea tocada por el herbicida. Use boquillas que aseguren un recubrimiento uniforme en toda el área tratada. En los rociadores con pantalla, mantenga las pantallas debidamente colocadas a fin de proteger la vegetación que no se desee destruir. SE DEBE TENER MUCHO CUIDADO PARA EVITAR EL CONTACTO DEL HERBICIDA CON LA VEGETACION DESEABLE.

Aplicadores por frotación y barras de esponja

Los aplicadores por frotación o de esponja aplican la solución del herbicida frotando las malezas con un material absorbente que contenga la solución del herbicida. El equipo debe ser diseñado, mantenido y operado de manera que la solución del herbicida no haga contacto con la vegetación deseable. Opere este equipo a velocidades inferiores a las 5 millas por hora. En áreas donde la infestación es grave, se puede mejorar la eficacia reduciendo la velocidad, así se asegura que el frotador esté siempre adecuadamente saturado con la solución del herbicida. Se obtienen mejores resultados si se aplica 2 veces en direcciones opuestas.

Evite fugas o goteos sobre la vegetación deseable. Ajuste la altura de los aplicadores a fin de asegurar un contacto adecuado con las malezas. Mantenga limpias las superficies de frotación. Tenga presente que en terrenos inclinados, el herbicida puede migrar causando goteos en la parte baja y el secado de las mechas en la parte superior del aplicador por frotación.

No use aplicadores por frotación cuando las malezas estén mojadas.

Mezcle solamente la cantidad de solución que se usará durante el período de un día, debido a que el uso de sobras de días anteriores puede dar como resultado un efecto menos eficiente. Inmediatamente después de usar este producto, lave bien el aplicador usando bastante agua.

Para aplicadores de cordón o de mecha de esponja—Puede emplearse soluciones que oscilan entre 33 al 75 por ciento de este producto en agua.

Para aplicadores de panel y sistemas de alimentación a presión—Se pueden usar soluciones que oscilan entre 33 al 100 por ciento de este producto con agua.

Cuando se aplica de acuerdo a las recomendaciones, este producto CONTROLA las siguientes malezas:

Corn, volunteer
Panicum, Texas
Rye, common
Shattercane
Sicklepod
Spanishneedles
Starbur, bristly

Cuando se aplica de acuerdo a las recomendaciones, este producto SUPRIME las siguientes malezas:

Beggarweed, Florida
Bermudagrass
Dogbane, hemp
Dogfennel
Guineagrass
Johnsongrass
Milkweed
Nightshade, silverleaf
Pigweed, redroot
Ragweed, common
Ragweed, giant
Smutgrass
Sunflower
Thistle, Canada
Thistle, musk
Vaseygrass
Velvetleaf

7.5 Sistemas por inyección

Este producto puede usarse con sistemas de rocío por inyección, ya sean aéreos o a nivel del terreno. Puede usarse como concentrado líquido o diluido antes de la inyección en el chorro de rocío. No mezcle este producto con concentraciones de otros productos sin diluir cuando use los sistemas por inyección salvo que se recomiende específicamente.

7.6 Equipo de aplicación por goteo controlado

La proporción de este producto aplicado por acre usando el equipo de aplicación por goteo controlado no debe ser menor que la cantidad indicada en esta etiqueta cuando se usa equipo convencional para aplicaciones al voleo. Cuando se usa el equipo aplicador por goteo controlado montado en un vehículo, use de 2 a 15 galones de agua por acre.

Los equipos de goteo controlado producen un rociado que es difícil de ver. Se debe tener especial cuidado para evitar que el rociado o el acarreo entre en contacto con el follaje o cualquier otra parte verde de la vegetación que no se quiere tratar, ya que en caso contrario, es probable que ésta sea dañada o destruida.

8.0 RECOMENDACIONES SEGUN AREAS Y USO

A continuación aparecen las instrucciones detalladas para cada área.

A menos que se especifique lo contrario en esta etiqueta o en otras etiquetas o fichas técnicas complementarias publicadas por Monsanto, pueden hacerse aplicaciones para controlar las malezas indicadas en las tablas de malezas anuales, perennes y matorrales leñosos. Vea también la sección "EQUIPO SELECTIVO".

8.1 Troncos cortados

El tratamiento de troncos cortados puede hacerse en cualquier área listada en esta etiqueta. Este producto controla muchas especies de matorrales leñosos y árboles. Aplique este producto usando equipo adecuado para garantizar la cobertura completa del cámbium. Corte los árboles o sus brotes cerca de la superficie del suelo. Aplique una solución de este producto del 50 al 100 por ciento a la superficie recién cortada, inmediatamente después del corte. Demorar la aplicación puede reducir la eficacia del producto. Para obtener mejores resultados, la aplicación deberá hacerse durante los períodos de crecimiento activo y expansión completa de las hojas.

NO HAGA LAS APLICACIONES SOBRE TRONCOS CORTADOS CUANDO LAS RAICES DE LOS MATORRALES LEÑOSOS O ARBOLES DESEABLES PUEDEN ESTAR INUERTADAS A LAS RAICES DE LOS TRONCOS CORTADOS. Algunos brotes, tallos o árboles pueden compartir el mismo sistema radicular. Árboles que están contiguos, que tienen la misma edad, altura y separación pueden indicar raíces compartidas. Cuando se trata a uno o más árboles que tienen raíces en común, tanto si están injertados como si comparten el sistema radicular, es probable que se produzca un daño en los brotes/árboles no tratados.

8.2 Preparación del lugar para forestación

Este producto puede ser utilizado para controlar o controlar parcialmente malezas leñosas, árboles y malezas herbáceas en forestaciones, y preparar o crear claros para la vida silvestre en estos lugares y para mantener los caminos de las explotaciones forestales.

Este producto puede ser utilizado para preparar el lugar antes de plantar cualquier especie de árbol, como árboles de Navidad, eucaliptos, cultivos de árboles híbridos y viveros dedicados a la silvicultura

Utilice proporciones más concentradas de este producto dentro de los márgenes recomendados para controlar o controlar parcialmente malezas leñosas, árboles y malezas herbáceas perennes difíciles de controlar. Para obtener resultados óptimos, aplique este producto a árboles y arbustos leñosos en crecimiento activo después de la expansión completa de las hojas y antes de que éstas adquieran color otoñal y se caigan. Incremente la concentración dentro del margen recomendado para controlar malezas herbáceas perennes en cualquier momento después de la emergencia y antes de que aparezcan inflorescencias, flores o bayas.

Utilice proporciones menos concentradas de este producto dentro del margen recomendado para controlar malezas herbáceas anuales y malezas herbáceas perennes en crecimiento activo después de que aparezcan inflorescencias, flores o bayas. Aplique

al follaje de malezas herbáceas anuales en crecimiento activo en cualquier momento después de la emergencia.

Este producto carece de actividad herbicida o residual en la tierra. Si es necesario repetir las aplicaciones, no exceda los 10,6 cuartos de galón de este producto por acre por año.

MEZCLAS PARA TANQUE: Se pueden emplear mezclas de tanque con este producto para aumentar el espectro de la vegetación controlada. Antes de preparar una mezcla de tanque, lea y siga al pie de la letra las instrucciones, las advertencias de precaución y toda la información en las etiquetas de todos los productos utilizados. Use la mezcla conforme a las advertencias de precaución más estrictas indicadas para cada producto en la mezcla.

NOTA: Para la preparación de sitios de forestación, asegúrese de que el producto para mezclar en tanque esté aprobado antes de plantar las especies deseadas. Respete las restricciones del intervalo de plantación.

Todas las proporciones recomendadas de este producto se pueden utilizar en una mezcla de tanque con los siguientes productos para la preparación de sitios de forestación.

Arsenal Applicators Concentrate	Garlon 3A
Chopper	Garlon 4
Chopper Gen2	Oust XP
Escort	

Para controlar malezas herbáceas, utilice las proporciones de menor concentración recomendadas para la mezcla de tanque. Para controlar grupos densos o difíciles de arbustos leñosos y árboles, utilice las proporciones de mayor concentración recomendadas en mezcla de tanque.

No aplique este producto para aplicaciones al voleo en la parte superior de coníferas para forestación o árboles de madera dura a menos que se indique lo contrario en esta etiqueta o en otras etiquetas o fichas técnicas complementarias publicadas por Monsanto.

8.3 Areas generales y áreas industriales

Este producto puede ser utilizado en áreas no cultivables como aeropuertos, conjuntos de apartamentos, sitios comerciales, orillas de acequias, caminos de entrada de automóviles, acequias secas, canales secos, filas de vallas, áreas de forestación, campos de golf, invernaderos, zonas industriales, áreas de paisaje, depósitos de madera, zonas de manufactura, solares municipales, zonas naturales, complejos de oficinas, cultivos ornamentales, parques, áreas de estacionamiento, zonas con tanques de petróleo e instalaciones de bombeo, vías de ferrocarril, áreas recreativas, áreas residenciales, derechos de paso, bordes de carreteras, escuelas, umbráculos, complejos deportivos, áreas de almacenamiento, subestaciones, zonas de césped, zonas de servicios públicos, zonas de almacenes, otras áreas públicas y zonas en la que se realiza gestión de vida silvestre.

También se puede utilizar este producto en áreas de cultivos no alimenticios, como granjas de árboles de Navidad, criaderos de plantas y granjas de césped o para semillas de césped.

A menos que se especifique lo contrario, pueden realizarse aplicaciones para controlar las malezas indicadas en la sección "MALEZAS CONTROLADAS" de esta etiqueta.

Control general de malezas, recortado de bordes y suelo limpio de malezas

Este producto puede utilizarse en áreas no cultivables y de cultivos no alimenticios. Puede aplicarse con cualquiera de los equipos descritos en este libreto. Puede usarse para el recortado de bordes alrededor de objetos en áreas no cultivables, para tratamiento localizado de vegetación no deseable y para eliminar las malezas no deseables que crecen en cuadros de arbustos establecidos y plantaciones ornamentales. Este producto puede usarse antes de plantar un área con plantas ornamentales, flores, césped (tepes o semillas), o antes de colocar asfalto o de comenzar un proyecto de construcción.

Pueden hacerse aplicaciones repetidas de este producto, a medida que emergen las malezas, para mantener el suelo limpio de malezas.

MEZCLAS DE TANQUE: Este producto se puede mezclar en un tanque con los siguientes productos, siempre que éstos estén aprobados para el área de uso deseada. Consulte las etiquetas de estos productos para informarse sobre las áreas de uso y las dosis de aplicación aprobadas.

Arsenal	Karmex	Ronstar 50 WSP
Barricade 65WG	Krovar I DF	Sahara
Clarity	Oust XP	simazine
diuron	Pendulum 3.3 EC	Surflan
Endurance	Pendulum WDG	Telar
Escort	Plateau	Vanquish
Garlon 3A	Princep DF	2,4-D
Garlon 4	Princep Liquid	

Este producto más las mezclas en tanque de dicamba no se pueden aplicar por rocío aéreo en California.

Cuando se aplica como mezcla de tanque para mantener el suelo limpio de malezas, este producto proporciona control sobre las malezas anuales emergidas y control o control parcial sobre las malezas perennes emergidas, matorrales leñosos y árboles.

Para controlar o controlar parcialmente las malezas perennes siguientes, aplique 1 a 2 cuartos de galón de este producto más 2 a 8 onzas de Oust XP por acre.

Bahiagrass	Fescue, tall
Bermudagrass	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Quackgrass
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Segador químico - Plantas perennes

Este producto suprime las hierbas perennes mencionadas en esta sección para servir como substituto del sageo. Use 8 onzas fluidas de este producto por acre cuando trate extensiones de tall fescue (*Festuca arundinacea*), fine fescue (*Festuca rubra*), orchardgrass (*Dactylis glomerata*), quackgrass (*Elytrigia repens*) o reed canarygrass (*Phalaris arundinacea*). Use 6 onzas fluidas de este producto por acre cuando trate Kentucky bluegrass. Aplique el tratamiento en 10 a 40 galones de solución para rociar por acre.

Uselo solamente en áreas en las que puede tolerarse un daño o decoloración temporal de las hierbas perennes.

Segador químico - Plantas anuales

Para suprimir el crecimiento de algunas hierbas anuales, tales como el ballico, la cebada silvestre y la avena loca anuales que crecen en céspedes agrestes al borde de las carreteras u otras áreas industriales, aplique de 4 a 5 onzas fluidas de este producto en 10 a 40 galones de solución de rocío por acre. Las aplicaciones se deben realizar cuando las hierbas anuales crezcan activamente y antes de que las semillas se encuentren en la etapa de "boot" del desarrollo. Los tratamientos pueden perjudicar a las hierbas deseadas.

Especie *Bromus* y Medusahead en pasturas y praderas

Especie *Bromus*. Este producto puede ser utilizado para tratar downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) y cheatgrass (*Bromus secalinus*) que se encuentran en lugares industriales, pasturas y praderas. Aplique por difusión, 8 a 16 onzas fluidas de este producto por acre.

Para obtener mejores resultados, el tratamiento debe coincidir con la emergencia temprana del epicótilo de las plantas más maduras. Demorar la aplicación hasta esta etapa del desarrollo maximizará la emergencia de otros brotes de malezas de pastos. Las aplicaciones se deben hacer todos los años sobre el mismo lugar hasta que se agoten los bancos de semilla y se puedan restablecer en el lugar los pastos perennes deseados.

Medusahead. Para tratar medusahead, aplique 16 onzas fluidas de este producto por acre, tan pronto como las plantas se encuentren en desarrollo activo y antes de la etapa de 4 hojas. Las aplicaciones se pueden hacer en el otoño o en la primavera.

Las aplicaciones sobre *Bromus* y sobre medusahead se pueden hacer utilizando equipo de pulverización terrestre o aéreo. Las aplicaciones aéreas para estos usos se pueden hacer utilizando equipos para aeronaves de ala fija o para helicóptero. Para aplicaciones aéreas, diluya en 2 a 10 galones de agua por acre. Para aplicaciones utilizando equipo terrestre, diluya en 10 a 20 galones de agua por acre. Cuando se aplica de acuerdo a las instrucciones de esta etiqueta, no hay restricciones al pastoreo.

Césped latente (durmiente)

Este producto puede usarse para controlar o suprimir muchas malezas anuales de invierno y tall fescue para el alivio eficaz de céspedes de bermudagrass y bahiagrass latentes. Trate solamente cuando el césped esté latente y antes de reverdecer en la primavera.

Aplique de 8 a 64 onzas fluidas de este producto por acre. Aplique las dosis recomendadas en 10 a 40 galones de agua por acre. Utilícelo sólo en áreas donde bermudagrass o bahiagrass sean coberturas de terreno convenientes y donde pueda tolerarse algún daño temporal o descoloración.

Los tratamientos en exceso de 16 onzas fluidas por acre pueden dañar o retrasar el reverdecer en las áreas donde se hace mucho mantenimiento, como campos de golf y jardines. NO aplique mezclas de tanque de este producto más Oust XP en áreas de césped donde se hace mucho mantenimiento. Para otros usos, vea la sección "Vías de ferrocarril" de esta etiqueta, que proporciona dosis para el tratamiento de bermudagrass latente y la sección "Bordes de las carreteras" de esta etiqueta, que proporciona dosis para tratamientos de bermudagrass y bahiagrass latentes.

Bermudagrass de crecimiento activo

Este producto puede emplearse para controlar total o parcialmente muchas malezas anuales y perennes a fin de obtener una distribución eficaz de bermudagrass de crecimiento activo. NO aplique más de 16 onzas fluidas de este producto por acre en áreas de céspedes de alto mantenimiento. NO aplique mezclas de tanque de este producto más Oust en áreas de céspedes de alto mantenimiento. Para otros usos, vea la sección "BORDES DE LAS CARRETERAS" de esta etiqueta, que proporciona dosis para tratamientos de bermudagrass de crecimiento activo. Utilícelo sólo en áreas donde puede tolerarse algún daño temporal o descoloración.

Renovación del césped, producción de semillas o tepes

Este producto controla la mayoría de la vegetación existente antes de la renovación del césped o de establecer céspedes cultivados para semilla o tepes. Para un control máximo de la vegetación existente, demore la siembra o cobertura de césped a fin de determinar si las partes de la planta que quedaron bajo tierra vuelven a crecer. Cuando sea necesario repetir el tratamiento, permita que las plantas se desarrollen lo suficiente antes de volver a tratar. Para controlar más eficientemente las hierbas de estación caliente, como bermudagrass, se debe aplicar este producto en el verano o en el otoño.

En lugares donde la vegetación existente esté creciendo y el césped esté bajo un programa de siega, aplique este producto después de omitir por lo menos un corte del césped para permitir un crecimiento suficiente a fin de que el rociado sea interceptado por las plantas.

No remueva la tierra ni las partes de la planta que estén bajo tierra antes del tratamiento. La labranza o las técnicas de renovación como corte vertical, perforación o rebanado deben esperar 7 días después de la aplicación a fin de permitir la absorción adecuada en las partes de la planta que estén bajo tierra.

Pueden plantarse los céspedes convenientes siguiendo los procedimientos anteriormente mencionados.

Puede utilizarse equipo de mano para el tratamiento en sitio de vegetación no deseada que crezca en el césped existente. Puede utilizarse equipo de difusión o de mano para controlar los restos de tepes u otra vegetación no deseada después de cosechar el tepe.

Si las dosis de aplicación ascienden a 3 qt (cuartos de galón) por acre o menos, no se requiere un período de espera entre el tratamiento y la alimentación o pastoreo del ganado. Si la dosis es mayor de 3 qt por acre, retire el ganado doméstico antes de la aplicación y espere 8 semanas después de la aplicación antes de pastorear o cosechar.

8.4 Manejo de hábitats

Restauración y mantenimiento de hábitats

Este producto puede ser usado para controlar la vegetación exótica y otras plantas indeseables en áreas de manejo de hábitats y en áreas naturales, incluyendo pastizales y refugios para la fauna silvestre. Pueden hacerse aplicaciones para permitir la recuperación de las especies de plantas nativas, antes de plantar dichas especies nativas deseables, y para otros requisitos similares de control de la vegetación de amplia efectividad. A fin de eliminar selectivamente ciertas plantas indeseables, se pueden hacer aplicaciones en puntos específicos para controlar y mejorar el hábitat.

Sitios donde se siembran alimentos para la fauna silvestre

Este producto puede ser usado para preparar el terreno donde se desea sembrar alimentos para la fauna silvestre. Cualquier especie de alimento para la fauna silvestre puede ser sembrada después de aplicar este producto, o también se puede permitir que las especies nativas vuelvan a poblar el área. Si hace falta labrar para preparar el terreno antes de sembrar las semillas, espere 7 días después de aplicar este producto antes de arar a fin de permitir la absorción adecuada en las partes de la planta que estén bajo tierra.

8.5 Inyección y chorro (matorrales leñosos y árboles)

Este producto puede aplicarse por inyección o chorro para el control total o parcial de matorrales leñosos y árboles. Aplique este producto usando equipo adecuado, que debe ser capaz de penetrar en el tejido viviente. Aplique el equivalente a 1/25 onza fluida (1 mL) de este producto por cada 2 ó 3 pulgadas de diámetro del tronco a la altura del pecho (DBH en inglés). La mejor forma de hacerlo es aplicando una solución del 50 al 100 por ciento, este producto, con un chorro continuo alrededor del árbol o en cortes espaciados uniformemente alrededor del árbol y por debajo del nivel de las ramas. A medida que el diámetro del árbol aumenta, se obtienen mejores resultados con el chorro continuo alrededor del árbol o en cortes espaciados muy cerca entre sí alrededor del árbol. Evite las aplicaciones que permiten el escurrimiento de material cuando se chorrea alrededor del árbol o sobre los cortes en árboles que tienen la facilidad de exudar savia de los cortes. En especies de este tipo, haga los cortes de manera oblicua a fin de producir el efecto de copa y use el producto sin diluir. Para obtener mejores resultados, la aplicación debe tener lugar durante períodos de crecimiento activo y expansión completa de las hojas. En especies de este tipo, haga los cortes de manera oblicua a fin de producir el efecto de copa y use el producto sin diluir. Para obtener mejores resultados, la aplicación debe tener lugar durante períodos de crecimiento activo y expansión completa de las hojas.

8.6 Plantas ornamentales, viveros y árboles de Navidad

Post-dirigido y recortado de bordes

Este producto puede ser utilizado antes como un rocío post-dirigido alrededor de especies ornamentales leñosas establecidas, como arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce y yew, que crecen en viveros, en granjas de árboles de Navidad o en otros sitios de producción de árboles no alimenticios. Este producto también puede ser utilizado para recortado de bordes alrededor de árboles, edificios, aceras y carreteras, plantas en macetas y otros objetos de viveros.

Las plantas deseables pueden ser protegidas de la solución usando pantallas o cubriéndolas con cartón o con algún otro material impermeable. ESTE PRODUCTO NO SE RECOMIENDA PARA ROCIARSE DESDE ARRIBA SOBRE PLANTAS ORNAMENTALES Y ÁRBOLES DE NAVIDAD. Se debe tener mucho cuidado para que el rocío, acarreo o vapor de este producto no hagan contacto con el follaje o la corteza de las especies ornamentales establecidas.

Preparación del terreno

Este producto puede ser usado antes de plantar cualquier tipo de planta ornamental, de vivero o árboles de Navidad.

Aplicadores por frotación

Este producto se puede usar mediante aplicadores de mecha de esponja u otro tipo de aplicadores por frotación adecuados, para controlar total o parcialmente la vegetación indeseable alrededor de eucaliptos o álamos. Consulte la sección "Equipo especializado" de este rótulo para obtener mayor información sobre el uso adecuado de los aplicadores por frotación.

Invernaderos/cobertizos

Este producto puede ser usado para controlar las malezas que estén creciendo en o alrededor de los invernaderos y cobertizos. No debe haber vegetación que no se quiera destruir y los equipos de ventilación deben estar apagados.

8.7 Parques, áreas recreativas y residenciales

Este producto puede usarse en parques, áreas recreativas y residenciales. Puede aplicarse con cualquiera de los equipos descritos en este libreto. Puede usarse para el recortado de bordes alrededor de árboles, vallas, caminos, alrededor de edificios, aceras y otros objetos en estas áreas. Puede usarse para tratamiento localizado de vegetación no deseable y para eliminar las malezas no deseables que crecen en cuadros de arbustos establecidos y plantaciones ornamentales. Este producto puede usarse antes de plantar un área con plantas ornamentales, flores, césped (tepes o semillas), o antes de colocar asfalto o de comenzar un proyecto de construcción.

Todas las instrucciones de la sección "Áreas no cultivadas y áreas industriales" son válidas para los parques y áreas recreativas.

8.8 Vías de ferrocarril

Todas las instrucciones de la sección "Áreas no cultivadas y áreas industriales" son válidas para las vías de ferrocarril.

Suelo vacío, balastos y bordes, cruces y tratamiento localizado

Este producto puede ser usado para mantener el suelo limpio de malezas en balastos y bordes de las vías de ferrocarril. Pueden hacerse aplicaciones repetidas de este producto, a medida que emergen las malezas, para mantener el suelo limpio de malezas. Este producto puede usarse para controlar las malezas altas y mejorar la línea visual en los cruces de ferrocarril y reducir la necesidad de segar a lo largo de las servidumbres de vía. Para aplicaciones en los cruces, pueden usarse hasta 80 galones de solución para rociar por acre.

Este producto puede mezclarse en tanque con los siguientes productos para tratamiento de balastos, bordes, tratamientos localizados, suelo limpio de malezas y cruces:

Arsenal	Krovar I DF
Clarity	Oust XP
diuron	Sahara
Escort	Spike
Garlon 3A	Telar
Garlon 4	Vanquish
Hyvar X	2,4-D

Control de matorrales

Este producto puede ser usado para controlar matorrales leñosos y árboles en las servidumbres de vía. Aplique de 4 a 10 cuartos de galón de este producto por acre para aplicaciones diseminadas, usando boquillas tipo aguilón o sin aguilón. Pueden usarse hasta 80 galones de solución para rociar por acre. Aplique una solución de 3/4 a 2 por ciento de este producto cuando haga aplicaciones de rociado para mojar a gran escala. Aplique una solución de 5 a 10 por ciento de este producto cuando haga aplicaciones de rociado dirigido a pequeña escala para tratamientos localizados. Este producto puede ser mezclado con los siguientes productos para un mejor control de los matorrales leñosos y árboles:

Arsenal	Garlon 4
Escort	Tordon K
Garlon 3A	

Mantenimiento del Bermudagrass

Este producto puede ser usado para controlar o controlar parcialmente muchas malezas anuales y perennes para el mantenimiento eficaz de bermudagrass que esté creciendo activamente. Aplique de 1 a 3 pintas de este producto en un máximo de 80 galones de solución para rociar por acre. Para tratar malezas anuales que tengan menos de 6 pulgadas de altura (o el largo de los tallos), use las proporciones más bajas. Use la proporción más alta a medida que las malezas aumenten de tamaño o cuando estén cerca de la floración o de la formación de semillas. Estas proporciones también controlan parcialmente las siguientes especies perennes:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

Este producto puede ser mezclado con Oust XP. Si se mezcla en tanques, no use más de 1 a 3 pintas de este producto con 1 a 2 onzas de Oust XP por acre. Para tratar malezas anuales listadas en esta etiqueta en la etiqueta de Oust XP, que tengan menos de 6 pulgadas de altura (o el largo de los tallos), use las proporciones más bajas de cada producto. Use la proporción más alta a medida que las malezas aumenten de tamaño o cuando estén cerca de la floración o de la formación de semillas. Estas proporciones también controlan parcialmente las siguientes especies perennes:

Bahiagrass	Fescue, tall
Blackberry	Johnsongrass
Bluestem, silver	Poorjoe
Broomsedge	Raspberry
Dallisgrass	Trumpetcreeper
Dewberry	Vaseygrass
Dock, curly	Vervain, blue
Dogfennel	

Úselo solamente en bermudagrass que esté bien establecido. Como resultado del tratamiento, el bermudagrass puede sufrir deterioro, pero volverá a crecer si se riega. No se recomienda repetir el tratamiento en la misma estación, ya que esto puede ocasionar daños graves al bermudagrass.

8.9 Bordes de las Carreteras

Todas las instrucciones de la sección "Áreas no cultivadas y áreas industriales" son válidas para bordes de las carreteras.

Tratamiento de bordes

Este producto puede ser usado en los bordes de las carreteras. Puede aplicarse con rociadores de aguilón, rociadores de aguilón con pantalla, boquillas descentradas de gran volumen, equipo de mano y equipos similares.

Barandas y otros obstáculos para la siega

Este producto puede ser usado para controlar las malezas que crecen debajo de las barandas y alrededor de la señalización y otros objetos en los bordes de las carreteras.

Tratamiento localizado

Este producto puede ser usado como tratamiento localizado para controlar la vegetación indeseable que crece a lo largo de los bordes de las carreteras.

Mezclas de tanque

Este producto puede mezclarse en tanque con los siguientes productos para tratamientos de bordes, barandas, localizados y de suelo vacío siempre y cuando dichos productos estén aprobados para su uso en dichos sitios. Lea y siga con cuidado las indicaciones, declaraciones preventivas y toda la demás información incluida en las etiquetas de los productos utilizados:

Clarity	Princep DF
diuron	Princep Liquid
Endurance	Ronstar 50 WSP
Escort	Sahara
Krovar I DF	simazine
Oust XP	Surflan
Outrider®	Telar
Pendulum 3.3 EC	Vanquish
Pendulum WDG	2,4-D

Vea las instrucciones generales para mezclas de tanque en la sección "Mezclas de tanques" de esta etiqueta.

Mantenimiento del Bermudagrass y Bahiagrass

Aplicaciones cuando estén latentes (durmientes)

Este producto puede usarse para controlar o controlar parcialmente muchas malezas anuales de invierno y tall fescue para el alivio eficaz de bermudagrass y bahiagrass latentes. Trate solamente cuando el césped esté latente y antes de su reverdecer primaveral. Este producto puede mezclarse en tanque con el herbicida Outrider o Oust XP para el control residual. Las mezclas de tanque de este producto con Oust XP pueden retrasar el reverdecer.

Para obtener mejores resultados con malezas anuales de invierno, haga el tratamiento cuando las plantas estén en una etapa temprana de su crecimiento (menos de 6 pulgadas de altura) después de que la mayoría haya germinado. Para obtener mejores resultados con tall fescue, haga el tratamiento cuando el fescue esté en o después de su etapa de 4 a 6 hojas.

Aplique de 8 a 64 onzas de este producto en una mezcla de tanque con 3/4 a 1-1/3 de onza de herbicida Outrider por acre. Lea y siga todas las instrucciones de la etiqueta del herbicida Outrider.

Aplique de 8 a 64 onzas fluidas de este producto por acre, solo o en mezcla de tanque con 1/4 a 1 onza de Oust XP por acre. Aplique las proporciones recomendadas en 10 a 40 galones de agua por acre. Uselo solamente en áreas donde el bermudagrass o bahiagrass son deseables y en las que puede tolerarse un poco de daño o decoloración. Para evitar que el reverdecer se retarde y para minimizar el daño, no agregue más de 1 onza de Oust XP por acre sobre bermudagrass y no más de 1/2 onzas de Oust XP por acre sobre bahiagrass, y evite el tratamiento cuando estas hierbas se encuentren en estado semilatente.

Bermudagrass que esté creciendo activamente

Este producto puede ser usado para controlar total o parcialmente muchas malezas anuales y perennes para el mantenimiento eficaz de bermudagrass que esté creciendo activamente. Aplique de 1 a 3 pintas de este producto en 10 a 40 galones de solución para rociar por acre. Para tratar malezas anuales que tengan menos de 6 pulgadas de altura (o el largo de los tallos), use las proporciones más bajas. Use la proporción más alta a medida que las malezas aumenten de tamaño o cuando estén cerca de la floración o de la formación de semillas. Estas proporciones también controlan parcialmente las siguientes especies perennes:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

Este producto puede ser mezclado en tanque con el Outrider para el control o el control parcial de *Sorghum halepense* (Johnsongrass) y otras malas hierbas indicadas en la etiqueta del Outrider. Use de 8 a 32 onzas de este producto con 3/4 a 1-1/3 onzas de Outrider. Utilice las proporciones más altas de ambos productos para el control de malas hierbas perennes o anuales que tengan una altura superior a 6 pulgadas.

Este producto puede ser mezclado con Oust XP. Si se mezcla en tanques, no use más de 1 a 2 pintas de este producto con 1 a 2 onzas de Oust XP por acre. Para tratar malezas anuales listadas en este etiqueta y en las etiqueta de Oust XP, que tengan menos de 6 pulgadas de altura (o el largo de los tallos), use las proporciones más bajas de cada producto. Use la proporción más alta a medida que las malezas aumenten de tamaño o cuando estén cerca de la floración o de la formación de semillas. Estas proporciones también controlan parcialmente las siguientes especies perennes:

Bahiagrass	Fescue, tall
Bluestem, silver	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Trumpetcreeper
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Úselo solamente en bermudagrass que esté bien establecido. Como resultado del tratamiento, el bermudagrass puede sufrir deterioro, pero volverá a crecer si se riega. No se recomienda repetir el tratamiento con la mezcla de tanque en la misma estación, ya que esto puede ocasionar daños graves al bermudagrass.

Bahiagrass que esté creciendo activamente

Para suprimir el crecimiento vegetativo y la inhibición de la formación de semillas de bahiagrass durante aproximadamente 45 días, aplique 6 onzas fluidas de este producto en 10 a 40 galones de agua por acre. Aplique de 1 a 2 semanas después de reverdecer completo o después de cortar a una altura uniforme de 3 a 4 pulgadas. Esta aplicación debe ser hecha antes de la emergencia de las semillas.

Para la supresión durante un máximo de 120 días, aplique 4 onzas fluidas de este producto por acre, y a continuación una aplicación de 2 a 4 onzas fluidas por acre unos 45 días más tarde. No haga más de 2 aplicaciones al año.

Este producto se puede utilizar para el control o el control parcial de Sorghum halepense (Johnsongrass) y otras malas hierbas indicadas en la etiqueta de Outrider, en Paspalum notatun (bahiagrass) en crecimiento activo. Aplique de 1-1/2 a 4-3/4 onzas de este producto con 0.75 a 1.33 onzas de Outrider por acre. Utilice las proporciones más altas para el control de malas hierbas perennes o anuales que tengan una altura superior a 6 pulgadas. Utilice sólo en Paspalum notatum (bahiagrass) bien establecido.

Utilice las mezclas del tanque de este producto con Oust XP. Aplique 6 onzas fluidas de este producto con 0.25 onzas de Oust XP por acre, 1 a 2 semanas después de la primera siega de la primavera. Haga solamente 1 aplicación al año.

8.10 Sitos de servicios públicos

Este producto puede ser utilizado junto a derechos de paso para alimentación eléctrica, conductos y teléfonos y en otros lugares asociados con estos derechos de paso, como subestaciones, bordes de carreteras, líneas de ferrocarril o derechos de paso similares para servicios públicos.

Este producto puede ser utilizado en áreas de servicios públicos y subestaciones para el mantenimiento del suelo limpio de malezas, el recortado de bordes y el tratamiento localizado de vegetación no deseable, así como para eliminar las malezas no deseables que crecen en cuadros de arbustos establecidos o plantaciones ornamentales. Este producto puede ser utilizado antes de plantar un área de servicios públicos con plantas ornamentales, flores y césped (panes de césped o semillas) o antes de comenzar un proyecto de construcción.

Pueden hacerse aplicaciones repetidas de este producto, a medida que emergen las malezas, para mantener el suelo limpio de malezas.

Este producto también puede ser utilizado para preparar o establecer zonas de reserva de vida silvestre dentro de estos sitios, manteniendo los caminos de acceso y para el recorte lateral a lo largo de los derechos de paso.

Mezclas de tanque

Se pueden emplear mezclas de tanque con este producto para aumentar el espectro de control de malezas herbáceas, arbustos leñosos y árboles, siempre que el producto específico esté registrado para su aplicación en el terreno deseado. Antes de preparar una mezcla de tanque, lea y siga al pie de la letra las instrucciones, las advertencias de precaución y toda la información en las etiquetas de todos los productos utilizados. Use la mezcla conforme a las advertencias de precaución más estrictas indicadas para cada producto en la mezcla. Pueden utilizarse en mezclas de tanque todas las proporciones recomendadas de este producto.

Para controlar malezas herbáceas, utilice las proporciones de menor concentración recomendadas para la mezcla de tanque. Para controlar grupos densos o difíciles de arbustos leñosos y árboles, utilice las proporciones de mayor concentración recomendadas.

MEZCLAS DE TANQUE: Este producto se puede mezclar en tanque con los siguientes productos para su uso en áreas de servicios públicos, siempre y cuando los productos

estén aprobados para su uso en dichos sitios. Refiérase a las etiquetas de cada producto para los sitios y proporciones de aplicación aprobados.

Arsenal	Outrider
atrazine[1]	pendimethalin[1]
Barricade 65WG	Plateau
dicamba[1]	Ronstar 50 WP
diuron[1]	Sahara
Endurance	simazine[1]
Escort	Surflan AS
Escort XP	Surflan WDG
Garlon 3A[2]	Telar DF
Garlon 4[3]	Transline
Krenite	Vanquish
Krovar I DF	Velpar DF
Oust	Velpar L
Oust XP	2,4-D[1]

1 Pueden realizarse mezclas en tanque con productos que contienen este ingrediente activo genérico siempre y cuando dichos productos esté aprobados para su aplicación en el lugar deseado.

2 Antes de agregar este producto, asegúrese de haber mezclado completamente Garlon 3A con agua, conforme a las instrucciones de la etiqueta. Para evitar problemas de incompatibilidad de rocío, agite la mezcla del rocío en el momento en que se agregue este producto.

3 Para tratamientos de recorte lateral, use este producto solo o en una mezcla en tanque con Garlon 4.

Tierra desprovista de vegetación y podas y bordes

Este producto se puede utilizar en sitios de servicios públicos y subestaciones para terreno desprovisto de vegetación y para objetos con bordes recortados, para tratamiento localizado de vegetación no deseable y para eliminar las malezas no deseables que crecen en cuadros de arbustos establecidos y plantaciones ornamentales. Este producto puede usarse antes de plantar un área con plantas ornamentales, flores, césped (tepes o semillas), o antes de colocar asfalto o de comenzar un proyecto de construcción.

Pueden hacerse aplicaciones repetidas de este producto, a medida que emergen las malezas, para mantener el suelo limpio de malezas.

Este producto se puede mezclar en tanque con los siguientes productos. Consulte en las etiquetas de estos productos los lugares aprobados para emplearlos en el establecimiento no cultivados y las proporciones de aplicación.

Arsenal	Plateau
Banvel	Princep DF
Barricade 65WG	Princep Liquid
diuron	Ronstar 50 WP
Endurance	Sahara
Escort	simazine
Garlon 3A	Surflan

9.0 TIPOS DE MALEZAS CONTROLADAS

Use siempre la proporción más alta de este producto por acre, dentro de las proporciones recomendadas, cuando las malezas son densas o cuando crecen en un área no tocada (no cultivada).

Puede haber una disminución de los resultados cuando se traten malezas cubiertas con mucho polvo. Para las malezas que han sido segadas, pastadas o cortadas, permita que vuelvan a crecer antes del tratamiento.

Cuando realice aplicaciones de rocío dirigido a pequeña escala, utilice una solución de 5 a 10 por ciento de este producto para el control total o parcial de malezas anuales, malezas perennes o matorrales leñosos y árboles. La cobertura del rocío debe ser uniforme y tomar contacto con al menos el 50 por ciento del follaje. La cobertura de la mitad superior de la planta es importante para obtener resultados óptimos. Para asegurar la cobertura del rocío adecuada, rocíe ambos lados de los matorrales leñosos y de los árboles grandes o altos, cuando el follaje es espeso y denso o cuando hay varios rebrotes.

Vea las secciones siguientes para las proporciones recomendadas para el control de malezas, matorrales leñosos y árboles anuales y perennes. Para las malezas, matorrales leñosos y árboles difíciles de controlar, donde las plantas crecen en condiciones de estrés, o donde la infestación es densa, pueden usarse 5 a 10 cuartos de galón por acre de este producto para obtener mejores resultados.

9.1 Malezas anuales

Use 1 cuarto de galón por acre si las malezas tienen menos de 6 pulgadas de altura o largo de los tallos y 1.5 cuartos a 4 cuartos de galón por acre si las malezas tienen más de 6 pulgadas de altura o largo de los tallos o cuando las malezas crecen en condiciones de estrés.

Para aplicaciones de rociado para mojar, aplique una solución de 1/2 por ciento de este producto a las malezas que tengan menos de 6 pulgadas de altura o largo de los tallos. Haga la aplicación antes de la formación de semillas para la hierba, o la formación de yemas para las malezas de hoja ancha. Para las malezas anuales que tienen más de 6 pulgadas de altura o las malezas más pequeñas que crecen en condiciones de estrés, use una solución del 1 al 2 por ciento. Use la dosis más alta para las especies difíciles de controlar o las malezas de más de 24 pulgadas de altura.

ESPECIES DE MALEZAS

Anoda, spurred	Medusahead*
Barley*	Morninggiory (*Ipomoea spp*)
Barley, little*	Mustard, blue*
Barnyardgrass*	Mustard, tansy*
Bassia, fivehook	Mustard, tumble*
Bittercress*	Mustard, wild*
Bluegrass, annual*	Nightshade, black*
Bluegrass, bulbous*	Oats
Brome, downy*	Pancium, browntop*
Brome, Japanese*	Pancium, fall*
Buttercup*	Pancium, Texas*
Castorbean	Pennycress, field*
Cheatgrass*	Pepperweed, Virginia*
Cheeseweed (*Malva parviflora*)	Pigweed*
Chervil*	Puncturevine
Chickweed*	Purslane, common
Cocklebur*	Pusley, Florida
Copperleaf, hophornbeam	Ragweed, common*
Copperleaf, Virginia	Ragweed, giant
Coreopis, plains/tickseed*	Rice, red
Corn*	Rocket, London*
Crabgrass*	Rocket, yellow
Cupgrass, woolly*	Rye*
Dwarfdandelion*	Ryegrass*
Eclipta*	Sandbur, field*
Falsedandelion*	Sesbania, hemp
Falseflax, smallseed*	Shattercane*
Fiddleneck	Shepherd's-purse*
Filaree	Sicklepod
Fleabane, annual*	Signalgrass, broadleaf*
Fleabane, hairy (*Conyza bonariensis*)*	Smartweed, ladysthumb*
	Smartweed, Pennsylvania*
Fleabane, rough*	Sorghum, grain (milo)*
Foxtail*	Sowthistle, annual
Foxtail, Carolina*	Spanishneedles
Geranium, Carolina	Speedwell, corn*
Goatgrass, jointed*	Speedwell, purslane*
Goosegrass	Sprangletop*
Groundsel, common*	Spurge, annual
Henbit	Spurge, prostrate*
Horseweed/Marestail (*Conyza canadensis*)	Spurge, spotted*
	Spurry, umbrella*
Itchgrass*	Starthistle, yellow
Johnsongrass, seedling	Stinkgrass*
Junglerice	Sunflower*
Knotweed	Teaweed/Prickly sida
Kochia	Thistle, Russian
Lamb's-quarters*	Velvetleaf
Lettuce, prickly*	Wheat*
Mannagrass, eastern*	Wild oats*
Mayweed	Witchgrass*

*Cuando use equipos de aplicación diseminada a nivel del terreno (aplicaciones aéreas o rociadores de aguilón con boquillas tipo abanico plano), estas especies serán controladas o controladas parcialmente con 1 pinta de este producto por acre. Las aplicaciones deben hacerse usando de 3 a 10 galones de volumen por acre. Use boquillas que garanticen una cobertura completa del follaje y haga el tratamiento cuando las malezas estén en su etapa temprana de crecimiento.

9.2 Malezas perennes

Los mejores resultados se obtienen cuando las malezas perennes son tratadas una vez que han alcanzado la etapa reproductiva de su crecimiento (inicio de las semillas para hierbas y formación de yemas para malezas de hoja ancha). Para las plantas sin flores, los mejores resultados se obtienen cuando las plantas alcanzan el estado de madurez. En muchos casos, se requiere el tratamiento antes de estas etapas del crecimiento. En estos casos, use la proporción más alta dentro de las proporciones recomendadas.

Use una solución del 2 por ciento en malezas perennes difíciles de controlar como pasto bermudagrass, dock, field bindweed, hemp dogbane, milkweed y Canada thistle.

Asegúrese de que la cobertura sea a fondo cuando emplee tratamientos de rociado para mojar con equipo de mano. Cuando se utilice equipo manual para tratamientos puntuales localizados de bajo volumen, aplique una solución de 5 a 10 por ciento de este producto.

Espere 7 días o más después de la aplicación antes de labrar.

Especies de malezas	Proporcion (cuartos por acre)	% de solucion de mano
Alfalfa*	1	2
Alligatorweed*	4	1.5
Anise (fennel)	2 - 4	1 - 2
Artichoke, Jerusalem	3 - 5	2
Bahiagrass	3 - 5	2
Beachgrass, European (*Ammophila arenaria*)	—	5
Bentgrass*	1.5	2
Bermudagrass	5	2
Bermudagrass, water (knotgrass)	1.5	2
Bindweed, field	4 - 5	2
Bluegrass, Kentucky	2	2
Blueweed, Texas	4 - 5	2
Brackenfern	3 - 4	1 - 1.5
Bromegrass, smooth	2	2
Bursage, woolly-leaf	—	2
Canarygrass, reed	2 - 3	2
Cattail	3 - 5	2
Clover: red, white	3 - 5	2
Cogongrass	3 - 5	2
Dallisgrass	3 - 5	2
Dandelion	3 - 5	2
Dock, curly	3 - 5	2
Dogbane, hemp	4	2
Fescue (except tall)	3 - 5	2
Fescue, tall	1 - 3	2
Guineagrass	3	1
Hemlock, poison	2 - 4	1 - 2
Horsenettle	3 - 5	2
Horseradish	4	2
Iceplant	2	1.5 - 2
Ivy, German	2 - 4	1 - 2
Johnsongrass	2 - 3	1
Kikuyugrass	2 - 3	2
Knapweed	4	2
Lantana	—	1 - 1.25
Lespedeza	3 - 5	2
Milkweed, common	3	2
Muhly, wirestem	2	2
Mullein, common	3 - 5	2
Napiergrass	3 - 5	2
Nightshade, silverleaf	2	2
Nutsedge, purple, yellow	3	1 - 2
Orchardgrass	2	2
Pampasgrass	3 - 5	1.5 - 2
Paragrass	3 - 5	2
Pepperweed, perennial	4	2
Phragmites*	3 - 5	1 - 2
Quackgrass	2 - 3	2
Redvine*	2	2
Reed, giant	4 - 5	2
Ryegrass, perennial	2 - 3	1
Smartweed, swamp	3 - 5	2
Spurge, leafy*	—	2
Sweet potato, wild*	—	2
Thistle, artichoke	2 - 3	1 - 2
Thistle, Canada	2 - 3	2
Timothy	2 - 3	2
Torpedograss*	4 - 5	2
Trumpetcreeper*	2 - 3	2
Vaseygrass	3 - 5	2
Velvetgrass	3 - 5	2
Wheatgrass, western	2 - 3	2

*Control parcial

9.3 Matorrales leñosos y árboles

Aplique este producto después de la formación completa de hojas, a menos que se indique lo contrario en esta etiqueta o en otras etiquetas o fichas técnicas complementarias publicadas por Monsanto. Para las plantas más grandes y/o donde la densidad de la vegetación sea alta, use la proporción más alta. En las plantas enredaderas que han alcanzado el estado leñoso de crecimiento, use las proporciones más altas. Los mejores resultados se obtienen cuando se aplica a finales del verano o en el otoño, después de la formación de frutos.

En zonas áridas, se obtienen mejores resultados cuando se aplica en la primavera o a principios del verano cuando las especies que crecen como matorrales tienen alto contenido de humedad y florecen.

Cuando haga tratamientos de rociado para mojar con equipos de mano, asegúrese de que la cobertura sea total. Cuando use equipos de mano para tratamientos localizados con rociado dirigido de poco volumen, aplique una solución del 5 al 10 por ciento de este producto.

Es posible que los síntomas no aparezcan antes de las heladas o del envejecimiento con tratamientos de otoño.

Permita que pasen 7 o más días después de la aplicación antes de labrar, segar o remover. Es posible que se necesite repetir el tratamiento para tratar plantas que emergen de partes enterradas o de semillas. Un poco de colorido otoñal es aceptable en plantas indeseables que pierden las hojas en el otoño, siempre y cuando no hayan sufrido mayor pérdida de hojas. Si la aplicación de otoño se realiza después de que hayan ocurrido heladas, es posible que se obtengan resultados deficientes.

Especies de malezas	Proporcion (cuartos por acre)	% de solucion de mano de rociado para mojar
Alder	3 - 4	1 - 1.5
Ash*	2 - 5	1 - 2
Aspen, quaking	2 - 3	1 - 1.5
Bearclover (Bearmat)*	2 - 5	1 - 2
Beech*	2 - 5	1 - 2
Birch	2	1
Blackberry	3 - 4	1 - 1.5
Blackgum*	2 - 5	1 - 2
Bracken	2 - 5	1 - 2
Broom: French, Scotch	2 - 5	1.5 - 2
Buckwheat, California*	2 - 4	1 - 2
Cascara*	2 - 5	1 - 2
Catsclaw*	—	1 - 1.5
Ceanothus*	2 - 5	1 - 2
Chamise*	2 - 5	1
Cherry: bitter, black, pin	2 - 3	1 - 1.5
Coyotebrush	3 - 4	1.5 - 2
Creeper, Virginia	2 - 5	1 - 2
Deerweed	2 - 5	1
Dogwood*	2 - 5	1 - 2
Elderberry	2	1
Elm*	2 - 5	1 - 2
Eucalyptus	—	2
Flower, monkey flower*	2 - 4	1 - 2
Gorse*	2 - 5	1 - 2
Hasardia*	2 - 4	1 - 2
Hawthorn	2 - 3	1 - 1.5
Hazel	2	1
Hickory*	2 - 5	1 - 2
Honeysuckle	3 - 4	1 - 1.5
Hornbeam, American*	2 - 5	1 - 2
Ivy, poison	4 - 5	2
Kudzu	4	2
Locust, black*	2 - 4	1 - 2
Madrone resprouts*	—	2
Manzanita*	2 - 5	1 - 2
Maple, red*	2 - 4	1 - 1.5
Maple, sugar	—	1-1.5
Maple, vine*	2 - 5	1 - 2
Oak: black, white*	2 - 4	1 - 2
Oak, post	3 - 4	1 - 1.5
Oak: northern pin	2 - 4	1 - 1.5
Oak, poison	4 - 5	2
Oak, scrub*	2 - 4	1 - 1.5

Especies de malezas	Proporción (cuartos por acre)	% de solución de mano de rociado para mojar
Oak, southern red	2 - 3	1 - 1.5
Olive, Russian*	2 - 5	1 - 2
Peppertree, Brazilian (Florida holly)*	2 - 5	1 - 2
Persimmon*	2 - 5	1 - 2
Pine	2 - 5	1 - 2
Poplar, yellow*	2 - 5	1 - 2
Redbud, eastern	2 - 5	1 - 2
Rose, multiflora	2	1
Sage, black	2 - 4	1
Sage, white*	2 - 4	1 - 2
Sage brush, California	2 - 4	1
Salmonberry	2	1
Saltcedar*	2 - 5	1 - 2
Sassafras*	2 - 5	1 - 2
Sourwood*	2 - 5	1 - 2
Sumac; laurel, poison, smooth, sugarbush, winged *	2 - 4	1 - 2
Sweetgum	2 - 3	1 -1 .5
Swordfern*	2 - 5	1 - 2
Tallowtree, Chinese	—	1
Tanoak resprouts*	—	2
Thimbleberry	2	1
Tobacco, tree*	2 - 4	1 - 2
Toyon*	—	2
Trumpetcreeper	2 - 3	1 - 1.5
Waxmyrtle, southern*	2 - 5	1 - 2
Willow	3	1
Yerba Santa, California*	—	2

*Control parcial

10.0 LIMITES EN LA GARANTIA Y EN LA RESPONSABILIDAD

Monsanto Compañía garantiza que este producto concuerda con la descripción química de la etiqueta y es razonablemente adecuado para los propósitos descritos en el libreto titulado Instrucciones Completas para el Uso ("Instrucciones") cuando se usa de acuerdo con dichas Instrucciones y las condiciones que allí se detallan. SEGUN LO ESTABLECIDO EN LA LEY VIGENTE, NO SE HACE NINGUNA OTRA GARANTIA EXPRESA O IMPLICITA ACERCA DE LA IDONEIDAD PARA UN USO PARTICULAR O COMERCIABILIDAD. Esta garantía está sujeta también a las condiciones y limitaciones que aquí se indican.

El comprador y todos los usuarios deberán reportar con prontitud a esta Compañía acerca de cualquier reclamo que se base en un contrato, negligencia, estricta responsabilidad, y otros actos ilícitos.

Según lo establecido en la ley vigente, el comprador y todos los usuarios son responsables por todas las pérdidas o daños que resultasen por el uso o manipulación en condiciones que estén más allá del control de esta Compañía, incluyendo pero no limitándose a: incompatibilidad con productos que no sean los señalados en las Instrucciones, aplicación o contacto con vegetación que no se quiera destruir, condiciones climáticas inusuales, condiciones de clima que estén fuera de los límites que se consideran normales en el lugar de la aplicación y para el período de tiempo en el cual se aplica, así como condiciones de clima que estén fuera de los límites indicados en las Instrucciones, aplicaciones que no estén explícitamente aconsejadas en las Instrucciones, condiciones de humedad que estén fuera de los límites establecidos en las Instrucciones, o la presencia de productos en la tierra o sobre ella, en las plantas o en la vegetación que se está tratando, diferentes a los indicados en las Instrucciones.

Monsanto Compañía no garantiza ninguno de los productos reformulados o reempacados de este producto, excepto de acuerdo a los requisitos de la administración de esta Compañía y con el permiso escrito expreso de esta Compañía.

SEGUN LO ESTABLECIDO EN LA LEY VIGENTE, LA UNICA Y EXCLUSIVA COMPENSACION AL USUARIO O COMPRADOR Y EL LIMITE DE RESPONSABILIDAD DE ESTA COMPAÑIA O DE CUALQUIER OTRO VENDEDOR POR CUALQUIER PERDIDA O POR TODAS LAS PERDIDAS, PERJUICIOS O DAÑOS QUE RESULTASEN DEL USO O MANEJO DE ESTE PRODUCTO (INCLUYENDO RECLAMOS QUE SE BASEN EN UN CONTRATO, NEGLIGENCIA, ESTRICTA RESPONSABILIDAD Y OTROS ACTOS ILICITOS) SERA EL PRECIO PAGADO POR EL USUARIO O EL COMPRADOR POR LA CANTIDAD INVOLUCRADA DE ESTE PRODUCTO, O A ELECCION DE ESTA COMPAÑIA O DE OTRO VENDEDOR, EL REEMPLAZO DE DICHA CANTIDAD, O SI NO SE OBTUVO MEDIANTE COMPRA SE REEMPLAZARA DICHA CANTIDAD DEL PRODUCTO. EN NINGUN CASO ESTA COMPAÑIA U OTRO VENDEDOR SERAN RESPONSABLES POR DAÑOS INCIDENTALES, CONSECUENTES O ESPECIALES.

En el momento de abrir y usar el producto, se asume que el comprador y todos los usuarios han aceptado las condiciones de los LIMITES EN LA GARANTIA Y EN LA RESPONSABILIDAD que no pueden variar por medio de ningún acuerdo verbal o escrito. Si las condiciones son inaceptables, devuelva el producto inmediatamente sin abrir el recipiente.

Outrider, Ranger PRO, Ranger PRO y el diseño, y el diseño de Monsanto y el Vine son marcas comerciales de la empresa Monsanto Technology LLC. Todas las otras marcas registradas son la propiedad de sus dueños respectivos.

Este producto está protegido por la patente de los Estados Unidos Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No se han otorgado licencias bajo ninguna patente que no sea de los Estados Unidos.

Registro en la EPA Nº 524-517

En caso de que se presente una emergencia relacionada con este producto, o para la ayuda médica, llame por cobrar a cualquier hora del día o de la noche, al teléfono (314) 694-4000.

Empacado Para:
MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI, 63167 U.S.A.
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102909

MONSANTO

MONSANTO COMPANY

Safety Data Sheet
Commercial Product

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Product identifier

Ranger PRO® Herbicide

1.1.1. Chemical name
Not applicable.

1.1.2. Synonyms
None.

1.1.3. EPA Reg. No.
524-517

1.2. Product use

Herbicide

1.3. Company

MONSANTO COMPANY, 800 N. Lindbergh Blvd., St. Louis, MO, 63167
Telephone: 800-332-3111, **Fax:** 314-694-5557
E-mail: safety.datasheet@monsanto.com

1.4. Emergency numbers

FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT Call CHEMTREC - Day or Night: 1-800-424-9300 toll free in the continental U.S., Puerto Rico, Canada, or Virgin Islands. For calls originating elsewhere: 703-527-3887 (collect calls accepted).
FOR MEDICAL EMERGENCY - Day or Night: +1 (314) 694-4000 (collect calls accepted).

2. HAZARDS IDENTIFICATION

2.1. Classification

OSHA Hazard Communication Standard, 29 CFR 1910.1200 (2012)
Acute toxicity, inhalation - Category 4

2.2. Label elements

2.2.1. Signal word
WARNING!

2.2.2. Hazard pictogram/pictograms



2.2.3. Hazard statement/statements
Harmful if inhaled.

2.2.4. Precautionary statement/statements
Avoid breathing dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well-ventilated area.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

2.3. Appearance and odour (colour/form/odour)
Amber /Liquid / Sweet

2.4. OSHA Status
This product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Refer to section 11 for toxicological and section 12 for environmental information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredient
Isopropylamine salt of N-(phosphonomethyl)glycine; {Isopropylamine salt of glyphosate}

Composition

COMPONENT	CAS No.	% by weight (approximate)
Isopropylamine salt of glyphosate	38641-94-0	41
Other ingredients		59

The specific chemical identity is being withheld because it is trade secret information of Monsanto Company.

4. FIRST AID MEASURES

Use personal protection recommended in section 8.

4.1. Description of first aid measures
- **4.1.1. Eye contact:** If in eyes, hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice. Immediately flush with plenty of water.
- **4.1.2. Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- **4.1.3. Inhalation:** If inhaled, move person to fresh air. If person is not breathing, call emergency number or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
- **4.1.4. Ingestion:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison center or doctor. Do not give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed
- **4.2.1. Eye contact, short term:** May cause temporary eye irritation.
- **4.2.2. Skin contact, short term:** Not expected to produce significant adverse effects when recommended use instructions are followed.
- **4.2.3. Inhalation, short term:** Not expected to produce significant adverse effects when recommended use instructions are followed.
- **4.2.4. Single ingestion:** Not expected to produce significant adverse effects when recommended use instructions are followed.

4.3. Indication of any immediate medical attention and special treatment needed

- **4.3.1. Advice to doctors:** This product is not an inhibitor of cholinesterase.
- **4.3.2. Antidote:** Treatment with atropine and oximes is not indicated.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

5.1.1. Recommended: Water, foam, dry chemical, carbon dioxide (CO2)

5.2. Special hazards

5.2.1. Unusual fire and explosion hazards

Minimise use of water to prevent environmental contamination.
Environmental precautions: see section 6.

5.2.2. Hazardous products of combustion

Carbon monoxide (CO), phosphorus oxides (PxOy), nitrogen oxides (NOx)

5.3. Fire fighting equipment: Self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

5.4. Flash point

Does not flash.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

Use personal protection recommended in section 8.

6.2. Environmental precautions

SMALL QUANTITIES:
Low environmental hazard.
LARGE QUANTITIES:
Minimise spread.
Keep out of drains, sewers, ditches and water ways.
Notify authorities.

6.3. Methods for cleaning up

SMALL QUANTITIES:
Flush spill area with water.
LARGE QUANTITIES:
Absorb in earth, sand or absorbent material.
Dig up heavily contaminated soil.
Collect in containers for disposal.
Refer to section 7 for types of containers.
Flush residues with small quantities of water.
Minimise use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.
Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.

7.1. Precautions for safe handling

When using do not eat, drink or smoke. Wash hands thoroughly after handling or contact. Thoroughly clean equipment after use. Do not contaminate drains, sewers and water ways when disposing of equipment rinse water. Refer to section 13 of the safety data sheet for disposal of rinse water.

7.2. Conditions for safe storage

Minimum storage temperature: -15 °C
Maximum storage temperature: 50 °C
Compatible materials for storage: stainless steel, fibreglass, plastic, glass lining
Incompatible materials for storage: galvanised steel, unlined mild steel, see section 10.
Keep out of reach of children.
Keep away from food, drink and animal feed.
Keep only in the original container.
Partial crystallization may occur on prolonged storage below the minimum storage temperature.
If frozen, place in warm room and shake frequently to put back into solution.
Minimum shelf life: 5 years.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Airborne exposure limits

Components	Exposure Guidelines
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

8.2. Engineering controls: No special requirement when used as recommended.

8.3. Recommendations for personal protective equipment

8.3.1. Eye protection: If there is significant potential for contact: Wear chemical goggles.
8.3.2. Skin protection: No special requirement when used as recommended. If repeated or prolonged contact: Wear chemical resistant gloves.
8.3.3. Respiratory protection: No special requirement when used as recommended.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Colour/colour range:	Amber
Odour:	Sweet
Form:	Liquid
Physical form changes (melting, boiling, etc.):	
Melting point:	Not applicable.
Boiling point:	No data.
Flash point:	Does not flash.
Explosive properties:	No data.
Auto ignition temperature:	No data.
Self-accelerating decomposition temperature (SADT):	No data.

Oxidizing properties:	No data.
Specific gravity:	1.162 @ 20 °C / 15.6 °C
Vapour pressure:	No significant volatility.
Vapour density:	Not applicable.
Evaporation rate:	No data.
Dynamic viscosity:	No data.
Kinematic viscosity:	No data.
Density:	1.162 g/cm3 @ 20 °C
Solubility:	Water: Completely miscible.
pH:	4.4 - 5.0
Partition coefficient:	log Pow: < 0.00

10. STABILITY AND REACTIVITY

10.1. Reactivity
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

10.2. Stability
Stable under normal conditions of handling and storage.

10.3. Possibility of hazardous reactions
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

10.4. Incompatible materials
galvanised steel;unlined mild steel;see section 10.;
Compatible materials for storage: see section 7.2.

10.5. Hazardous decomposition
Thermal decomposition: Hazardous products of combustion: see section 5.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

Likely routes of exposure: Skin contact, eye contact

Potential health effects
Eye contact, short term: May cause temporary eye irritation.
Skin contact, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.
Inhalation, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.
Single ingestion: Not expected to produce significant adverse effects when recommended use instructions are followed.

Data obtained on similar products and on components are summarized below.

Similar formulation

Acute oral toxicity
Rat, LD50: 5,108 mg/kg body weight
Practically non-toxic.

Acute dermal toxicity
Rat, LD50 (limit test): > 5,000 mg/kg body weight
Practically non-toxic. No mortality.
Skin irritation
Rabbit, 6 animals, OECD 404 test:
Days to heal: 3
Primary Irritation Index (PII): 0.5/8.0
Essentially non irritating.
Eye irritation
Rabbit, 6 animals, OECD 405 test:
Days to heal: 3
Slight irritation.
Acute inhalation toxicity
Rat, LC50, 4 hours, aerosol: 2.9 mg/L
Other effects: weight loss, breathing difficulty
Practically non-toxic.
Skin sensitization
Guinea pig, 3-induction Buehler test:
Positive incidence: 0 %

N-(phosphonomethyl)glycine; { glyphosate acid}

Genotoxicity
Not genotoxic.

Carcinogenicity
Not carcinogenic in rats or mice. Listed as Category 2A by the International Agency for Research on Cancer (IARC) but our expert opinion is that classification as a carcinogen is not warranted.

Reproductive/Developmental Toxicity
Developmental effects in rats and rabbits only in the presence of significant maternal toxicity.
Reproductive effects in rats only in the presence of significant maternal toxicity.

12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.

Data obtained on similar products and on components are summarized below.

Similar formulation

Aquatic toxicity, fish
Rainbow trout (Oncorhynchus mykiss):
Acute toxicity, 96 hours, static, LC50: 5.4 mg/L
Moderately toxic.
Aquatic toxicity, invertebrates
Water flea (Daphnia magna):
Acute toxicity, 48 hours, static, EC50: 11 mg/L
Slightly toxic.
Arthropod toxicity
Honey bee (Apis mellifera):
Oral/contact, 48 hours, LD50: > 100 µg/bee
Practically non-toxic.

Similar formulation

Aquatic toxicity, algae/aquatic plants
Green algae (Selenastrum capricornutum):
Acute toxicity, 72 hours, static, EbC50 (biomass): 12.4 mg/L
Slightly toxic.
Green algae (Selenastrum capricornutum):
Acute toxicity, 72 hours, static, NOEC: 6.3 mg/L

N-(phosphonomethyl)glycine; { glyphosate acid}

Bioaccumulation
Bluegill sunfish (Lepomis macrochirus):
Whole fish: BCF: < 1
No significant bioaccumulation is expected.
Dissipation
Soil, field:
Half life: 2 - 174 days
Koc: 884 - 60,000 L/kg
Adsorbs strongly to soil.
Water, aerobic:
Half life: < 7 days

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product

Excess product may be disposed of by agricultural use according to label instructions. Keep out of drains, sewers, ditches and water ways. Recycle if appropriate facilities/equipment available. Burn in proper incinerator. Follow all local/regional/national/international regulations.

13.1.2. Container

See the individual container label for disposal information. Emptied containers retain vapour and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Empty packaging completely. Triple or pressure rinse empty containers. Do NOT contaminate water when disposing of rinse waters. Ensure packaging cannot be reused. Do NOT re-use containers. Store for collection by approved waste disposal service. Recycle if appropriate facilities/equipment available. Follow all local/regional/national/international regulations.

Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

14.1. US Dept. of Transportation (DOT) Hazardous Materials Regulations (49 CFR Parts 105-180)

Proper Shipping Name (Technical Name if required):	Not regulated for domestic ground transportation. ()

14.2. IMDG Code

Proper Shipping Name	Not regulated for transport under IMO Regulations ()

(Technical Name if required):	

14.3. IATA/ICAO

Proper Shipping Name (Technical Name if required):	Not regulated for transport under IATA/ICAO Regulations ()

15. REGULATORY INFORMATION

15.1. Environmental Protection Agency

15.1.1. TSCA Inventory

All components are on the US EPA's TSCA Inventory

15.1.2. SARA Title III Rules

Section 311/312 Hazard Categories: Immediate
Section 302 Extremely Hazardous Substances: Not applicable.
Section 313 Toxic Chemical(s): Not applicable.

15.1.3. CERCLA Reportable quantity

Not applicable.

15.1.4. Federal Insecticide, Fungicide, Rodenticide Act (FIFRA)

This chemical is a pesticide product regulated by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION!
CAUSES EYE IRRITATION

Acute oral toxicity: FIFRA category IV.
Acute dermal toxicity: FIFRA category IV.
Acute inhalation toxicity: FIFRA category IV.
Skin irritation: FIFRA category IV.
Eye irritation: FIFRA category III.

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.
Follow all local/regional/national/international regulations.
Please consult supplier if further information is needed.
In this document the British spelling was applied.
|| Significant changes versus previous edition.

	Health	Flammability	Instability	Additional Markings
NFPA	1	1	1	

0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Severe hazard, 4 = Extreme hazard

Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short-Term Exposure Limit), STOT SE (Specific Target Organ Toxicity, Single Exposure), STOT RE (Specific Target Organ Toxicity, Repeated Exposure),TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, MONSANTO Company or any of its subsidiaries makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for the purposes prior to use. In no event will MONSANTO Company or any of its subsidiaries be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR TO THE PRODUCT TO WHICH INFORMATION REFERS.

SPECIMEN

Pendimethalin	Group	3	Herbicide

Pendulum® AquaCap

Herbicide

For use as a preemergence weed control herbicide in turfgrass, landscape or grounds maintenance, noncropland areas, and ornamental production

Active Ingredient:	
pendimethalin: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine	38.7%
Other Ingredients:	61.3%
Total:	100.0%

1 gallon contains 3.8 lbs of microencapsulated pendimethalin in an aqueous carrier.

EPA Reg. No. 241-416

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

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

See inside for complete **First Aid**, **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709

BASF
We create chemistry

FIRST AID	
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. • Call a poison control center or doctor for treatment advice.

HOTLINE
Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency endangering life or property involving this product, call day or night, 1-800-832-HELP (4357).

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks

Follow manufacturer's instructions for cleaning and 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

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240)(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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. Wash thoroughly and put on clean clothing.
- 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 product is toxic to fish. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

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

Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at time of herbicide application.

DO NOT apply this product through any type of irrigation system.

BASF Corporation does not recommend or authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

DO NOT apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application.

For requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

DO NOT apply **Pendulum® AquaCap herbicide** in greenhouses, shadehouses, or other enclosed structures.

Not for use for commercial seed production.

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 **24 hours.**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

DO NOT enter treated areas without protective clothing until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

STORAGE AND DISPOSAL

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

Pesticide Storage

DO NOT store below 15° F. Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals dissolve.

Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. 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.

(continued)

STORAGE AND DISPOSAL *(continued)*

Container Handling *(continued)*

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

Product Information

Pendulum® AquaCap herbicide controls most annual grasses and certain broadleaf weeds as they germinate. When susceptible weeds germinate in the treated area, they contact the herbicide and both shoot and root growth stops. Translocation of the herbicide within the plant is limited. Affected weeds die shortly after growth is stopped, usually before emergence from the soil.

Mode of Action

Pendimethalin, the active ingredient in **Pendulum AquaCap**, is a **Group 3 (WSSA)/Group K_1 (HRAC)** herbicide belonging to the dinitroaniline chemistry class. **Pendulum AquaCap** is a meristematic inhibitor that interferes with meristematic plant cell division or mitosis inhibiting germinating seedling growth.

Herbicide Resistance Management

While weed resistance to **Group 3** herbicides is infrequent, populations of resistant biotypes are known to exist. Weeds resistant to **Group 3** herbicides should be managed using herbicide(s) from a different group (mode or site of action) that are effective against the target weeds. Resistance management should be part of a diversified weed control strategy that integrates chemical, cultural, and mechanical (tillage) control tactics. Consult your local BASF representative, state cooperative extension service, professional consultants, or other qualified authority to determine appropriate actions if you suspect resistant weeds.

Chemical Control

- Start clean with mechanical control measure or an effective burndown herbicide program.
- **DO NOT** rely on a single herbicide site of action for weed control.
- Follow labeled application rate and weed growth stage specifications.
- Avoid application of herbicides with the same site of action more than twice a season.
- Use tank mixes and sequential applications with other herbicides possessing different sites of action that are also effective on the target weeds.

Scouting and Containment

- Scout treated areas after herbicide application to identify areas where weed control was ineffective.
- Control weed escapes with herbicides possessing a different site of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- Contact your **Pendulum AquaCap** supplier and/or your local BASF representative to report weed escapes.
- Clean equipment before moving to a different treatment area to avoid spread of resistant weeds.

Weeds Controlled

Pendulum AquaCap will not control established weeds. If weeds germinate before herbicide activation, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow. Use **Pendulum AquaCap** with herbicides registered for postemergence application (i.e. **Roundup® herbicide** or **Finale® herbicide**) for the control of established weeds. **DO NOT** apply sprays containing **Roundup** or **Finale** over the top of desirable plants. A **Pendulum AquaCap** treatment may be followed by any registered herbicide to control weeds not listed on the **Pendulum AquaCap** label.

The efficacy of **Pendulum AquaCap** will be improved if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if **Pendulum AquaCap** is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of **Pendulum AquaCap** at the specified rates.

Table 1. Weeds Controlled

Common Name	Scientific Name
Grasses	
Barnyardgrass	*Echinochloa crus-galli*
Bluegrass, annual	*Poa annua*
Crabgrass	*Digitaria* spp.
Crowfootgrass	*Dactyloctenium aegyptium*
Foxtail, giant	*Setaria faberi*
Foxtail, green	*Setaria viridis*
Foxtail, yellow	*Setaria glauca*
Goosegrass	*Eleusine indica*
Itchgrass	*Rottboellia exaltata*
Johnsongrass (from seed)	*Sorghum halepense*
Junglerice	*Echinochloa colona*
Lovegrass (from seed)	*Eragrostis* spp.
Panicum, browntop	*Panicum fasciculatum*
Panicum, fall	*Panicum dichotomiflorum*
Panicum, Texas	*Panicum texanum*
Sandbur, field	*Cenchrus incertus*
Signalgrass	*Brachiaria platyphylla*
Sprangletop, Mexican	*Leptochloa uninervia*
Sprangletop, red	*Leptochloa filiformis*
Witchgrass	*Panicum capillare*
Woolly cupgrass	*Eriochloa villosa*
Broadleaf Weeds	
Burweed, lawn	*Soliva pterosperma*
Carpetweed	*Mollugo verticillata*
Chickweed, common	*Stellaria media*
Chickweed, mouseear	*Cerastium vulgatum*
Clover, hop	*Trifolium procumbens*
Cudweed	*Gnaphalium* spp.
Evening primrose	*Oenothera biennis*
Fiddleneck	*Amsinckia intermedia*
Filaree	*Erodium* spp.
Henbit	*Lamium amplexicaule*
Knotweed, prostrate	*Polygonum aviculare*
Kochia	*Kochia scoparia*
Lambsquarters	*Chenopodium album*
Pigweed	*Amaranthus* spp.
Puncturevine	*Tribulus terrestris*
Purslane	*Portulaca oleracea*
Pusley, Florida	*Richardia scabra*

(continued)

Table 1. Weeds Controlled *(continued)*

Common Name	Scientific Name
Broadleaf Weeds *(continued)*	
Rocket, London	*Sisymbrium irio*
Shepherdspurse	*Capsella bursa-pastoris*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Speedwell, corn	*Veronica arvensis*
Spurge, annual	*Euphorbia* spp.
Spurge, prostrate	*Chamaesyce humistrata*
Woodsorrel, yellow	*Oxalis stricta*
Velvetleaf (Buttonweed)	*Abutilon theophrasti*

Application Use Sites

Use **Pendulum® AquaCap herbicide** for preemergence control of grass and certain broadleaf weed species as they germinate **in any turfgrass site** (golf courses, lawns, sod farms and other turf areas) and **landscape ornamental maintenance areas**. Examples of such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas, and sod farms.

Pendulum AquaCap can be applied for general grounds maintenance in areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, and mulch beds. It may be used under asphalt or concrete treatments as part of a site preparation program.

Use **Pendulum AquaCap** for preemergence control of most annual grasses and certain broadleaf weeds as they germinate **in any noncropland area** such as railroad, utility, highway, and pipeline rights-of-way; highway guardrails, delineators, and sign posts; bridge abutments and approaches; utility substations; petroleum tank farms; pumping installations; storage areas; fence rows; windbreaks and shelterbelts; paved or gravel surfaces; and established wildflower plantings where weed control is desired.

Pendulum AquaCap can also be used **in bulb plantings, nonbearing fruit and nut tree nurseries, conifer and hardwood seedling nurseries**, and **tree plantations for site preparation and maintenance**. Applications can be made, but are not limited to, plant species listed on this label such as trees, shrubs, groundcovers, perennials, bulbs, ornamental grasses, and bedding plants.

Pendulum AquaCap can be used **in and around field, liner, and container ornamental production**.

Application Instructions

Pendulum® AquaCap herbicide will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or **Pendulum AquaCap** may be used with herbicides registered for postemergence use in managed turf sites, landscape ornamentals, and in other noncropland areas. Consult the labels of those herbicides for suggested treatments, rates, and precautions or restrictions for use in these areas. The efficacy of **Pendulum AquaCap** will improve if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. If **Pendulum AquaCap** is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, **Pendulum AquaCap** or **Pendulum AquaCap** tank mix combinations will not cause crop injury. Overapplication can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants and increase the possibility of plant damage from **Pendulum AquaCap**.

Mixing Instructions

Pendulum AquaCap may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to **Pendulum AquaCap** alone.

When using tank mixtures or sequential applications with **Pendulum AquaCap**, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing **Pendulum AquaCap** or **Pendulum AquaCap** tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

Pendulum AquaCap Alone

When using **Pendulum AquaCap** alone, add **Pendulum AquaCap** to the partially filled tank while agitating; then fill the remainder of the tank with water or liquid fertilizer.

Pendulum AquaCap Tank Mixes

Add the tank mixture ingredients in the following order:

1. **Wettable Powder (WP) formulations** - Make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
2. **Dry Flowable/Water Dispersible Granule (DF/WDG) formulations** - Add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
3. **Flowable (F) formulations** - Add the F formulation to the partially filled tank while agitating.
4. Add **Pendulum AquaCap** to the partially filled tank while agitating.
5. **Water-soluble Concentrate (WSC) formulations** - Add the WSC formulation to the partially filled tank while agitating.
6. **Emulsifiable Concentrate (EC) formulations** - Add the EC formulation to the partially filled tank while agitating.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

Maintain continuous agitation while adding herbicides and until spraying is completed. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed.

Backpack Sprayer

Begin with a clean spray tank. Fill the spray tank 1/2 full with clean water and add the required amount of **Pendulum AquaCap** to the sprayer. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate once again. During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential before spraying is resumed.

Liquid Fertilizers

Before mixing, always test small quantities with a simple jar test. Add the required amount of **Pendulum AquaCap** to a half-filled spray tank while agitating; then add the fertilizer product. Complete filling spray tank to desired level.

Spraying Instructions

Avoid unintentional contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed. Treated turfgrass should be dry before entering to avoid staining onto nontreated surfaces.

Ground Application (spray boom)

Uniformly apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area with a spray pressure of 25 to 50 psi. Suggested spray volumes are 20 to 200 gpa for professional turfgrass, landscape and ornamental applications, and 10 to 200 gpa for all other noncrop applications such as roadsides, utility rights-of-way, or soft-residual bareground applications. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified.

Ground Application (hand-held equipment)

Use **Table 2** or **Table 3** to determine the amount of **Pendulum® AquaCap herbicide** to apply per 1,000 square feet of treated area. The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1,000 square feet before mixing the spray solution. Follow information in **Mixing Instructions** section of this label.

Aerial Application

Uniformly apply in 5 or more gallons of water per acre.

Spray Drift Management

Ground Application (spray boom)

- Applicators must only apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or plant canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 mph at the application site.
- **DO NOT** apply during temperature inversions.

Ground Application (hand-held)

- Take precautions to minimize spray drift.

Spray Drift Management

Aerial Application

- **DO NOT** release spray at a height greater than 10 feet above the ground or plant canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must not exceed 65% of the wingspan for fixed wing aircraft or 75% of the rotor diameter for helicopters. Otherwise, the boom length must not exceed 75% of the wingspan for fixed wing aircraft or 90% of the rotor diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply during temperature inversions.

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 recommended 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 manufacturer's recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

Boom Height - Ground Boom

For ground equipment, the boom should remain level with the plants and have minimal bounce.

Release Height - Aircraft

Higher release heights increase the potential for spray drift.

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 Inversion

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.

Turfgrass

Use **Pendulum® AquaCap herbicide** for preemergence control of grasses and certain broadleaf weed species as they germinate in any turfgrass site (golf courses, lawns, sod farms and other turf areas) and landscape ornamental maintenance areas. Examples of such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas, and sod farms.

The efficacy of **Pendulum AquaCap** will be improved if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. If **Pendulum AquaCap** is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

To prevent establishment of weeds along the edges of treated area, it may be necessary to overlap the spray 3 to 6 inches onto sidewalks or driveways, etc., to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is to be avoided, **DO NOT** rub or scrub surface. Rinse area immediately using a heavy spray of water to avoid staining. Treated turfgrass should be dry before entering to avoid staining onto nontreated surfaces.

Turfgrass Tank Mixes

Pendulum AquaCap can be mixed with postemergence herbicides to control emerged weeds in nonresidential turfgrass. For annual grass control, applications can be made with **Drive® 75 DF herbicide**, **Drive® XLR8 herbicide**, or MSMA to control emerged weeds.

Broadleaf weeds can be controlled using **Trimec® herbicide**, **Three-Way™ herbicide**, 2-4,D and other similar products.

Before tank mixing, use a simple jar test to ensure compatibility of herbicides.

Refer to manufacturer's labels for specific use directions, precautions, and limitations before tank mixing with **Pendulum AquaCap**. Follow those that are most restrictive.

Turfgrass Restrictions

- Use on well-established turfgrass with a dense and uniform stand. On turf that has been thinned or damaged due to winter injury, excessive moisture, etc., allow for turf recovery before application.
- On newly planted areas, application should not be made until the turfgrass has filled in and has been mowed at least four times. Applications made to overseeded warm-season turfgrass may cause thinning or injury of the overseeded species.
- **DO NOT** use on bentgrass or *Poa annua* greens and tees or injury may occur.
- Delay reseeding or winter overseeding treated turfgrass for at least three (3) months following the last **Pendulum AquaCap** application.
- Delay sprigging turfgrass for five (5) months after application.

Table 2. Pendulum® AquaCap herbicide Residential, Golf Course, Commercial, and Other Nonresidential Turfgrass Uses for Preemergence Weed Control[1]

Cool Season Turfgrass	Weed	Product per 1,000 sq ft (fl ozs)	Product per acre (pts)	Comment
Bluegrass, Kentucky Fescue, fine Fescue, tall Ryegrass, perennial	barnyardgrass crabgrass evening primrose fall panicum foxtail hop clover knotweed oxalis *Poa annua* prostrate spurge purslane	**All Turf Uses:**		Apply a repeat application of 2.2 to 3.1 pts/A (0.86 to 1.1 fl ozs/ 1,000 sq ft) after 5 to 8 weeks for extended control or where heavy weed infestations are expected.
		1.1 to 1.6	3.1 to 4.2	
		Initial application before weed germination in spring		
	goosegrass	**Residential and Sod Farm Turf Uses Only[2]:**		Apply a repeat application of 3.1 pts/A (1.1 fl ozs/1,000 sq ft) if the lower rate was used initially or for extended goosegrass control after 5 to 8 weeks.
		1.1 to 1.6	3.1 to 4.2	
		Golf Course, Commercial and Other Nonresidential Turf Uses Only:		
		1.1 to 2.3	3.1 to 6.3	
		Initial application before weed germination in spring		
	chickweed corn speedwell cudweed henbit lawn burweed *Poa annua*	**All Turf Uses:**		Apply in late summer or early fall before weed germination. Apply a repeat application of 3.1 to 4.2 pts/A (1.1 to 1.6 fl ozs/1,000 sq ft) after 5 to 8 weeks for extended *Poa annua* control.
		1.1 to 1.6	3.1 to 4.2	
Bentgrass or established *Poa annua*[3] (1/2-inch high or taller)	barnyardgrass crabgrass evening primrose fall panicum foxtail hop clover knotweed oxalis *Poa annua* prostrate spurge purslane	**All Turf Uses (Non-greens and Tees):**		Apply a repeat application of 2.2 to 3.1 pts/A (0.86 to 1.1 fl ozs/ 1,000 sq ft) after 5 to 8 weeks for extended control or where heavy weed infestations are expected.
		1.1	3.1	
		Initial application before weed germination in spring		
	goosegrass	**All Turf Uses (Non-greens and Tees):**		Apply a repeat application of 3.1 pts/A (1.1 fl ozs/1,000 sq ft) for extended goosegrass control after 5 to 8 weeks.
		1.1	3.1	
		Initial application before weed germination in spring		
	chickweed corn speedwell cudweed henbit lawn burweed *Poa annua*	**All Turf Uses (Non-greens and Tees):**		Apply in late summer or early fall before weed germination.
		1.1 to 1.6	3.1 to 4.2	

(continued)

Table 2. Pendulum® AquaCap herbicide Residential, Golf Course, Commercial, and Other Nonresidential Turfgrass Uses for Preemergence Weed Control[1] *(continued)*

Warm Season Turfgrass	Weed	Product per 1,000 sq ft (fl ozs)	Product per acre (pts)	Comment
Bahiagrass Bermudagrass Buffalograss Centipedegrass Fescue, tall *Paspalum*, seashore St. Augustinegrass Zoysiagrass	barnyardgrass crabgrass evening primrose fall panicum foxtail hop clover knotweed oxalis *Poa annua* prostrate spurge purslane	**Residential and Sod Farm Turf Uses Only:**		Apply a repeat application of 2.2 to 3.1 pts/A (0.86 to 1.1 fl ozs/ 1,000 sq ft) after 5 to 8 weeks if necessary.
		1.1 to 1.6	3.1 to 4.2	
		Golf Course, Commercial and Other Nonresidential Turf Uses Only:		
		1.1 to 2.3	3.1 to 6.3	
		Initial application before weed germination in spring		
	goosegrass	**All Turf Uses (Non-greens and Tees):**		An additional application of 3.1 pts/A (1.1 fl ozs/1,000 sq ft) may be made for extended goosegrass control 8 weeks after the second application.
		1.1	3.1	
		Apply before weed germination in spring. Make a second application at 3.1 pts/A (1.1 fl ozs/1,000 sq ft) 5 to 8 weeks later.		
	chickweed corn speedwell cudweed henbit lawn burweed *Poa annua*	**All Turf Uses:**		Apply in late summer or early fall before weed germination. Apply a repeat application of 3.1 to 4.2 pts/A (1.1 to 1.6 fl ozs/1,000 sq ft) after 5 to 8 weeks for extended *Poa annua* control.
		1.1 to 1.6	3.1 to 4.2	

[1] **DO NOT** exceed a maximum of 4.2 pints (2.1 quarts)/A or 1.6 fl ozs/1,000 sq ft product **per application** for use on residential and sod farm turfgrass. **DO NOT** exceed a maximum rate of 6.3 pints (3.1 quarts)/A or 2.3 fl ozs/1,000 sq ft product **per application** for use on golf course turfgrass, commercial, or other nonresidential turfgrass.

[2] Residential is defined as turf in any residential situation as well as home lawns, schools, parks, and playgrounds.

[3] **DO NOT** use on bentgrass or *Poa annua* greens or tees.

Weeds Controlled

Pendulum AquaCap will not control established weeds. If weeds should germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow. **Pendulum AquaCap** may be used with herbicides registered for postemergence application (i.e. **Roundup® herbicide** or **Finale® herbicide**) for control of established weeds. **DO NOT** apply sprays containing **Roundup** or **Finale** over the top of desirable plants. A **Pendulum AquaCap** treatment may be followed by any registered herbicide to control weeds not listed on the **Pendulum AquaCap** label.

Landscape and Grounds Maintenance

Pendulum AquaCap can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds. Areas to be treated, such as mulch beds, parking areas and roadsides, fencelines and borders, and around statuary or monuments, should be free of emerged weeds before application. To remove emerged weeds, either cultivate or tank mix **Pendulum AquaCap** with a postemergence product labeled for such use.

Not all ornamental species or cultivars of species can be tested for plant safety. Refer to the list of ornamental plant species found in this label (**Table 4. Tolerant Ornamental Species**). **Pendulum AquaCap** may be used on plant species not listed on this label; however, testing a small number plants at the specified rate and evaluating for suitability before a broad-use application is advised. Refer to **Table 3. Weed Control in All Nonturfgrass Sites** for application rates. Avoid unintentional contact of spray solution with stone, wood, or other porous surfaces because staining may occur. Rinse surfaces immediately using a heavy spray of water to avoid staining.

Table 3. Weed Control in All Nonturfgrass Sites*

For preemergence control of the weed species listed, apply **Pendulum® AquaCap herbicide** at the specified rates:

Length of Control (months)	Pendulum AquaCap (qts/A)	Required to Treat 1,000 sq ft (fl ozs)
Short term (2 to 4)	2.1	1.6
Long term (6 to 8)	4.2	3.2

*For all turfgrass weed control rates, refer to **Table 2. Pendulum® AquaCap herbicide Residential, Golf Course, Commercial, and Other Nonresidential Turfgrass Uses for Preemergence Weed Control.**

For extended weed control, repeat applications of **Pendulum AquaCap** can be made.

Ornamental Plantings and Tree Plantations including Noncropland Areas

Use **Pendulum AquaCap** for grounds maintenance in noncropland areas, for preemergence control of the weed species listed in and around established tree plantations for site preparation, and for maintenance of conifer and hardwood seedling nurseries and pulpwood and fiber farms. **Pendulum AquaCap** may be used for hardwood and conifer regeneration on conservation reserve program land. **Pendulum AquaCap** can also be used in Christmas trees and nonbearing fruit and nutcrops and vineyards established, or bulb and wildflower field plantings, in and around established ornamentals planted in noncropland areas such as highway rights-of-way and utility substations. Refer to **Table 3. Weed Control in All Nonturfgrass Sites** for application rates.

Applications at Planting or to Established Trees

When applying at planting, it is important to achieve slit closure to prevent **Pendulum AquaCap** from directly contacting the tree roots or being washed into the root zone via the open slit, or root stunting may occur. Refer to **Landscape and Ornamental Plantings Instructions and Restrictions** chart before application.

For postemergence weed control, tank mix combinations of **Pendulum AquaCap** plus **Segment® herbicide**, **Roundup® herbicide**, **Finale® herbicide**, or other labeled herbicides are recommended. Refer to approved labeling for species recommendations. Determine rates for tank mix compounds from the product labels of **Pendulum AquaCap** and partner herbicides before use. Use caution to prevent combination sprays from direct contact with desirable foliage or injury may result. **Pendulum AquaCap** plus diuron or simazine combinations will broaden weed control spectrum; however, use of combinations may restrict **Pendulum AquaCap** use in sensitive areas. Refer to manufacturer's labels for specific use directions, precautions, and limitations before application and follow those that are most restrictive.

Ornamental Bulbs

Pendulum AquaCap may be applied for control of susceptible annual weeds in ornamental bulbs listed in the **Perennials** section in **Table 4. Tolerant Ornamental Species** (crocus, daffodil [narcissus], gladiolus, lily, tulip, etc.). Apply **Pendulum AquaCap** before, during, or after bulb emergence. If weeds have already germinated, add a labeled postemergence herbicide to control emerged weeds.

Wildflowers

Pendulum AquaCap may be applied for control of susceptible annual weeds in plantings of wildflowers listed in the **Perennials** section in **Table 4. Tolerant Ornamental Species**. The perennial species noted[1] (black-eyed Susan, California poppy, coreopsis, oxeye daisy, etc.) have been evaluated for plant tolerance to applications of **Pendulum AquaCap** at 4.2 pints (2.1 quarts) per acre. **Pendulum AquaCap** may be applied to established perennial wildflowers before emergence of weeds or wildflowers. For wildflowers being established from seed, apply **Pendulum AquaCap** no sooner than 4 weeks after wildflowers have emerged, but before weed germination. If weeds have already germinated, add a labeled postemergence product to control emerged weeds. Refer to all label restrictions before application.

Due to the diversity of species and varieties that exist in areas where wildflowers are grown, the response to **Pendulum AquaCap** may vary greatly. Careful testing on desirable species is recommended to determine if area-wide applications can be made.

Nonbearing Fruit and Nutcrops and Vineyards

Pendulum AquaCap may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following nonbearing crops:

Almond
Apple
Apricot
Cherry
Citrus
Fig
Grape
Nectarine
Olive
Peach
Pear
Pecan
Pistachio
Plum
Prune
Walnut, English

Noncropland

Use **Pendulum AquaCap** for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way; highway guardrails, delineators, and sign posts; utility substations, petroleum tank farms, pumping installations, fence rows, storage areas, windbreaks and shelterbelts.

Industrial (Unimproved) Turf

Pendulum® AquaCap herbicide will provide pre-emergence control of the annual grasses and broadleaf weeds listed in **Table 1. Weeds Controlled** that might germinate in established grass in rights-of-way, roadsides, construction sites, parks, substations, or lots.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D, **Drive® 75 DF herbicide**, **Drive® XLR8 herbicide**, **Segment® herbicide**, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

Total Vegetation Control

Pendulum AquaCap may be tank mixed with **Arsenal® herbicide**, **Sahara® DG herbicide**, **Plateau® herbicide**, **Segment**, **Roundup PRO® herbicide**, **Karmex® herbicide**, **Finale® herbicide**, **Oust® herbicide**, diuron, glyphosate or other products to provide bareground or total vegetation control. **Pendulum AquaCap** can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. **DO NOT** tank mix with **Arsenal**, **Sahara DG**, or **Plateau herbicides** in California.

Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions.

For kochia control, combinations of **Pendulum AquaCap** with **Arsenal** or diuron are recommended if control has been a problem for other herbicides.

Landscape and Ornamental Plantings Instructions and Restrictions[1]

Site	Application Instructions and Restrictions
Landscape plantings[2]	1. **DO NOT** apply to newly transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots. 2. Apply as a directed or over-the-top spray. 3. Use the lowest labeled rate when making applications to annuals. Repeat applications can be made for extended landscape weed control.
Ornamental bulbs[3]	1. **Pendulum AquaCap** may be applied to bulb species listed on the label. 2. Apply before bulb emergence.

(continued)

Landscape and Ornamental Plantings Instructions and Restrictions[1] *(continued)*

Site	Application Instructions and Restrictions
Wildflowers[3]	1. **Pendulum AquaCap** may be applied in plantings of wildflowers listed on the label. Refer to specific instructions for rate and plant tolerance. 2. For wildflowers being established from seed, apply at 4 weeks after wildflowers have germinated, but before weed seed germination.

[1] Plant only those desirable plant species listed on this label into soil treated the previous season with **Pendulum AquaCap** or injury may occur.

[2] Before treating a large number of plants, spray a few plants and observe for 1 to 2 months for plant damage before full-scale application.

[3] **DO NOT** treat plants grown for food or feed. **DO NOT** use treated plants for food or feed.

Weeds Controlled

Pendulum AquaCap will not control established weeds. If weeds germinate before herbicide activation, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow.

Use **Pendulum AquaCap** with herbicides registered for postemergence application (i.e. **Roundup® herbicide** or **Finale**) for control of established weeds. **DO NOT** apply sprays containing **Roundup** or **Finale** over the top of desirable plants. A **Pendulum AquaCap** treatment may be followed by any registered herbicide to control weeds not listed on the **Pendulum AquaCap** label.

The efficacy of **Pendulum AquaCap** will be improved if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if **Pendulum AquaCap** is not activated by rainfall or irrigation within 30 days.

Commercial Ornamental Production

Application Use Sites

Pendulum AquaCap can be used in and around field, liner, and container ornamental production.

Pendulum AquaCap sprays are safe around and over the top of the established plants listed in **Table 4. Tolerant Ornamental Species**. However, not all varieties or strains of the plant species listed have been tested. Refer to ornamental instructions and restrictions in this label before any application of **Pendulum AquaCap**. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use, or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage before full-scale application.

Application Instructions

Pendulum® AquaCap herbicide will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or use **Pendulum AquaCap** with herbicides registered for postemergence use in ornamentals and vegetation control sites. Consult the labels of those herbicides for suggested treatments, rates, and precautions or restrictions for use in these areas.

The efficacy of **Pendulum AquaCap** will improve if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. If **Pendulum AquaCap** is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, **Pendulum AquaCap** or **Pendulum AquaCap** tank mix combinations will not cause crop injury. Overapplication can result in crop-stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants and increase the possibility of plant damage from **Pendulum AquaCap**.

Production Ornamentals Instructions and Restrictions[1]

Site	Application Instructions and Restrictions
Newly transplanted field-grown nursery stock[2,3]	1. **DO NOT** make over-the-top applications at time of field transplanting. Use shielded sprayer until plantings have been established for one (1) year or more in the field. 2. **DO NOT** apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where **Pendulum AquaCap** could come into contact with the roots. 3. **DO NOT** apply during bud swell, bud break, or at time of first flush of new growth. 4. Direct sprays away from grafted or budded tissue on transplants at all times.
Ornamental bulbs[3]	1. **Pendulum AquaCap** may be applied to bulb species listed on the label. 2. Apply before bulb emergence.

(continued)

Production Ornamentals Instructions and Restrictions[1] *(continued)*

Site	Application Instructions and Restrictions
Newly transplanted container-grown nursery stock[2,3]	1. **DO NOT** apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where **Pendulum AquaCap** could come into contact with the roots. 2. For container-grown ornamentals, delay first application of the product to bareroot liners for two (2) weeks after transplanting. 3. **DO NOT** apply during bud swell, bud break, or at time of first flush of new growth. 4. Direct sprays away from grafted or budded tissue on transplants at all times.
Established container or field-grown nursery stock[2,3]	1. **DO NOT** apply during bud swell, bud break, or at time of first flush of new growth. 2. Apply as a directed or over-the-top spray. 3. If newly budded or grafted rootstock, apply with a shielded sprayer. 4. Take care to ensure there are no cracks in the soil where **Pendulum AquaCap** could come into contact with the roots.
Bareground for container placement	Apply to soil (including mulch, gravel, wood chips, or other permeable base); then water in. Replace containerized ornamentals onto pad.
Greenhouses, shadehouses, or other enclosed structures	**DO NOT** apply in greenhouses, shadehouses, or other enclosed structures.

[1] Plant only those desirable plant species listed on this label into soil treated the previous season with **Pendulum AquaCap** or injury may occur.

[2] Before treating a large number of plants, spray a few plants and observe for 1 to 2 months for plant damage before full-scale application.

[3] **DO NOT** treat plants grown for food or feed. **DO NOT** use treated plants for food or feed.

Refer to **Table 3. Weed Control in All Nonturfgrass Sites** for application rates.

Ornamental Tank Mixes

Emerged weeds in ornamentals can be controlled using tank mixes containing **Segment® herbicide**, **Roundup® herbicide**, **Finale® herbicide**, **Ornamec® herbicide**, **Gallery® herbicide**, **Princep® herbicide**, and other similar products. **DO NOT** apply sprays containing **Roundup** or **Finale** over the top of ornamental plants.

Before tank mixing, use a simple jar test to ensure compatibility of herbicides.

Refer to manufacturer's labels for specific use directions, precautions, and limitations before tank mixing with **Pendulum® AquaCap herbicide**. Follow those that are most restrictive.

Christmas Tree Plantations

Use **Pendulum AquaCap** in and around Christmas tree plantations. Apply **Pendulum AquaCap** at planting or to established trees. When applying at planting, it is important to achieve slit closure to prevent **Pendulum AquaCap** from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur.

For postemergence weed control, tank mix combinations of **Pendulum AquaCap** plus **Segment**, **Roundup**, **Finale**, or other labeled herbicides are recommended. Refer to approved labeling for species recommendations. Determine rates for tank mix combinations from the product labels of **Pendulum AquaCap** and partner herbicides before use. Use caution to prevent combination sprays from direct contact with desirable foliage or injury may result. **Pendulum AquaCap** plus diuron or simazine combinations will broaden weed control spectrum; however, use of combinations may restrict **Pendulum AquaCap** use in sensitive areas. Refer to manufacturer's labels for specific use directions, precautions, and limitations before application. Follow those that are most restrictive. Refer to **Table 3. Weed Control in All Nonturfgrass Sites** for **Pendulum AquaCap** application rates.

Vegetation Control in Ornamental Production

Use **Pendulum AquaCap** for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as sign posts, pumping installations, fence rows, storage areas, and windbreaks and shelterbelts. **Pendulum AquaCap** may be tank mixed with **Segment**, **Roundup PRO® herbicide**, **Karmex® herbicide**, **Finale**, diuron, glyphosate or other products to provide bareground or total vegetation control. **Pendulum AquaCap** can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions. Refer to **Table 3. Weed Control in All Nonturfgrass Sites** for **Pendulum AquaCap** application rates.

Weeds Controlled

Pendulum AquaCap will not control established weeds. If weeds germinate before herbicide activation, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow. **Pendulum AquaCap** may be used with herbicides registered for postemergence application (i.e. **Roundup** or **Finale**) for the control of established weeds. **DO NOT** apply sprays containing **Roundup** or **Finale** over the top of desirable plants. A **Pendulum AquaCap** treatment may be followed by any registered herbicide to control weeds not listed on the **Pendulum AquaCap** label.

The efficacy of **Pendulum AquaCap** will be improved if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if **Pendulum AquaCap** is not activated by rainfall or irrigation within 30 days.

Pendulum AquaCap may be used on plant species not listed on this label. Determine the suitability for such uses by treating a small number of such plants at the specified rate. Evaluate treated plants 1 to 2 months following treatment for possible injury.

Pendulum AquaCap sprays are safe around and over the top of the established plants listed in **Table 4. Tolerant Ornamental Species**. Refer to ornamentals instructions and restrictions before application. Refer to **Table 3. Weed Control in All Nonturfgrass Sites** for application rates.

Table 4. Tolerant Ornamental Species

Common Name	Scientific Name
Bedding Plants	
Ageratum	*Ageratum houstonianum*
Alyssum[1]	*Alyssum saxatile*
Anemone, poppy-flowered	*Anemone coronaria*
Artemesia	*Artemesia* spp.
Balloonflower	*Platycodon grandiflorum*
Begonia[1]	*Begonia* spp.
Cabbage, ornamental	*Brassica olereacea*
Caladium	*Caladium* spp.
Cast-iron plant	*Aspidistra elatior*
China aster[1]	*Callistephus chinensis*
Crocosmia, montebretia	*Crocosmia x crocosmiiflora*
Dahlia[1]	*Dahlia* spp.
Dianthus	*Dianthus barbatus*

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Bedding Plants *(continued)*	
Dusty miller	*Senecio cineraria*
Gayfeather	*Liatris* spp.
Gazania, treasure flower	*Gazania rigens*
Gazania, trailing	*Gazania rigens leucolaena*
Gloxinia	*Gloxinia simningia*
Kale, ornamental	*Brassica napus*
Marigold, African	*Tagetes erecta*
Moss rose[1]	*Portulaca grandiflora*
Mum, garden	*Chrysanthemum* spp.
Periwinkle[1]	*Vinca major*
Periwinkle, rose	*Catharanthus roseus*
Petunia[1]	*Petunia* spp.
Plumosa cockscomb	*Celosia cristata*
Portulaca[1]	*Portulaca grandiflora*
Salvia[1]	*Salvia splendens*
Snapdragon	*Antirrhinum majus*
Statice[1]	*Limonium* spp.
Sweet William	*Dianthus barbatus*
Vinca[1]	*Vinca major*

[1] Application of **Pendulum® AquaCap herbicide** should not be made sooner than four weeks after transplanting for these annuals. Use the lower labeled rate.

Ground Covers	
Ajuga	*Ajuga reptans*
Baby sun rose	*Aptenia cordifolia*
Beach strawberry	*Fragaria chiloensis*
Capeweed	*Arctotheca calendula*
Cinquefoil, spring	*Potentilla verna*
Coyotebrush, dwarf	*Baccharis pitularis*
Daisy, trailing African	*Osteospermum fruticosum*
Dymondia	*Dymondia margaretae*
Gazania	*Gazania splendens*
Iceplant, large leaf	*Carpobrotus edulis*
Ivy, English	*Hedera helix*
Ivy, geranium	*Pelargonium peltatum*
Jasmine, Asiatic	*Trachelospermum asiaticum*
Jasmine, primrose	*Jasminum mesnyi*
Jessamine, Carolina	*Gelsemium sempervirens*

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Ground Covers *(continued)*	
Manzanita, bearberry	*Arctostaphylos uva-ursi*
Miscanthus	*Miscanthus* spp.
Mondograss	*Ophiopogon japonica*
Morningglory	*Convolvulus* spp.
Myoporum	*Myoporum parviflolium*
Pachysandra	*Pachysandra terminalis*
Potentilla	*Potentilla fruticosa*
Red apple	*Aptenia cordifolia*
Rosemary	*Rosemarinus officinalis*
Rose-of-Sharon	*Hypericum calycinum*
St. Johnswort, creeping	*Hypericum calycinum*
Sand strawberry	*Fragaria chiloensis*
Sedum	*Sedum spurium*
Stonecrop	*Sedum spurium*
Verbena, Peruvian	*Verbena peruviana*
Vervain	*Verbena peruviana*
Vetch, crown	*Vicia sativa*
Vinca	*Vinca minor*
Wintercreeper	*Euonymous fortunei*
Ornamental Grasses	
Beach grass	*Ammophila breviligulata*
Fescue, blue	*Festuca ovina*
Fescue, sheep	*Festuca ovina*
Fountain grass	*Pennisetum setaceum*
Pampas grass	*Cortaderia selloana*
Reed canary grass	*Phalaris arundinacea*
Reed, giant	*Arundo* spp.
Ribbon grass	*Phalaris arundinacea*
Tufted hair grass	*Deschampsia caespitosa*
Perennials	
Acacia	*Acacia redolens*
Asparagus	*Asparagus* spp.
Aster, New York	*Aster novi-belgii*
Aster, Stokes	*Stokesia laevis*
Astilibe (False spirea)	*Astilibe* spp.
Avens	*Geum triflorum*
Baby's breath	*Gypsophila elegans*

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Perennials *(continued)*	
Baby's breath	*Gypsophila paniculata*
Beard-tongue	*Penstemon* spp.
Bellflower	*Campanula* spp.
Bellflower, willow	*Campanula persicifolia*
Bird of paradise	*Caesalpinia pulcherrima*
Black-eyed Susan[1]	*Rudbeckia hirta*
Blanket flower[1]	*Gaillardia aristata*
Blanket flower[1]	*Gaillardia* x *grandiflora*
Bleeding heart	*Dicentra spectabilis*
Butterfly weed	*Asclepias tuberosa*
California poppy[1]	*Eschscholzia californica*
Calla lily	*Zantedeschia aethiopica*
Canna, common garden	*Canna generalis* 'Lucifer'
Carex	*Carex* spp.
Chincherinchee	*Ornithogalum thyrsoides*
Clover, crimson[1]	*Trifolium incarnatum*
Columbine	*Aquilegia* 'McKana Giant'
Columbine	*Aquilegia* x *hybrida*
Coreopsis (Tickseed)[1]	*Coreopsis lanceolata*
Crinum lily	*Crinum* spp.
Crocus	*Crocus* spp.
Daffodil (Narcissus)	*Narcissus* spp.
Daylily	*Hemerocallis* spp.
Fairy duster	*Calliandra eriophylla*
Fern, asparagus	*Asparagus officinalis*
Fern, Boston	*Nephrolepis exaltata*
Fern, hay-scented	*Dennstaedtia punctilobula*
Fern, leatherleaf[2]	*Rumohra adiantiformis*
Fortnight lily	*Moraea* spp.
Foxglove	*Digitalis purpurea*
Freesia	*Freesia* x *hybrida*
Gaillardia	*Gaillardia pulchella*
Geum	*Geum* spp.
Gladiolus	*Gladiolus* spp.
Heather, dwarf	*Calluna vulgaris*
Hosta	*Hosta* spp.
Indian blanket[1]	*Gaillardia pulchella*
Iris, Japanese	*Iris kaemphera*

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Perennials *(continued)*	
Lantana, weeping	*Lantana montevidensis*
Leopard's bane	*Doronicum cordatum*
Lily	*Lillium* spp.
Liriope, big blue	*Liriope muscari*
Liriope, creeping	*Liriope spicata*
Liriope, variegated	*Liriope muscari*
Montbretia	*Crocosmia crocosmiiflora*
Moonbeam	*Coreopsis verticillata*
Mugwort, Western	*Artemesia ludoviciana*
Nightshade	*Solanum* spp.
Orchid, peacock	*Acidanthera bicolor*
Oxeye daisy[1]	*Chrysanthemum leucanthemum*
Palm, areca	*Chysalidocarpus lutescens*
Palm, pygmy date	*Phoenix roebelence*
Palm, Washington	*Washington robusta*
Peony, Chinese	*Paeonia lactiflora*
Purple coneflower[1]	*Echinacea purpurea*
Purple gay-feather	*Liatris pycnostachya*
Purple loosestrife	*Lythrum virgatum*
Rodgersia	*Rodgersia henricie*
Rosemary	*Rosmarinus officinalis*
Sedge	*Carex* spp.
Shasta daisy[1]	*Chrysanthemum* x *superbum*
Statice	*Limonium latifolia*
Statice, German	*Goniolimon tartaricum*
Sweet flag	*Acorus calamus*
Tickseed[1]	*Coreopsis lanceolata*
Texas bluebonnet	*Lupinus texenis*
Tulip	*Tulipa* spp.
Wonder flower	*Ornithogalum thyrsoides*
Yarrow[1]	*Achillea millefolium*
Zephyr lily	*Zephyranthes* spp.

[1] These plants have shown tolerance to **Pendulum® AquaCap herbicide** applications of 4.2 pints/A (2.1 quarts/A) in wildflower plantings established from seed.

[2] Applications of **Pendulum AquaCap** to immature ferns (during periods of new growth of fronds) may result in some injury.

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Shrubs	
Abelia, glossy	*Abelia grandiflora*
Alder, witch	*Fothergilla gardenii*
Aucuba, gold	*Aucuba japonica*
Azalea	*Rhododendron* spp.
Bamboo, heavenly	*Nandina domestica*
Barberry	*Berberis gladwynensis*
Barberry, Japanese	*Berberis thunbergii*
Blue indigo bush	*Dalea gregii*
Bottlebrush, lemon	*Callistemon citrinus*
Boxwood, common	*Buxus sempervirens*
Boxwood, Japanese	*Buxus microphylla*
Brittlebush	*Encelia farinosa*
Buttonbush	*Cephalanthus occidentalis*
Camellia	*Camellia japonica*
Cape jasmine	*Gardenia jasminoides*
Cassia, feathery	*Cassia artemisioides*
Cordyline	*Cordyline* spp.
Correa	*Correa* spp.
Cotoneaster	*Cotoneaster apiculatus*
Cotoneaster, bearberry	*Cotoneaster dammeri*
Cotoneaster, rock	*Cotoneaster horizontalis*
Cypress, Italian	*Cupressus sempervirens*
Cypress, Leyland	*Cupressocyparis leylandii*
Deutzia, slender	*Deutzia gracilis*
Dogwood, red twig	*Cornus sericea*
Elaeagnus	*Elaeagnus ebbingei*
Escallonia	*Escallonia fradesii*
Euonymus	*Euonymus fortunei*
Euonymus, golden	*Euonymus japonica*
Euonymus, winged	*Euonymus alata*
Firethorn	*Pyracantha coccinea*
Forsythia, border	*Forsythia intermedia*
Fragrant olive	*Osmanthus fragrans*
Fuchsia, California	*Zauschineria californica*
Gardenia	*Gardenia jasminoides*
Hawthorne, Indian	*Raphiolepis indica*
Hibiscus	*Hibiscus syriacus*
Holly, Chinese	*Ilex cornuta*

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Shrubs *(continued)*	
Holly, Japanese	*Ilex crenata*
Holly, Fosters	*Ilex attenuata* 'Fosteri'
Holly, Savannah	*Ilex attenuata*
Holly, Yaupon	*Ilex vomitoria*
Honeysuckle, bush	*Diervilla lonicera*
Hopseed bush	*Dodonaea viscosa*
Hopbush	*Dodonaea viscosa*
Hydrangea	*Hydrangea macrophylla*
Juniper	*Juniperus* spp.
Juniper, Chinese	*Juniperus chinensis* v. *pfitzer*
Juniper, shore	*Juniperus conferta*
Juniper, trailing	*Juniperus horizontalis*
Laurel, cherry	*Prunus laurocerasus*
Laurel, mountain	*Kalmia latifolia*
Laurel, Otto Luyken	*Prunus laurocerasus*
Laurel, Schipka	*Prunus schipkanensis*
Laurustinus	*Viburnum tinus*
Lavender, English	*Lavandula angustifolia*
Leucothoe	*Leucothoe fontanesiana*
Leucothoe, coast	*Leucothoe axillaris*
Lilac, cut-leaf	*Syringa laciniata*
Lily-of-the-Nile	*Agapanthus africanus*
Mahonia	*Mahonia aquifolium*
Mock orange	*Pittosporum tobira*
Myrtle, compact	*Myrtus communis*
Myrtle, wax	*Myrica cerifera*
Nandina	*Nandina domestica*
Oleander	*Nerium oleander*
Oregon grape	*Mahonia aquifolium*
Osmanthus	*Osmanthus fragrans*
Palm, European fan	*Chamaerops humilis*
Palm, Mediterranean fan	*Chamaerops* spp.
Phlox, prickly	*Leptodactylon californicum*
Photinia, Fraser	*Photinia* x *fraseri*
Pieris, Japanese	*Pieris japonica*
Pine, Mugo	*Pinus mugo*
Plum, Natal	*Carissa grandiflora*
Privet, California	*Ligustrum ovalifolium*

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Shrubs *(continued)*	
Privet, glossy	*Ligustrum lucidum*
Privet, variegated	*Ligustrum sinensis*
Privet, waxleaf	*Ligustrum japonicum*
Pyracantha	*Pyracantha coccinea*
Quince, flowering	*Chaenomeles japonica*
Ranger, Texas	*Leucophyllum frutescens*
Redroot	*Ceanothus* spp.
Rhododendron	*Rhododendron* spp.
Robira	*Pittosporum tobira*
Rose	*Rosa* spp.
Spice plant	*Illicium parviflorum*
Spiraea	*Spiraea vanhouttei*
Spiraea, Anthony Waterer	*Spiraea* x *bumalda*
Spiraea, Japanese	*Spiraea japonica*
Sweet bay	*Laurus nobilis*
Trumpet bush	*Tecoma stans*
Verbena, lemon	*Aloysia triphylla*
Viburnum	*Viburnum suspensum*
Vitex	*Vitex* spp.
Weigela	*Weigela florida*
Wild lilac	*Ceanothus* spp.
Wisteria	*Wisteria* spp.
Xylosma	*Xylosma congestum*
Yellowbells	*Tecoma stans*
Yew[1]	*Taxus media*
Yew, Japanese[1]	*Taxus cuspidata*
Yew, Southern[1]	*Podocarpus macrophyllus*
Yucca, Adam's needle	*Yucca filamentosa*
Yucca, weeping	*Yucca pendula*

[1] Applications of **Pendulum® AquaCap herbicide** should not be made during spring growth or injury to terminals may occur.

Trees	
Alder, European black	*Alnus glutinosa*
Apple	*Malus* spp.
Arborvitae, American	*Thuja occidentalis*
Arbutus	*Arbutus* spp.
Ash, red	*Fraxinus pennsylvanica*

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Trees *(continued)*	
Ash, white	*Fraxinus americana*
Aspen, bigtooth	*Populus grandidentata*
Aspen, quaking	*Populus tremuloides*
Basswood	*Tilia* spp.
Birch, European weeping	*Betula pendula*
Birch, river	*Betula nigra*
Buckeye, red	*Aesculus pavia*
Cedar, white	*Thuja occidentalis*
Chamaecyparis, Boulevard	*Chamaecyparis pisifera*
Cherry, black	*Prunus serotina*
Cherry, choke	*Prunus virginiana*
Cherry, Kwanzan	*Prunus serrulata*
Cherry, Nanking	*Prunus tomentosa*
Cottonwood	*Populus deltoides*
Crabapple	*Malus* spp.
Crape myrtle	*Lagerstroemia indica*
Cryptomeria, Japanese cedar	*Cryptomeria japonica*
Cypress, bald	*Taxodium distichum*
Cypress, Leyland	*Cupressocyparis leylandii*
Dogwood, flowering	*Cornus florida*
Dogwood, Korean	*Cornus kousa*
Dogwood, shrub	*Cornus* spp.
Dogwood, silky	*Cornus amomum*
Elm	*Ulmus japonica*
Elm, winged	*Ulmus alata*
Eucalyptus (Silver-dollar) tree	*Eucalyptus cinerea*
Fir, balsam	*Abies balsamae*
Fir, Douglas	*Pseudotsuga menziesii*
Fir, Fraser	*Abies fraseri*
Fir, white	*Abies concolor*
Franklinia	*Franklinia* spp.
Fringe tree	*Chlonenthus retusus*
Ginkgo	*Ginkgo biloba*
Gum, black	*Nyssa sylvatica*
Gum, sour	*Nyssa sylvatica*
Haw, black	*Viburnum prunifolium*

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Trees *(continued)*	
Hawthorn	*Crataegus* spp.
Hemlock, Canada	*Tsuga canadensis*
Hemlock, Eastern	*Tsuga canadensis*
Holly, American	*Ilex opaca*
Honeylocust	*Gleditsia triacanthos*
Lilac, common	*Syringa vulgaris*
Lilac, Japanese tree	*Syringa reticulata*
Linden	*Tilia* spp.
Magnolia, saucer	*Magnolia soulangiana*
Magnolia, Southern	*Magnolia grandiflora*
Magnolia, star	*Magnolia stellata*
Maidenhair tree	*Ginkgo biloba*
Maple, Japanese	*Acer palmatum*
Maple, Norway	*Acer platanoides*
Maple, red	*Acer rubrum*
Maple, sugar	*Acer saccharum*
Nannyberry, rusty	*Viburnum rufidulum*
Oak, chinquapin	*Quercus muehlenbergii*
Oak, live	*Quercus virginiana*
Oak, pin	*Quercus palustris*
Oak, red	*Quercus rubra*
Oak, swamp chestnut	*Quercus michauxii*
Oak, water	*Quercus nigra*
Oak, white	*Quercus alba*
Oak, willow	*Quercus phellos*
Olive	*Olea europaea*
Palm, date	*Phoenix* spp.
Palm, fan	*Washingtonia* spp.
Palm, pindo	*Butia* spp.
Palm, Washington	*Washingtonia* spp.
Peach	*Prunus persica*
Pear, Bradford	*Pyrus calleryana* 'Bradford'
Pecan	*Carya illinoensis*
Pine, Austrian	*Pinus nigra*
Pine, Italian stone	*Pinus pinea*
Pine, loblolly	*Pinus taeda*
Pine, Monterey	*Pinus radiata*
Pine, red	*Pinus resinosa*

(continued)

Table 4. Tolerant Ornamental Species
(continued)

Common Name	Scientific Name
Trees *(continued)*	
Pine, Scotch	*Pinus sylvestris*
Pine, Virginia	*Pinus virginiana*
Pine, white	*Pinus strobus*
Plum, purple leaf	*Prunus cerasifera*
Poplar, black	*Populus nigra*
Redcedar, Eastern	*Juniperus virginiana*
Redcedar, Western	*Thuja plicata*
Red ironbark	*Eucalyptus sideroxylon* 'Rosea'
Redwood, dawn	*Metasequoia glyptostroboides*
Sequoia, giant	*Sequoiadendron giganteum*
Serviceberry	*Amelanchier laevis*
Sourwood	*Oxydendrum arboreum*
Spruce, Colorado blue	*Picea pungens*
Spruce, dwarf Alberta	*Picea glauca* 'Albertiana'
Spruce, Norway	*Picea abies*
Spruce, white	*Picea glauca*
Sweetgum	*Liquidambar styraciflua*
Sycamore	*Platanus occidentalis*
Trachycarpus	*Trachycarpus* spp.
Tulip tree	*Liriodendron tulipifera*
Walnut, black	*Juglans nigra*
Willow, weeping	*Salix babylonica*
Yellowwood	*Cladrastis lutea*

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The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

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BASF Corporation
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Research Triangle Park, NC 27709

BASF

We create chemistry

BASF
The Chemical Company

Safety Data Sheet
PENDULUM AQUACAP HERBICIDE

1. Product and Company Identification

Company
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Substance number:	000000171005
Molecular formula:	C13 H19 N3 O4
Chemical family:	aniline derivative
Synonyms:	pendimethalin

2. Hazards Identification

Emergency overview

CAUTION:
Causes eye irritation.
HARMFUL IF ABSORBED THROUGH SKIN.
HARMFUL IF SWALLOWED.
KEEP OUT OF REACH OF CHILDREN.
KEEP OUT OF REACH OF DOMESTIC ANIMALS.
Avoid contact with the skin, eyes and clothing.

See Product Label for additional precautionary statements.

State of matter: liquid
Colour: yellow to brown
Odour: faint odour, nutty

Potential health effects

Primary routes of exposure:
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:
Relatively nontoxic after single ingestion. Relatively nontoxic after short-term inhalation. Relatively nontoxic after short-term skin contact.

Irritation / corrosion:
May cause slight but temporary irritation to the eyes. May cause slight irritation to the skin.

Sensitization:
Skin sensitizing effects were not observed in animal studies.

Medical conditions aggravated by overexposure:
Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

Signs and symptoms of overexposure:
orange-red coloured urine caused by dye (not associated with methemoglobinemia)

Potential environmental effects

Aquatic toxicity:
Very toxic (acute effect) to aquatic organisms.

Terrestrial toxicity:
Acutely harmful to terrestrial organisms.

3. Composition / Information on Ingredients

CAS Number	Content (W/W)	Chemical name
40487-42-1	38.7 %	pendimethalin
	61.3 %	Proprietary ingredients

4. First-Aid Measures

General advice:
First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:
Remove the affected individual into fresh air and keep the person calm.

If on skin:
Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:
Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:
Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

Note to physician

Antidote:	No known specific antidote.
Treatment:	Treat symptomatically.

5. Fire-Fighting Measures

Flash point:	> 230 °F	
Autoignition:	354 °C	(DIN EN 14522)
Lower explosion limit:		not determined
Upper explosion limit:		not determined
Flammability:	not highly flammable	

Suitable extinguishing media:
foam, dry powder, carbon dioxide, water spray

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrocarbons,
If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions:
Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions:
Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Cleanup:
Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Handling

General advice:
RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:
The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Storage

General advice:

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

Storage incompatibility:
General advice: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Temperature tolerance
Protect from temperatures below: 0 °C
Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.
Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls and Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Advice on system design:
Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:
Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:
Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	microencapsulated, suspension	
Odour:	faint odour, nutty	
Colour:	yellow to brown	
pH value:	approx. 8 - 10	(1 %(m), 21 °C)
Melting point:	approx. 0 °C	Information applies to the solvent.
Density:	approx. 9.79 lb/USg	(68 °F)
Vapour density:		not determined
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Viscosity, dynamic:	128 mPa.s	(20 °C) (OECD 114)
Solubility in water:		dispersible
Molar mass:	281.31 g/mol	

10. Stability and Reactivity

Conditions to avoid:
Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

Substances to avoid:
strong acids, strong bases, strong oxidizing agents

Hazardous reactions:
The product is chemically stable.
Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

Thermal decomposition:
Possible thermal decomposition products:
carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrocarbons
Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.

Oxidizing properties:
not fire-propagating

11. Toxicological information

Acute toxicity

Oral:
Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg (OECD Guideline 401)

Inhalation:
Type of value: LC50
Species: rat (male/female)
Value: > 5.23 mg/l (OECD Guideline 403)
Exposure time: 4 h
An aerosol was tested.
No mortality was observed.

Dermal:

Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg (OECD Guideline 402)

Irritation / corrosion

Skin:
Species: rabbit
Result: mildly irritating

Eye:
Species: rabbit
Result: mildly irritating

Sensitization:
modified Buehler test
Species: guinea pig
Result: Non-sensitizing.
Method: OECD Guideline 406

Repeated dose toxicity

Information on: pendimethalin
Assessment of repeated dose toxicity:
No substance-specific organtoxicity was observed after repeated administration to animals. Adaptive effects were observed after repeated exposure in animal studies.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Assessment of repeated dose toxicity:
The substance may cause damage to the olfactory epithelium after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

Information on: Methylenediphenyl diisocyanate
Assessment of repeated dose toxicity:
The substance may cause damage to the olfactory epithelium after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

Carcinogenicity

Information on: pendimethalin
In long-term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counter part. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.
Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.
Information on: Methylenediphenyl diisocyanate
A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.

Development:

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.
Information on: Methylenediphenyl diisocyanate
The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Experiences in humans:

Pendimethalin is a strongly orange-red compound - virtually an aniline dye. Cases have been described of of orange-yellow colouration of urine following heavy exposure of workers to the dust of pendimethalin. Despite its structure as both a nitro-compound and aromatic amine, exposure to pendimethalin is NOT associated with methemoglobinemia.

Other Information:

Misuse can be harmful to health.

12. Ecological Information

Fish

Acute:
OECD Guideline 203 static
Oncorhynchus mykiss/LC50 (96 h): 20.36 mg/l

Aquatic invertebrates

Acute:
OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h): > 100 mg/l

Aquatic plants

Toxicity to aquatic plants:
OECD Guideline 201 green algae/EC50 (72 h): 1.49 mg/l

Non-Mammals

Information on: pendimethalin
Other terrestrial non-mammals:
mallard duck/LD50: 1,421 mg/kg
Acutely harmful to terrestrial organisms.
Honey bee/LD50: 49.8 ug/bee
Acutely harmful to terrestrial organisms.

Environmental mobility:

Information on: pendimethalin
Assessment transport between environmental compartments:
Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Other adverse effects:

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:
Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:
Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA: D028
The waste codes are manufacturer's recommendations based on the designated use of the product. Other use and special waste disposal treatment on customer's location may require different waste-code assigments.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PENDIMETHALIN)

Air transport
IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PENDIMETHALIN)

Further information
DOT: This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ). Please refer to Section 15 of this MSDS for the RQ for this product.

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection	TSCA, US	released / listed
Chemical	TSCA, US	blocked / not listed

OSHA hazard category: Skin and/or eye irritant; Chronic target organ effects reported

EPCRA 311/312 (Hazard categories): Acute; Chronic

EPCRA 313:

CAS Number	Chemical name
40487-42-1	pendimethalin

16. Other Information

Refer to product label for EPA registration number.

Recommended use: herbicide

NFPA Hazard codes:
Health : 1 Fire: 1 Reactivity: 1 Special:

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MSDS Prepared by:
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MSDS Prepared on: 2012/11/29

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