

19713-588

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

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Ms. Luz G. Chan  
Product Registration  
Drexel Chemical Company  
P.O. Box 13327  
Memphis, TN 38113-9327

OCT 8 2009

SUBJECT: Application for Pesticide Notification (PRN 98-10)  
Request Primary Brand Name Change "Imitator IPA PRO" and Alternate Brand  
Name "GLYPHOSATE IPA PRO," General Label Changes, and Directions for Use  
EPA Reg. No. 19713-588  
Application Dated September 9, 2009

Dear Registrant:

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

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

Sincerely,

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

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

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United States  
Environmental Protection Agency  
Washington, DC 20460

Registration  
 Amendment  
 Other

OPP Identifier Number

### Application for Pesticide - Section I

1. Company/Product Number 19713-588	2. EPA Product Manager JIM TOMPKINS	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) DREXEL GLYPHOSATE IPA PRO	PM# 25/Herbicide Branch	
5. Name and Address of Applicant (Include ZIP Code) Drexel Chemical Company P.O. Box 13327 Memphis, TN 38113-0327 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

### Section - II

<input type="checkbox"/> Amendment - Explain below.	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

**NOTIFICATION**  
OCT - 8 2009

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

Submission of revised label with proposed basic brand name (588SP-0909\*) plus label updates. Details are in the cover letter accompanying this submission.  
Thank you.

### Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
* Certification must be submitted	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1, 2.5, 5, 10, 15, 30, 55 gal; Bulk; Tote		5. Location of Label Directions <input type="checkbox"/>	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

### Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name LUZ G CHAN	Title REGISTRATION MANAGER	Telephone No. (include Area Code) (901) 774-4370
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature <i>Luza Chan</i> 2009.09.09 15:37:13 -05'00'	3. Title REGISTRATION MANAGER	
4. Typed Name LUZ G CHAN	5. Date September 9, 2009	



**Drexel Chemical Company**

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September 9, 2009

Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Rm S-4900, One Potomac Yard  
2777 S Crystal Drive  
Arlington, VA 22202

**Re: Submission of Revised Label by Notification per PR Notice 98-10 to Change Basic Brand Name Plus Label Updates  
DREXEL GLYPHOSATE IPA PRO (EPA Reg. No. 19713-588)**

Herewith:

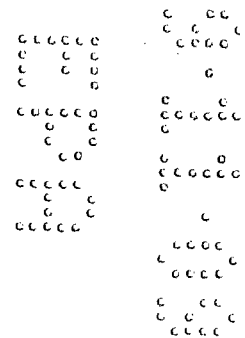
1. Completed EPA Form 8570-1
2. One (1) copy of the label 588SP-0909\* with the following revisions:
  - i) The basic brand name is changed to **IMITATOR IPA PRO**. We also propose that "GLYPHOSATE IPA PRO" brand name becomes the alternate brand name for this product.
  - ii) "Shake Well Before Using" and the optional statement "Recirculate Contents Before Use" were deleted from the front panel as it is unnecessary. This product is a true solution.
  - iii) In the Storage and Disposal, under 'Refillable Containers', 'this product' was changed to "this pesticide".
3. Certification Statement

If you have questions/clarification regarding this submission, I can be reached at (901) 774-4370 or e-mail [Lchan@drexchem.com](mailto:Lchan@drexchem.com).

Thank you.

Respectfully yours,  
FOR DREXEL CHEMICAL COMPANY

*Luz G Chan*  
Luz G Chan  
Registration Manager





**Drexel Chemical Company**

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September 9, 2009

***Submission of Revised Label by Notification***  
**DREXEL GLYPHOSATE IPA PRO (EPA Reg. No. 19713-588)**

This notification is consistent with the Provisions of PR Notice 98-10 and EPA Regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the Confidential Statement of Formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

FOR DREXEL CHEMICAL COMPANY

LUZ G CHAN

Registration Manager

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NOTIFICATION

OCT - 8 2009

Drexel

# Imitator® IPA PRO

Herbicide

THE COMPLETE BROAD SPECTRUM POSTEMERGENCE PROFESSIONAL HERBICIDE FOR INDUSTRIAL TURF, AND ORNAMENTAL WEED CONTROL.

Avoid herbicide contact with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees because severe injury or destruction may result.

**ACTIVE INGREDIENT:**

Glyphosate: N-(Phosphonomethyl) glycine in the form of its isopropylamine salt* .....	41.0%
<b>OTHER INGREDIENTS:</b> .....	59.0%
<b>TOTAL:</b> .....	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.

## KEEP OUT OF REACH OF CHILDREN CAUTION

See FIRST AID Below

EPA Reg. No. 19713-588

EPA Est. No. 19713-XX-XXX

Net Content: \_\_\_\_\_

Read the entire label before using this product. Use only according to label instructions. Read "WARRANTY-DISCLAIMER" before buying or using. If terms are not acceptable, return product unopened without delay.

### FIRST AID

**IF IN EYES:**

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product, (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.

**Domestic animals:** This product is considered to be relatively non-toxic 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.

### PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

**CAUTION:** Causes moderate eye irritation. Avoid contact with eyes or clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, shoes plus socks and gloves.

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

**ENGINEERING CONTROLS STATEMENT**

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:** 1) Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately before pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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

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.

### PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, 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. 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 at the time of application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Manufactured By:

**Drexel Chemical Company**

P.O. BOX 13327, MEMPHIS, TN 38113-0327

SINCE 1972

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated area during the REI of 12 hours.

PPE required for early entry to treated area that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves (Category A) such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber >14 mls, shoes plus socks and protective eyewear.

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the WPS for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses. Keep people and pets off treated areas until spray solution has dried.

## USE INFORMATION

READ ENTIRE LABEL BEFORE USING THIS PRODUCT.

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

This product mixes readily with water to be applied as a foliar spray for the control or destruction of most Herbaceous plants. It may be applied through most standard handheld or industrial or field-type sprayers after dilution

and thorough mixing with water in accordance with label instructions.

This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most Annual weeds occur 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 visible effects of control. 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.

Unless otherwise specified on this label, delay application until vegetation has emerged and reached the stages described for control of such vegetation under the "WEEDS CONTROLLED" section of this label. Unemerged plants arising from unattached underground rhizomes or root stocks of Perennials will not be affected by the herbicide and will continue to grow. For this reason, best control of most Perennial weeds is obtained when treatment is made at late growth stages approaching maturity.

Always use the higher rate of this product per acre within the recommended range when 1) weed growth is heavy or dense, or 2) weeds are growing in an undisturbed (non-cultivated) area.

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

Reduced control may result when applications are made to Annual and Perennial weeds that have been mowed, grazed or cut and have not been allowed to regrow to the recommended stage for treatment. Rainfall or irrigation occurring within 6 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours after application may wash the chemical off the foliage and a repeat treatment may be required.

This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used.

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 recommended in this labeling. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance.

For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

**ATTENTION: 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 is greatest when winds are gusty or in excess of 5 miles per hour, or when other conditions, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid

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combinations of pressure and nozzle type that will result in splatter or fine particles (mist), which 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. Keep container closed to prevent spills and contamination.

## MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES. DO NOT APPLY WHEN WIND OR OTHER CONDITIONS FAVOR DRIFT. HANDGUN APPLICATIONS SHOULD BE PROPERLY DIRECTED TO AVOID SPRAYING DESIRABLE PLANTS.

**Note:** REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS WATER FROM PONDS AND UNLINED DITCHES.

## MIXING

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 water. Add the recommended amount of this product (see the "DIRECTIONS FOR USE" and "WEEDS CONTROLLED" sections of this label) near the end of the filling process and mix well. Remove hose from tank immediately after filling to avoid siphoning back into the carrier source. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate bypass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

## TANK MIXTURES

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20- to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full of water and start agitation.
3. If a wettable powder is used, make a slurry with the water carrier and add it SLOWLY through the screen into the tank. Continue agitation.
4. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
5. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
6. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
7. Where non-ionic surfactant is recommended, add this to the spray tank before completing the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water-soluble liquid followed by surfactant.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed. Keep bypass line on or near bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50-mesh. Carefully select proper nozzle to avoid spraying a fine mist. For best results with conventional ground application equipment, use flat fan nozzles. Clean sprayer and parts immediately after using this product by thoroughly flushing with water.

## ADDITIVES

**Surfactants:** Non-ionic surfactants that are labeled "for use with herbicides" may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, follow manufacturer's rates and recommendations for use of the surfactant. OR, use 0.5% surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactants that contain at least 70% active ingredient or a 1% surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70% active ingredient. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

**Ammonium Sulfate:** The addition of 1 to 2% dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product and this product plus 2,4-D, Banvel® or residual herbicide tank mixtures on Annual and Perennial weeds. The improvement in performance may be apparent where environmental stress is a concern. Low-quality ammonium sulfate may contain material that will not readily dissolve, which could result in nozzle tip plugging. To determine quality, perform a jar test by adding 0.33 cup of ammonium sulfate to 1 gallon of water and agitate for 1 minute. If undissolved sediment is observed, predissolve the ammonium sulfate in water and filter prior to addition to the spray tank. If ammonium sulfate is added directly to the spray tank, add slowly with agitation. Adding too quickly may clog outlet line. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides or surfactant. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

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**Note:** The use of ammonium sulfate as an additive does not preclude the need for additional surfactant. Do not use herbicide rates lower than recommended in this label.

**Colorants or Dyes:** Agriculturally-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 dilutions. Use colorants or dyes according to the manufacturer's recommendations.

**APPLICATION EQUIPMENT AND TECHNIQUES**

Do not apply this product through any type of irrigation system. This product may be applied with the following application equipment:

**Aerial** — Fixed-wing and helicopter.

**Broadcast Spray**

**Controlled Droplet Applicator (CDA)** — Handheld or boom-mounted applicators that produce a spray consisting of a narrow range of droplet sizes.

**Handheld and High-volume Spray Equipment** — Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other handheld and motorized spray equipment used to direct the spray into weed foliage.

**Selective Equipment** — Recirculating sprayers, shielded sprayers and wiper applicators.

See the appropriate part of this section for specific instructions and rates of application.

**AERIAL EQUIPMENT**

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. See the "WEEDS CONTROLLED" section of this label for specific rates. Unless otherwise specified, do not exceed 1 quart per acre. **Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced-tillage systems, pre-harvest, silvicultural sites and right-of-ways. Refer to the individual use area sections of this label for recommended volumes and application rates.**

Avoid direct application to any body of water.

**AVOID DRIFT** — DO NOT APPLY DURING LOW-LEVEL INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

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 airstream 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.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion. **THIS PRODUCT PLUS OUST®, BANVEL OR 2,4-D TANK MIXTURES MAY NOT BE APPLIED BY AIR IN CA.**

**SPRAY DRIFT MANAGEMENT**

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

2. Nozzles must always point backwards parallel with the airstream and never be pointed downward more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the *Aerial Drift Reduction Advisory Information*.

**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 Wind, Temperature and Humidity, and Temperature Inversion section of this label).

**Controlling Droplet Size**

**Volume**— Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure**— Use the lower spray pressures recommended 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 airstream 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**— Application should 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 exposure of droplets to evaporation and wind.

**Swath Adjustment**

When applications are made with a cross-wind, the swath will be displaced downward. 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 should increase, with increasing drift potential (higher wind, smaller drops, etc.).

**Wind**

Drift potential is the lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they 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 should not occur during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to 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 connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas**

The pesticide should only be applied when the potential for drift to adjacent 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).

**BROADCAST EQUIPMENT**

**For control of Annual or Perennial weeds listed on this label using broadcast equipment** — Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified on this label. See the "WEEDS CONTROLLED" section of this label for specific rates. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzle to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

**CONTROLLED DROPLET APPLICATION (CDA)**

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount recommended in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre. For the control of labeled Annual weeds with handheld CDA units, apply a 20% solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 MPH (1 quart per acre). For the control of labeled Perennial weeds, apply a 20 to 40% solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 MPH (2 to 4 quarts per acre).

Controlled droplet application equipment produces a spray pattern that is not easily visible. Extreme care should be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

**HANDHELD AND HIGH-VOLUME EQUIPMENT**

Use coarse sprays only. Mix this product in clean water and apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff.

For control of Annual weeds listed on this label, apply a 0.5% solution of this product plus non-ionic surfactant to weeds less than 6 inches in height or runner length. Apply prior to seed-head formation in Grass or bud formation in Broadleaf weeds. Allow 3 or more days before tillage or mowing.

\*THIS PRODUCT IS NOT REGISTERED IN CA OR AZ FOR USE IN MISTBLOWERS.

For Annual weeds over 6 inches tall, or when not using additional surfactant, or unless otherwise specified, use ( ) solution. For best results, use a 2% solution on harder-to-control Perennials, such as Bermudagrass, Canada thistle, Dock, Field bindweed, Hemp dogbane and Milkweed.

When using application methods that result in less than complete coverage, use a 5% solution for Annual and Perennial weeds and a 5 to 10% solution for Woody brush and Trees.

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 This Product					
	0.5%	1%	1.5%	2%	5%	10%
1 Gallon	0.66 oz.	1.33 ozs.	2 ozs.	2.66 ozs.	6.5 ozs.	13 ozs.
25 Gallons	1 pt.	1 qt.	1.5 qts.	2 qts.	5 qts.	10 qts.
100 Gallons	2 qts.	1 gal.	1.5 gals.	2 gals.	5 gals.	10 gals.

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

**SELECTIVE EQUIPMENT**

This product may be applied through a recirculating spray system, a shielded applicator or a wiper applicator after dilution and thorough mixing with water to listed weeds growing in any non-crop site specified on this label and only when specifically recommended in cropping systems.

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.

A shielded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide.

A wiper applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution.

**AVOID CONTACT WITH DESIRABLE VEGETATION.**

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desired vegetation should be adjusted so that 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 may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. 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 treatments may be necessary.

**Shielded Applicators**

When applied as directed under conditions described for shielded applicators, this product will control those weeds listed in the "WEEDS CONTROLLED" section of this label.

Use the following equation to convert from a broadcast rate per acre to a band rate per acre:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Herbicide broadcast RATE per acre} = \text{Herbicide band RATE per acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast VOLUME of solution per acre} = \text{Band VOLUME of solution per acre}$$

Use nozzles that provide uniform coverage within the treated area. Keep shields on shielded sprayers adjusted to protect desirable vegetation. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT WITH DESIRABLE VEGETATION.

For specific rates of application and instructions for control of various Annual weeds and Perennial weeds, see the "WEEDS CONTROLLED" section of this label.

**Wiper Applicators**

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

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 mph. 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 activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Do not add surfactant to the herbicide solution.

**For rope or sponge wick applicators** — Mix 1 gallon of this product in 2 gallons of water to prepare a 33% solution. Apply this solution to weeds listed in this "Wiper Applicators" section.

**For porous-plastic applicators** — Solutions ranging from 33% to 100% of this product in water may be used in porous-plastic wiper applicators.

When applied as recommended under the conditions described for "Wiper Applicators", this product CONTROLS the following weeds:

Annual Grasses	
Corn <i>Zea mays</i> Panicum, Texas <i>Panicum texanum</i>	Rye, common <i>Secale cereale</i> Shattercane <i>Sorghum bicolor</i>
Annual Broadleaves	
Sicklepod <i>Cassia obtusifolia</i> Spanishneedles <i>Bidens bipinnata</i>	Starbur, bristly <i>Acanthospermum hispidum</i>

When applied as recommended under the conditions described for "Wiper Applicators", this product SUPPRESSES the following weeds:

Annual Broadleaves	
Beggarweed, Florida <i>Desmodium tortuosum</i> Dogfennel <i>Eupatorium capilliflorum</i> Pigweed, redroot <i>Amaranthus retroflexus</i> Ragweed, common <i>Ambrosia artemisiifolia</i>	Ragweed, giant <i>Ambrosia trifida</i> Sunflower <i>Helianthus annuus</i> Thistle, musk <i>Carduus nutans</i> Velvetleaf <i>Abutilon theophrasti</i>
Perennial Grasses	
Bermudagrass <i>Cynodon dactylon</i> Guineagrass <i>Panicum maximum</i> Johnsongrass <i>Sorghum halepense</i>	Smutgrass <i>Sporobolus poiretii</i> Vaseygrass <i>Paspalum urvillei</i>
Perennial Broadleaves	
Dogbane, hemp <i>Apocynum cannabinum</i> Milkweed <i>Asclepias syriaca</i>	Nightshade, silverleaf <i>Solanum elaeagnifolium</i> Thistle, Canada <i>Cirsium arvense</i>

**WEEDS CONTROLLED**

This herbicide controls many Annual and Perennial grasses and Broadleaf weeds.

**ANNUAL WEEDS**

- Apply to actively growing Grass and Broadleaf weeds.
- Allow at least 3 days after treatment before tillage.
- For maximum agronomic benefit, apply when weeds are 6 inches or less in height.
- To prevent seed production, applications should be made prior to seedhead formation.
- This product does not provide residual control; therefore, delay application until maximum weed emergence. Repeat treatments may be necessary to control later germinating weeds.

**Low-Volume Broadcast Application (Low-Rate Technology)**

When applied as directed under the conditions described in this product will control the weeds listed below when:

1. Water carrier volumes of 3 to 10 gallons per acre for ground applications and 3 to 5 gallons per acre for aerial applications are recommended. (See the "AERIAL EQUIPMENT" section of this label for approved sites.)
2. A non-ionic surfactant is added at 0.5 to 1% by total spray volume. Use 0.5% surfactant concentration when using surfactants which contain at least 70% active ingredient or a 1% surfactant concentration for those surfactants containing less than 70% active ingredient.

**Notes:**

- The addition of 2% dry ammonium sulfate by weight or 17 pounds per 100 gallons of water may increase the performance of this product on Annual weeds. The improvement in performance may be apparent where environmental stress is a concern. Refer to the "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" section of this label.
- Do not tank-mix with soil residual herbicides when using these rates unless otherwise specified.
- For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.



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• Refer to the "TANK MIXTURES" portion of (b)(1) section for control of additional Broadleaf weeds.

**Tank Mixtures**  
**This Product plus Banvel plus non-ionic surfactant**  
**This Product plus 2,4-D plus non-ionic surfactant**

Weed Species	Maximum Height-Length	Rate per Acre* (fl. ozs.)
<b>Foxtail</b> <i>Setaria spp.</i>	12 inches	8 fl. ozs.
<b>Barnyardgrass</b> <i>Echinochloa crus-galli</i>	6 inches	12 fl. ozs.
<b>Bluegrass, annual</b> <i>Poa annua</i>	0 to 4 inches	16 fl. ozs. <sup>1</sup>
<b>Brome, downy**</b> <i>Bromus tectorum</i>	4 to 6 inches	24 fl. ozs. <sup>1</sup>
<b>Mustard, blue</b> <i>Chorispora tenella</i>		
<b>Mustard, tansy</b> <i>Descurainia pinnata</i>		
<b>Mustard, tumble</b> <i>Sisymbrium altissimum</i>		
<b>Mustard, wild</b> <i>Brassica kaber</i>		
<b>Spurry, umbrella</b> <i>Holosteum umbellatum</i>		
<b>Barley</b> <i>Hordeum vulgare</i>	12 inches	12 fl. ozs.
<b>Rye</b> <i>Secale cereale</i>		
<b>Sandbur, field</b> <i>Cenchrus spp.</i>		
<b>Shattercane</b> <i>Sorghum bicolor</i>		
<b>Stinkgrass</b> <i>Eragrostis ciliaris</i>		
<b>Wheat</b> <i>Triticum aestivum</i>	18 inches	12 fl. ozs.
<b>Morningglory</b> <i>Ipomoea spp.</i>	2 inches	16 fl. ozs.
<b>Sicklepod</b> <i>Cassia obtusifolia</i>		
<b>Bluegrass, bulbous</b> <i>Poa bulbosa</i>	6 inches	16 fl. ozs.
<b>Cheat</b> <i>Bromus secalinus</i>		
<b>Chickweed, common</b> <i>Stellaria media</i>		
<b>Chickweed, mouseear</b> <i>Cerastium vulgatum</i>		
<b>Corn</b> <i>Zea mays</i>		
<b>Goatgrass, jointed</b> <i>Aegilops cylindrica</i>		
<b>Groundsel, common</b> <i>Senecio vulgaris</i>		
<b>Henbit</b> <i>Lamium amplexicaule</i>		
<b>Horseweed, maretail</b> <i>Conyza canadensis</i>		
<b>Lambsquarters, common</b> <i>Chenopodium album</i>		
<b>Pennycress, field (fanweed)</b> <i>Thlaspi arvense</i>		
<b>Rocket, London</b> <i>Sisymbrium irio</i>		
<b>Ryegrass, Italian</b> <i>Lolium multiflorum</i>		
<b>Shepherdspurse</b> <i>Capsella bursa-pastoris</i>		
<b>Spurge, annual</b> <i>Euphorbia spp.</i>		

<sup>1</sup>Use these rates to control Barnyardgrass in AL, AR, MO, MS, LA and TX for pre-plant treatments.  
\*For those rates less than 32 fl. ozs. per acre, this product at rates up to 32 fl. ozs. per acre may be used where heavy Weed densities exist.  
\*\*For control in no-tillage systems, use 16 fl. ozs. per acre.

(Continued)

**Weed Species (Cont.)**

Weed Species	Maximum Height-Length	Rate per Acre* (fl. ozs.)
<b>Buttercup</b> <i>Ranunculus spp.</i>	12 inches	16 fl. ozs.
<b>Cocklebur</b> <i>Xanthium strumarium</i>		
<b>Crabgrass</b> <i>Digitaria spp.</i>		
<b>Dwarf dandelion</b> <i>Krigia cespitosa</i>		
<b>Falseflax, smallseed</b> <i>Camelina microcarpa</i>		
<b>Foxtail, Carolina</b> <i>Alopecurus carolinianus</i>		
<b>Johnsongrass, seedling</b> <i>Sorghum halepense</i>		
<b>Oats, wild</b> <i>Avena fatua</i>		
<b>Panicum, fall</b> <i>Panicum dichotomiflorum</i>		
<b>Panicum, Texas</b> <i>Panicum texanum</i>		
<b>Pigweed, redroot</b> <i>Amaranthus retroflexus</i>		
<b>Pigweed, smooth</b> <i>Amaranthus hybridus</i>		
<b>Witchgrass</b> <i>Panicum capillare</i>		
<b>Sicklepod</b> <i>Cassia obtusifolia</i>	3 to 4 inches	24 fl. ozs.
<b>Signalgrass, broadleaf</b> <i>Bracharia platyphylla</i>	4 inches	24 fl. ozs.
<b>Horseweed, maretail</b> <i>Conyza canadensis</i>	7 to 12 inches	24 fl. ozs.
<b>Lambsquarters, common</b> <i>Chenopodium album</i>		
<b>Spurge, annual</b> <i>Euphorbia spp.</i>		
<b>Rice, red</b> <i>Oryza sativa</i>	4 inches	32 fl. ozs.
<b>Tea weed</b> <i>Sida spinosa</i>		
<b>Sprangletop</b> <i>Leptochloa app.</i>	6 inches 12 inches	32 fl. ozs. 48 fl. ozs.
<b>Geranium, Carolina</b> <i>Geranium carolinianum</i>	12 inches	32 fl. ozs.
<b>Goosegrass</b> <i>Eleusine indica</i>		
<b>Primrose, cutleaf evening</b> <i>Oenothera laciniate</i>		
<b>Pusley, Florida</b> <i>Richardia scabra</i>		
<b>Sicklepod</b> <i>Cassia obtusifolia</i>	5 to 12 inches	32 fl. ozs.
<b>Spanishneedles</b> <i>Bidens bipinnata</i>		
<b>Filaree</b> <i>Erodium spp.</i>	12 inches	48 fl. ozs.

\*For those rates less than 32 fl. ozs. per acre, this product at rates up to 32 fl. ozs. per acre may be used where heavy Weed densities exist.

DO NOT APPLY BANVEL OR 2,4-D TANK MIXTURES BY AIR IN CA  
These tank mixtures are recommended for use in fallow and reduced-tillage areas only. Follow use directions as given in the "Low Volume Broadcast Application" section.

This product plus Banvel or 2,4-D will control the Annual grasses and Broadleaf weeds listed for this product, alone at the indicated heights (except 8 fluid ounces per acre applications), plus the following Broadleaf weeds. For those weeds previously listed at 8 fluid ounces of this product alone per acre, use 12 fluid ounces in these tank mixtures.

**Note:** Refer to the specific product label for crop rotation restrictions and cautionary statements for all products used in tank mixtures. Some crop injury may occur if Banvel is applied within 45 days of planting. The addition of Banvel in a mixture with this product may provide short-term residual control of selected weed species.

Apply 12 to 16 fluid ounces of this product plus 0.25 pound active ingredient of Banvel or 0.5 pound active ingredient of 2,4-D, plus 0.5 to 1% non-ionic surfactant by total spray volume per acre to control dense populations of the following Annual broadleaf weeds when less than the height indicated:

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<b>Cocklebur (12 inches)</b> <i>Xanthium strumarium</i> <b>Horseweed/Marestail (6 inches)</b> <i>Conyza canadensis</i> <b>Kochia* (6 inches)</b> <i>Kochia scoparia</i> <b>Lambsquarters (12 inches)</b> <i>Chenopodium album</i> <b>Lettuce, prickly (6 inches)</b> <i>Lactuca scariola</i>	<b>Morningglory (inches)</b> <i>Ipomoea</i> <b>Pigweed, redroot (12 inches)</b> <i>Amaranthus retroflexus</i> <b>Pigweed, smooth (12 inches)</b> <i>Amaranthus hybridus</i> <b>Thistle, Russian (12 inches)</b> <i>Salsola kali</i>
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\*Controlled with Banvel tank mixture only.

Apply 16 fluid ounces of this product plus 0.5 pound active ingredient of 2,4-D, plus 0.5 to 1% non-ionic surfactant by total spray volume per acre to control the following Annual broadleaf weeds when less than 6 inches in height.

<b>Ragweed, common</b> <i>Ambrosia artemisiifolia</i> <b>Ragweed, giant</b> <i>Ambrosia trifida</i>	<b>Smartweed, Pennsylvania</b> <i>Polygonum pennsylvanicum</i> <b>Velvetleaf</b> <i>Abutilon theophrasti</i>
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**High-Volume Broadcast Applications**

When applied as directed under the conditions described, this product will control the weeds listed below when water carrier volumes are 10 to 40 gallons per acre for ground applications.

Apply 1 to 1.5 quarts of this product per acre plus 0.5 to 1% non-ionic surfactant by total spray volume. Use 1 quart per acre if weeds are less than 6 inches tall and 1.5 quarts per acre if weeds are over 6 inches tall. If weeds have been mowed, grazed or cut, allow adequate time for new growth to reach recommended stages prior to treatment. These rates will also provide control of weeds listed in the "Low-Volume Broadcast Application" section.

Weed Species	
<b>Balsamapple*</b> <i>Momordica charantia</i> <b>Bassia, fivehook</b> <i>Bassia hyssopifolia</i> <b>Brome</b> <i>Bromus spp.</i> <b>Fiddleneck</b> <i>Amsinckia spp.</i> <b>Fleabane, hairy</b> <i>Conyza bonariensis</i> <b>Fleabane</b> <i>Erigeron spp.</i> <b>Kochia</b> <i>Kochia scoparia</i> <b>Lettuce, prickly</b> <i>Lactuca scariola</i>	<b>Panicum</b> <i>Panicum spp.</i> <b>Ragweed, common</b> <i>Ambrosia artemisiifolia</i> <b>Ragweed, giant</b> <i>Ambrosia trifida</i> <b>Smartweed, Pennsylvania</b> <i>Polygonum pennsylvanicum</i> <b>Sowthistle, annual</b> <i>Sonchus oleraceus</i> <b>Sunflower</b> <i>Helianthus annuus</i> <b>Thistle, Russian</b> <i>Salsola kali</i> <b>Velvetleaf</b> <i>Abutilon theophrasti*</i>

\*Apply with handheld equipment only.

**PERENNIAL WEEDS**

Apply this product as follows to control or destroy most Perennial weeds:

**Note:** If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the recommended stages. Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.

The addition of 1 to 2% dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product on Perennial weeds. The improvement in the performance may be apparent where environmental stress is a concern. Refer to the "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" section of this label.

When applied as recommended under the conditions described, this product WILL CONTROL the following Perennial weeds:

<b>Alfalfa</b> <i>Medicago sativa</i> <b>Alligatorweed*</b> <i>Alternanthera philoxeroides</i> <b>Anise (fennel)</b> <i>Foeniculum vulgare</i> <b>Artichoke, Jerusalem</b> <i>Helianthus tuberosus</i> <b>Bahiagrass</b> <i>Paspalum notatum</i> <b>Bentgrass</b> <i>Agrostis spp.</i> <b>Bermudagrass</b> <i>Cynodon dactylon</i>	<b>Bermudagrass, water (Knotgrass)</b> <i>Paspalum distichum</i> <b>Bindweed, field</b> <i>Convolvulus arvensis</i> <b>Bluegrass, Kentucky</b> <i>Poa pratensis</i> <b>Blueweed, Texas</b> <i>Helianthus ciliaris</i> <b>Brackenfern</b> <i>Pteridium aquilinum</i> <b>Bromegrass, smooth</b> <i>Bromus inermis</i> <b>Bursage, woollyleaf</b> <i>Franseria tomentosa</i> <p style="text-align: right;">(Continued)</p>
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\*Partial control

<b>(Cont.)</b> <b>Canarygrass, reed</b> <i>Phalaris arundinacea</i> <b>Cattail</b> <i>Typha spp.</i> <b>Clover, red</b> <i>Trifolium pratense</i> <b>Clover, white</b> <i>Trifolium repens</i> <b>Cogongrass</b> <i>Imperata cylindrica</i> <b>Dallisgrass</b> <i>Paspalum dilatatum</i> <b>Dandelion</b> <i>Taraxacum officinale</i> <b>Dock, curly</b> <i>Rumex crispus</i> <b>Dogbane, hemp</b> <i>Apocynum cannabinum</i> <b>Fescues</b> <i>Festuca spp.</i> <b>Fescue, tall</b> <i>Festuca arundinacea</i> <b>Guineagrass</b> <i>Panicum maximum</i> <b>Horsenettle</b> <i>Solanum carolinense</i> <b>Horseradish</b> <i>Acomoria rusticana</i> <b>Ice plant</b> <i>Mesembryanthemum crystallinum</i> <b>Johnsongrass</b> <i>Sorghum halepense</i> <b>Kikuyugrass</b> <i>Pennisetum clandestinum</i> <b>Knapweed</b> <i>Centaurea repens</i> <b>Lantana</b> <i>Lantana camara</i> <b>Lespedeza</b> <i>Lespedeza spp.</i> <b>Milkweed</b> <i>Asclepias spp.</i> <b>Muhly, wirestem</b> <i>Muhlenbergia frondosa</i> <b>Mullein, common</b> <i>Verbascum thapsus</i> <b>Napiergrass</b> <i>Penisetum purpureum</i>	<b>Nightshade, silverleaf</b> <i>Solanum elaeagnifolium</i> <b>Nutsedge, purple, yellow</b> <i>Cyperus rotundus</i> <i>Cyperus esculentus</i> <b>Orchardgrass</b> <i>Dactylis glomerata</i> <b>Pampasgrass</b> <i>Cortaderia spp.</i> <b>Paragrass</b> <i>Brachiaria mutica</i> <b>Phragmites*</b> <i>Phragmites spp.</i> <b>Poison hemlock</b> <i>Conium maculatum</i> <b>Quackgrass</b> <i>Elytrigia repens</i> <b>Redvine*</b> <i>Brunnichia ovata</i> <b>Reed, giant</b> <i>Arundo donax</i> <b>Ryegrass, perennial</b> <i>Lolium perenne</i> <b>Smartweed, swamp</b> <i>Polygonum coccineum</i> <b>Spurge, leafy*</b> <i>Euphorbia esula</i> <b>Starthistle, yellow</b> <i>Centaurea solstitialis</i> <b>Sweet potato, wild*</b> <i>Ipomoea pandurata</i> <b>Thistle, Canada</b> <i>Cirsium arvense</i> <b>Thistle, artichoke</b> <i>Cynara cardunculus</i> <b>Timothy</b> <i>Phleum pratense</i> <b>Torpedograss*</b> <i>Panicum repens</i> <b>Trumpetcreeper*</b> <i>Campsis radicans</i> <b>Vaseygrass</b> <i>Paspalum urvillei</i> <b>Velvetgrass</b> <i>Holcus spp.</i> <b>Wheatgrass, western</b> <i>Agropyron smithii</i>
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\*Partial control

THIS PRODUCT IS NOT REGISTERED IN CA FOR USE ON WATER BERMUDAGRASS.

See "DIRECTIONS FOR USE" and "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" sections of this label for labeled uses and specific application instructions.

**Alfalfa**—Apply 1 quart of this product per acre plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Make application after the last hay cutting in the Fall. Allow Alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Application should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.

**Alligatorweed**—Apply 4 quarts of this product per acre or apply a 1.5% solution with handheld equipment to provide partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain such control.

**Anise (Fennel), Poison hemlock**—Apply a 1 to 2% solution of this product as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full bloom stage of growth. Repeat applications may be needed in succeeding years to control plants arising from seeds.

**Bentgrass**—For suppression in Grass seed production areas. For ground applications only, apply 1.5 quarts of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 10 to 20 gallons of water per acre. Ensure entire crown areas has resumed growth prior to Fall applications. Bentgrass should be actively growing and have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results. Failure to use tillage after treatment may result in unacceptable control.

**Bermudagrass**—For control, apply 5 quarts of this product per acre. For partial control, apply 3 quarts per acre. Treat when Bermudagrass is actively growing and seedheads are present. Re-treatment may be necessary to maintain control. Allow 7 or more days after application before tillage.

**Bermudagrass, water (Knotgrass)**—Apply 1.5 quarts of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 5 to 10 gallons of water per acre. Apply when Water bermudagrass is actively growing and 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.

Fall applications only - Apply 1 quart of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on Water bermudagrass that is actively growing and 12 to 18 inches in length. Allow 7 or more days before tillage.

**Bindweed (Field)**—For control, apply 4 to 5 quarts of this product per acre West of the Mississippi River and 3 to 4 quarts East of the Mississippi River. Apply when the weeds are actively growing and are at or beyond full bloom. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. For best results, apply in late Summer or Fall. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage.

Also for control, apply 2 quarts of this product plus 0.5 pound active ingredient of Banvel in 10 to 20 gallons of water per acre. At these rates, apply using ground application only.

The following tank mixtures with 2,4-D may be applied using aerial application equipment (except in CA) in fallow and reduced tillage systems only.

For suppression on irrigated agricultural land, apply 1 to 2 quarts of this product plus 1 pound active ingredient of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in Fall fallow ground when the Bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active Bindweed growth.

For suppression, apply 16 fluid ounces of this product plus 0.5 pound active ingredient of 2,4-D plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

In CA only, apply 1 to 5 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions.

For suppression on irrigated land where annual tillage is performed, apply 1 quart of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to actively growing Bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth. Allow 3 or more days after application before tillage.

**Bluegrass (Kentucky), Bromegrass (Smooth), Orchardgrass**—Apply 2 quarts of this product in 10 to 40 gallons of water per acre when the Grasses are actively growing and most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height. Allow 7 or more days after application before tillage.

**Orchardgrass (sods going to no-till Corn)**—Apply 1 to 1.5 quarts of this product per acre plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to Orchardgrass that is a minimum of 12 inches tall for Spring applications and 6 inches tall for Fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

**Blueweed (Texas)**—Apply 4 to 5 quarts of this product West of the Mississippi River and 3 to 4 quarts per acre East of the Mississippi River. Apply when weed is actively growing and is at or beyond full bloom. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. New leaf development indicates active growth. For best results, apply in late Summer or Fall. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage.

**Brackenfern**—Apply 3 to 4 quarts of this product per acre as a broadcast spray or as a 1 to 1.5% solution with handheld equipment. Apply to fully expanded fronds which are at least 18 inches long.

**Bursage (Woollyleaf)**—For control, apply 2 quarts of this product plus 1 pint of Banvel per acre. For partial control, apply 1 quart of this product plus 1 pint of Banvel per acre. Add 0.5 to 1% non-ionic surfactant by total spray volume and apply in 3 to 20 gallons of water per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

**Canarygrass (Reed), Timothy, Wheatgrass (Western)**—Apply 2 to 3 quarts of this product per acre. For best results, apply to actively growing plants when most have reached the boot-to-head stage of growth. Allow 7 or more days after application before tillage.

**Cogongrass**—Apply 3 to 5 quarts of this product plus 0.5 to 1% non-ionic surfactant in 10 to 40 gallons of water per acre. Apply when Cogongrass is at least 18 inches tall and actively growing in late Summer or Fall. Allow 7 or more days after application before tillage or mowing. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

**Dandelion, Dock (Curly)**—Apply 3 to 5 quarts of this product per acre when plants are actively growing and most have reached early bud stage of growth. Allow 7 or more days after application before tillage. Also for control, apply 16 fluid ounces of this product plus 0.5 pound active ingredient 2,4-D plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre.

**Dogbane (Hemp)**—Apply 4 quarts of this product per acre. Apply when actively growing and when most weeds have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. Allow 7 or more days after application before tillage. For best results, apply in late Summer or Fall. For suppression, apply 16 fluid ounces of this product plus 0.5 pound active ingredient 2,4-D plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of Dogbane has occurred.

**Fescue (Tall)**—Apply 3 quarts of this product in 10 to 40 gallons of water per acre to actively growing plants when most have reached boot-to-early seedhead stage of development.

Fall applications only - Apply 1 quart of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to Fescue in the Fall when actively growing and plants have 6 to 12 inches of new growth. Allow 7 or more days after application before tillage. A sequential application of 1 pint per acre of this product plus non-ionic surfactant will improve long-term control and control seedlings germinating after Fall treatments or the following Spring.

**Guineagrass**—Apply 3 qts. of this product per acre or use a 1% solution with handheld equipment. Apply to actively growing Guineagrass when most has reached at least the 7-leaf stage of growth. Ensure thorough coverage when using handheld equipment. Allow 7 or more days after application before tillage.

**Johnsongrass, Ryegrass (Perennial)**—Apply 1 to 3 quarts of this product per acre or as 1% solution with handheld equipment. In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre. In non-crop or areas where annual tillage (no-till) is not performed, apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply to actively growing plants when most have reached the boot-to-head stage of growth or in the Fall prior to frost. Allow 7 or more days after application before tillage. Do not tank-mix with residual herbicides when using the 1 quart per acre rate.

For burndown of Johnsongrass - Apply 1 pint per acre plus 0.5 to 1% non-ionic surfactant in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

For spot treatment (partial control or suppression) - Apply a 1% solution of this product plus 0.5 to 1% non-ionic surfactant by total spray volume when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

**Kikyugrass**—Apply 2 to 3 quarts of this product per acre. Spray when most Kikyugrass is at least 8 inches in height (3- or 4-leaf stage of growth) and actively growing. Allow 3 or more days after application before tillage.

**Knapweed, Horseradish**—Apply 4 quarts of this product per acre. Apply when actively growing and when most weeds have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late Summer to Fall. Allow 7 or more days after application before tillage.

**Lantana**—Apply this product as a 1 to 1.25% solution using handheld equipment only. Apply to actively growing Lantana at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth. Allow 7 or more days after application before tillage.

**Milkweed (Common)**—Apply 3 quarts of this product per acre. Apply when actively growing and most of the Milkweed has reached the late bud to flower stage of growth. Following crop harvest or mowing, allow Milkweed to regrow to a mature stage prior to treatment. Allow 7 or more days after application before tillage.

**Muhly (Wirestem)**—Apply 1 to 2 quarts of this product per acre. Use 1 quart of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre or in pasture, sod or non-crop areas. Spray when Wirestem muhly is 8 inches or more in height and actively growing. Do not till between harvest and Fall applications or in the Fall or Spring prior to Spring applications. Allow 3 or more days after application before tillage. This product will not provide residual control of Wirestem muhly from seeds which germinate after application of this product. Do not tank-mix with residual herbicides when using the 1-quart per acre rate.

**Nightshade (Silverleaf)**—For control, apply 2 quarts of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Applications should be made when at least 60% of the plants have berries. Fall treatments must be applied before

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a killing frost. Allow 7 or more days after application before tillage. Do not treat when weed is under drought stress. Good soil moisture is necessary for active growth.

**Nutsedge (Purple, Yellow)**—Apply 3 quarts of this product per acre as a broadcast spray or apply a 1 to 2% solution from handheld equipment to control existing Nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications of 1 to 2 quarts of this product plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre will provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control. For suppression to partial control of existing plants, apply 1 pint to 2 quarts of this product per acre, plus 0.5 to 1% non-ionic surfactant in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants. Wait 7 days after treatment before tillage or mowing.

**Pampasgrass, Ice plant**—Apply this product as a 1.5 to 2% solution using handheld equipment. Apply to plants that are actively growing at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

**Phragmites**—For partial control of Phragmites in FL and the counties of other states bordering the Gulf of Mexico, apply 5 quarts per acre as a broadcast spray or apply as a 2% solution from handheld equipment. In other areas of the U.S., apply 3 quarts per acre as a broadcast spray or apply a 1% solution from handheld equipment for partial control. For best results, treat during late Summer or Fall months or when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to uneven stages of growth or the dense nature of the vegetation, which may prevent good spray coverage, repeat treatments may be necessary to maintain control. Visible symptoms of control will be slow to develop.

**Quackgrass—In annual cropping systems or in pastures and sods followed by deep tillage:** Apply 1 to 2 quarts of this product per acre. For the 1-quart rate, apply 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre. For the 2-quart rate, apply in 10 to 40 gallons of water per acre. Do not tank-mix with residual herbicides when using the 1-quart rate. Spray when Quackgrass is 6 to 8 inches in height and actively growing. Do not till between harvest and Fall applications or in Fall or Spring prior to Spring application. Allow 3 or more days after application before tillage. In pastures or sods, for best results, use a moldboard plow.

**Quackgrass—In pasture or sod or other non-crop areas where deep tillage is not planned following application:** Apply 2 to 3 quarts in 10 to 40 gallons of water per acre. Spray when the Quackgrass is greater than 8 inches tall and actively growing. Do not till between harvest and Fall application or in Fall or Spring prior to Spring application. Allow 3 or more days after application before tillage.

**Redvine**—For suppression, apply 24 fluid ounces of this product per acre at each of two applications 7 to 14 days apart, or a single application of 2 quarts per acre. Apply recommended rates in 5 to 10 gallons of water per acre plus 0.5 to 1% non-ionic surfactant by total volume. Apply in late September or early October to actively growing plants, which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

**Reed (Giant)**—For control of Giant reed, apply a 2% solution of this product when plants are actively growing. Best results are obtained when applications are made in late Summer to Fall.

**Smartweed (Swamp)**—Apply 3 to 5 quarts of this product per acre when plants are actively growing and most have reached the early bud stage of growth. Allow 7 or more days after application before tillage. Also for control, apply 16 fluid ounces of this product plus 0.5 pound active ingredient of 2,4-D plus 0.5 to 1% non-ionic surfactant by total volume in 3 to 10 gallons of water per acre in the late Summer or Fall. Apply when plants are actively growing and most have reached the early bud stage of growth. Allow 7 or more days after application before tillage.

**Spurge (Leafy)**—For suppression, apply 16 fluid ounces of this product plus 0.5 pound active ingredient 2,4-D plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre in the late Summer or Fall. Apply when plants are actively growing. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall. Allow 7 or more days after application before tillage.

**Starthistle (Yellow)**—Best results are obtained when applications are made during periods of active growth, including the rosette, bolting and early flower stages. For spray-to-wet applications, apply this product as a 2% solution. For broadcast applications, apply 2 quarts per acre in 10 to 40 gallons per acre of water carrier.

**Sweet potato (Wild), This (Artichoke)**—Apply this product as a 2% solution using handheld equipment. Apply to actively growing weeds that are at or beyond the bloom stage of growth. Repeat applications will be required. Allow the plant to reach the recommended stage of growth before re-treatment. Allow 7 or more days before tillage.

**Thistle (Canada)**—Apply 2 to 3 quarts of this product per acre. Apply to actively growing Thistles when most are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late Summer or Fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

For suppression of Canada thistle, apply 1 quart per acre of this product or 1 pint of this product plus 0.5 pound active ingredient 2,4-D per acre, plus 0.5 to 1% non-ionic surfactant by total spray volume in 3 to 10 gallons of water per acre in the late Summer or Fall after harvest, mowing or tillage. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.

**Torpedograss**—Apply 4 to 5 quarts of this product per acre to provide partial control of Torpedograss. Apply to actively growing Torpedograss when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost. Allow 7 or more days after application before tillage.

**Trumpet creeper**—For control, apply 2 quarts of this product per acre in 5 to 10 gallons of water per acre. Apply to actively growing plants in late September and October, which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before killing frost.

**Other Perennials listed on this label**—Apply 3 to 5 quarts of this product per acre. Apply when actively growing and most have reached the early head to early bud stage of growth. Allow 7 or more days after application before tillage.

**WOODY BRUSH AND TREES**

When applied as recommended under the conditions described, this product CONTROLS or PARTIALLY CONTROLS the following Woody brush, plants and trees:

<b>Alder</b> <i>Alnus spp.</i>	<b>Elm*</b> <i>Ulmus spp.</i>
<b>Ash*</b> <i>Fraxinus spp.</i>	<b>Eucalyptus</b> <i>Eucalyptus spp.</i>
<b>Aspen, Quaking</b> <i>Populus tremuloides</i>	<b>Gorse</b> <i>Ulex europaeus</i>
<b>Bearmat (bearclover)</b> <i>Chamaebatia foliolosa</i>	<b>Hasardia*</b> <i>Haplopappus squamosus</i>
<b>Beech</b> <i>Fagus grandifolia</i>	<b>Hawthorn</b> <i>Crataegus spp.</i>
<b>Birch</b> <i>Betula spp.</i>	<b>Hazel</b> <i>Corylus spp.</i>
<b>Blackberry</b> <i>Rubus spp.</i>	<b>Hickory*</b> <i>Carya spp.</i>
<b>Blackgum</b> <i>Nyssa spp.</i>	<b>Holly (Florida),</b> <b>Brazilian Peppertree*</b> <i>Schinus terebinthifolius</i>
<b>Bracken</b> <i>Peridium spp.</i>	<b>Honeysuckle</b> <i>Lonicera spp.</i>
<b>Broom:</b> <b>French</b> <i>Cytisus monspessulanus</i>	<b>Hombeam, American*</b> <i>Carpinus caroliniana</i>
<b>Scotch</b> <i>Cytisus scoparius</i>	<b>Kudzu</b> <i>Pueraria lobata</i>
<b>Buckwheat, California*</b> <i>Eriogonum fasciculatum</i>	<b>Locust, black*</b> <i>Robinia pseudoacacia</i>
<b>Cascara*</b> <i>Rhamnus purshiana</i>	<b>Madrone</b> <i>Arbutus menziesii</i>
<b>Catsclaw*</b> <i>Acacia greggii</i>	<b>Manzanita</b> <i>Arcostaphylos spp.</i>
<b>Ceanothus*</b> <i>Ceanothus spp.</i>	<b>Maple:</b> <b>Red*</b> <i>Acer rubrum</i>
<b>Chamise</b> <i>Adenostoma fasciculatum</i>	<b>Sugar</b> <i>Acer saccharum</i>
<b>Cherry:</b> <b>Bitter</b> <i>Prunus emarginata</i>	<b>Vine*</b> <i>Acer circinatum</i>
<b>Black</b> <i>Prunus serotina</i>	<b>Monteary flower*</b> <i>Mimulus guttatus</i>
<b>Pin</b> <i>Prunus pensylvanica</i>	<b>Oak</b> <b>Black*</b> <i>Quercus velutina</i>
<b>Coyote brush</b> <i>Baccharis consanguinea</i>	<b>Northern Pin</b> <i>Quercus palustris</i>
<b>Creepers, Virginia*</b> <i>Parthenocissus quinquefolia</i>	<b>Post</b> <i>Quercus stellata</i>
<b>Dewberry</b> <i>Rubus trivialis</i>	<b>Red</b> <i>Quercus rubra</i>
<b>Dogwood*</b> <i>Cornus spp.</i>	<b>Southern Red</b> <i>Quercus falcata</i>
<b>Elderberry</b> <i>Sambucus spp.</i>	<b>White*</b> <i>Quercus alba</i>
	<b>PerSIMMON*</b> <i>Diospyros spp.</i>
	<b>Pine</b> <i>Pinus spp.</i>

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<p>(Cont.)  <b>Poison ivy</b>  <i>Rhus radicans</i>  <b>Poison oak</b>  <i>Rhus toxicodendron</i>  <b>Poplar, yellow* (Tulip tree)</b>  <i>Liriodendron tulipifera</i>  <b>Raspberry</b>  <i>Rubus spp.</i>  <b>Redbud, Eastern</b>  <i>Cercis canadensis</i>  <b>Rose Multiflora</b>  <i>Rosa multiflora</i>  <b>Russian olive***</b>  <i>Elaeagnus angustifolia</i>  <b>Sage Black, White</b>  <i>Salvia spp.</i>  <b>Sagebrush, California</b>  <i>Artemisia californica</i>  <b>Salmonberry</b>  <i>Rubus spectabilis</i>  <b>Saltcedar</b>  <i>Tamarix spp.</i>  <b>Sassafras</b>  <i>Sassafras albidum</i></p>	<p><b>Sourwood</b>  <i>Oxydendrum arboreum</i>  <b>Sumac:</b>  <b>Poison* <i>Rhus vernix</i></b>  <b>Smooth* <i>Rhus glabra</i></b>  <b>Winged* <i>Rhus copallina</i></b>  <b>Sweetgum</b>  <i>Liquidambar styraciflua</i>  <b>Swordfern*</b>  <i>Polystichum munitum</i>  <b>Tallowtree, Chinese</b>  <i>Sapium sebiferum</i>  <b>Tan Oak</b>  <i>Lithocarpus densiflorus</i>  <b>Thimbleberry</b>  <i>Rubus parviflorus</i>  <b>Tobacco Tree*</b>  <i>Nicotiana glauca</i>  <b>Trumpet creeper</b>  <i>Campsis radicans</i>  <b>Waxmyrtle, southern*</b>  <i>Myrica cerifera</i>  <b>Willow</b>  <i>Salix spp.</i></p>
<p>*Partial Control  **See the following section for control or partial control instructions.  ***THIS PRODUCT IS NOT REGISTERED IN CA FOR USE ON RUSSIAN OLIVE.</p>	

**Note:** If brush has been mowed or tilled or trees have been cut, do not treat until regrowth has reached the recommended stages of growth. Apply this product when plants are actively growing and, unless otherwise directed, after full leaf expansion. 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 the late Summer or Fall after fruit formation.

In arid areas, best results are obtained when application is made in the Spring to early Summer when brush species are at high moisture content and are flowering.

Ensure thorough coverage when using handheld equipment. 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.

See "DIRECTIONS FOR USE" and "MIXING, ADDITIVES and APPLICATION INSTRUCTIONS" sections of this label for labeled uses and specific application instructions.

Apply this product as follows to control or partially control the following Woody brush and trees:

**Alderberry, Dewberry, Honeysuckle, Post oak, Raspberry**—For control, apply 3 to 4 quarts per acre of this product as a broadcast spray or as a 1 to 1.5% solution with handheld equipment.

**Aspen (Quaking), Cherry (Bitter, Black, Pin), Hawthorn, Oak (Southern red), Sweetgum, Trumpet creeper**—For control, apply 2 to 3 quarts of this product per acre as a broadcast spray or as a 1 to 1.5% solution with hand held equipment.

**Birch, Elderberry, Hazel, Salmonberry, Thimbleberry**—For control, apply 2 quarts per acre of this product as a broadcast spray or as a 1% solution with handheld equipment.

**Blackberry**—For control, apply 3 to 4 quarts per acre of this product as a broadcast spray or 1 to 1.5% solution with hand held equipment. Make application after plants have reached full leaf maturity. Best results are obtained when applications are made in the late Summer or Fall. After berries have set or dropped in late Fall, Blackberries can be controlled by applying a 0.75% solution of this product plus 0.5 to 1% non-ionic surfactant by total spray volume with handheld equipment. For control of Blackberries after leaf drop and until killing frost or as long as stems are green, apply 3 to 4 quarts of this product in 10 to 40 gallons of water per acre.

**Broom (French, Scotch)** - For control, apply a 1.5 to 2% solution with handheld equipment.

**Buckwheat (California), Hasardia, Monkey flower, Tobacco (Tree)**—For partial control of these species, apply a 1 to 2% solution of this product as a foliar spray with handheld equipment. Thorough coverage of foliage is necessary for best results.

**Catsclaw**—For partial control, apply a 1 to 1.5% solution with handheld equipment.

**Coyote brush**—For control, apply a 1.5 to 2% solution with handheld equipment when at least 50% of the new leaves are fully developed.

**Eucalyptus**—For control of Eucalyptus resprouts, apply a 2% solution with handheld equipment when resprouts are 6 to 12 feet tall. Ensure complete coverage. Apply when plants are growing actively. Avoid application to drought-stressed plants.

**Kudzu**—For control, apply 3 quarts of this product per acre as a broadcast spray or as a 2% solution with handheld equipment. Repeat applications will be required to maintain control.

**Madrone resprouts**—For suppression or partial control, apply a 2% solution of this product to resprouts less than 3 to 6 feet tall. Best results are obtained with Spring/early Summer treatments.

**Maple (Red)**—For control, apply as a 1 to 1.5% solution with handheld equipment when at least 50% of the new leaves are fully developed. For partial control, apply 2 to 4 quarts of this product per acre as a broadcast spray.

**Maple (Sugar), Oak (Northern pin), Oak (Red)**—For control, apply as a 1 to 1.5% solution with handheld equipment when at least 50% of the new leaves are fully developed.

**Poison ivy, Poison oak**—For control, apply 4 to 5 quarts of this product per acre as a broadcast spray or as a 2% solution with handheld equipment. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.

**Rose (Multiflora)**—For control, apply 2 quarts of this product per acre as a broadcast spray or as a 1% solution with handheld equipment. Treatments should be made prior to leaf deterioration by leaf-feeding insects.

**Sage (Black), Sagebrush (California), Chamise, Tallowtree (Chinese)**—For control of these species, apply a 1% solution of this product as a foliar spray with handheld equipment. Thorough coverage of foliage is necessary for best results.

**Tan oak resprouts**—For suppression or partial control, apply a 2% solution of this product to resprouts less than 3 to 6 feet tall. Best results are obtained with Fall applications.

**Willow**—For control, apply 3 quarts of this product per acre as a broadcast spray or as a 1% solution with handheld equipment.

**Other Woody brush and trees listed on this label**—For partial control, apply 2 to 5 quarts of this product per acre as a broadcast spray or as a 1 to 2% solution with handheld equipment.

**NON-CROP USES**

See "GENERAL INFORMATION" and "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" sections of this label for essential product performance information and the following NON-CROP sections for specific recommended uses.

**EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE TURFGRASSES, TREES, SHRUBS OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.**

Repeat treatments may be necessary to control weeds regenerating from underground parts or seeds.

This product does not provide residual weed control. For subsequent weed control, follow a label-approved herbicide program.

Read and carefully observe all cautionary statements and all other information appearing on the labels of all herbicides used.

**INDUSTRIAL, RECREATIONAL AND PUBLIC AREAS**

When applied as directed for "NON-CROP USES", under conditions described, this product controls Annual and Perennial weeds listed on this label growing in areas such as airports, ditchbanks, dry ditches, dry canals, fencerows, golf courses, highways, industrial plant sites, lumberyards, parking areas, parks, petroleum tank farms and pumping installations, pipelines, power and telephone right-of-ways, railroads, roadsides, schools, storage areas, and utility substations. For specific rates of application and instructions for control of various Annual and Perennial weeds and Woody brush and trees, see the "WEEDS CONTROLLED" section of this label.

This product may be applied with recirculating sprayers, shielded applicators or wiper applicators in any non-crop site specified on this label. See the "Selective Equipment" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

**Tank Mixtures for Industrial and Forestry Site Preparations**

**This product plus Oust**

Use on industrial sites including airports, industrial plants, lumberyards, petroleum tank farms, pumping stations, pipelines, railroads, roadsides, storage areas, fence rows, power and telephone right-of-ways, and utility substations where bare ground is desired.

This tank mixture may also be used as a site preparation treatment for sites to be planted to Jack pine, Loblolly pine, Red pine, Slash pine and Virginia pine.

When applied as directed for "NON-CROP USES" under the conditions described, this product plus Oust provides control of Annual weeds listed in the "WEEDS CONTROLLED" section of the label for this product and Oust, and control or partial control of the following Perennial weeds.

Apply 1 to 2 quarts of this product with 2 to 4 ounces of Oust in 10 to 40 gallons of spray solution per acre as a broadcast spray to actively growing weeds.

This mixture may be applied by aerial equipment in site prep operations. When applied by air, use the recommended rates in 5 to 15 gallons of spray solution per acre.

**THIS PRODUCT PLUS OUST TANK MIXTURES MAY NOT BE APPLIED BY AIR IN CA.**

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For control of Annual weeds, use the lower rates of these products. For control on the listed Perennial weeds, use the higher rates of both products. For partial control, use the lower rates.

<b>Bahlagrass</b> <i>Paspalum notatum</i> <b>Bermudagrass*</b> <i>Cynodon dactylon</i> <b>Broomsedge</b> <i>Andropogon virginicus</i> <b>Dock, curly</b> <i>Rumex crispus</i> <b>Dogfennel</b> <i>Eupatorium capillifolium</i> <b>Fescue, tall</b> <i>Festuca arundinacea</i>	<b>Johnsongrass**</b> <i>Sorghum halepense</i> <b>Poorjoe**</b> <i>Diodia teres</i> <b>Quackgrass</b> <i>Elytrigia repens</i> <b>Trumpetcreeper*</b> <i>Campsis radicans</i> <b>Vaseygrass</b> <i>Paspalum urvillei</i> <b>Vervain, blue</b> <i>Verbena hastata</i>
<small>*Suppression at higher rates only.  **Control at the lower rates.</small>	

Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used.

**Tank Mixtures for Non-Crop Sites**

When applied as a tank mixture, this product provides control of the emerged Annual weeds and partial control of the emerged Perennial weeds listed in this label. When applied as a tank mixture, the following residual herbicides will provide pre-emergence control of the weeds listed on the individual product labels.

**This product...**

- plus Diuron
- plus Krovar® I
- plus Krovar II
- plus Ronstar™ 50WP
- plus Simazine
- plus Simazine 4L
- plus Simazine 80W
- plus Surflan™ 75W
- plus Surflan AS

When tank-mixing with residual herbicides, add an agriculturally-approved non-ionic surfactant at 0.5 to 1% by volume of spray solution. See the "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" section of this label before preparing these tank mixtures. Read and carefully observe the label claims, cautionary statements, recommended use rates and all other information on the labels of all products used in these tank mixtures. Use according to the most restrictive label directions for each product in the mixture. This product may be tank-mixed with the products listed provided the product to be tank-mixed is registered for use on this site.

**Control of Emerged Weeds**

**Annual weeds**—Apply 1 quart of this product per acre in these tank mixtures when weeds are less than 6 inches tall and 1.5 quarts per acre when weeds are more than 6 inches tall.

**Perennial weeds**—For partial control of Perennial weeds using tank mixtures, apply 2 to 5 quarts of this product per acre. Follow the recommendations in the "WEEDS CONTROLLED" section of this label for stage of growth and rate of application for specific Perennial weeds.

**Pre-emergence Weed Control**

For pre-emergence weed control, refer to the individual product labels for specific non-crop sites, rates, carrier volumes and precautionary statements.

Mix only the quantity of spray solution that can be used during the same day. Do not allow these tank mixtures to stand overnight as this may result in reduced weed control.

Apply these tank mixtures through conventional broadcast equipment only.

**FARMSTEAD WEED CONTROL**

When applied as directed for "NON-CROP USES", under conditions described, this product controls undesirable vegetation listed on this label around farmstead building foundations, along and in fences, shelterbelts and for general non-selective farmstead weed control. For specific rates of application and instructions for control of various Annual and Perennial weeds, see the "WEEDS CONTROLLED" section of this label.

**Farm Ditches**

This product will suppress Perennial grasses along farm ditches. Apply this product at a rate of 6 to 8 fluid ounces per acre. Use 8 fluid ounces per acre when treating Tall (coarse) fescue, Fine fescue, Orchardgrass or Quackgrass covers. For best suppression of these species, add ammonium sulfate at a rate of 1.7 pounds per 10 gallons of spray solution. Use 6 fluid ounces per acre without ammonium sulfate when treating Kentucky bluegrass.

Apply treatments in 10 to 20 gallons of spray solution per acre to actively growing Perennial grass covers.

For best spray distribution and coverage, use flat fan nozzles.

Add non-ionic surfactant at a rate of 0.5% of the spray solution. Where Broadleaf weed control or suppression is desired, tank-mix this product with the appropriate, labeled Broadleaf weed herbicide.

**CONSERVATION RESERVE PROGRAM (CRP ACRES)**

This product can be used to control undesirable vegetation when rotating out of CRP acres or to suppress competitive growth and seed production of undesirable vegetation in CRP acres.

For specific rates of application for various Annual and Perennial weeds, see the "WEEDS CONTROLLED" section of this label.

CRP applications may be made with wiper applicators or conventional spray equipment.

For selective applications with broadcast spray equipment, apply 12 to 16 fluid ounces per acre of this product in early Spring before desirable CRP grasses, such as Crested and Tall wheatgrass, break dormancy and initiate green growth. Late Fall applications can be made after desirable Perennial grasses have reached dormancy. Some stunting of CRP Perennial grasses will occur if applications are made when plants are not dormant.

**HABITAT MANAGEMENT**

This product is recommended for the restoration and/or maintenance of native habitats and in wildlife management areas. Apply as recommended in the "NON-CROP USES" section of this label.

**Habitat Restoration and Maintenance**

When applied as directed, exotic and other undesirable vegetation may be controlled in habitat management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broadspectrum vegetation control requirements in habitat management areas. Spot treatments can be made selectively to remove unwanted plants for habitat maintenance and enhancement. For spot treatments, care should be exercised to keep spray off desirable plants.

**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 applying this product before tilling.

**ORNAMENTALS AND CHRISTMAS TREES**

THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES.

**Note:** Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.

When applied as instructed for the conditions described for "NON-CROP USES", this product controls undesirable vegetation listed on this label prior to planting, within and around greenhouses and shade-houses, and as a post-directed spray around established Ornamentals and Christmas trees.

For specific rates of application and instructions for control of various Annual and Perennial weeds, see the "WEEDS CONTROLLED" section of this label.

Where repeat applications are necessary, do not exceed 10.6 quarts of this product (7.9 lbs. glyphosate a.i.) per acre per year.

**Site Preparation**

Following pre-plant applications of this product, any Ornamental or Christmas tree species may be planted. Precautions should be taken to protect non-target plants during site preparation applications.

**Greenhouse/Shadehouse Use**

This product may be used to control weeds listed on this label that are growing inside greenhouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

**Post-directed Spray**

Use as a post-directed spray around established Woody ornamental species or Christmas trees such as those listed below. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Ornamental species.

Arborvitae	Lilac
Thuja spp.	Syringa spp.
Azalea	Magnolia
Rhododendron spp.	Magnolia spp.
Boxwood	Maple
Buxus spp.	Acer spp.
Crabapple	Oak
Malus spp.	Quercus spp.
Douglas fir	Privet
Pseudotsuga spp.	Ligustrum spp.
Euonymus	Pine
Euonymus spp.	Pinus spp.
Fir	Spruce
Abies spp.	Picea spp.
Jojoba	Yew
Simmondsia chinensis	Taxus spp.
Holly	
Ilex spp.	

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**SILVICULTURAL SITES AND RIGHT-OF-WAY**

**Note:** NOT RECOMMENDED FOR USE AS AN **AT-THE-TOP BROADCAST SPRAY IN SILVICULTURAL NURSERIES.**

When applied as directed for "NON-CROP USES" under conditions described, this product controls undesirable vegetation listed on this label. This product also suppresses or controls undesirable vegetation listed on this label when applied at recommended rates for release of established Coniferous species listed on this label.

For specific rates of application and instructions for control of various Brush, Annual and Perennial weeds, see the "WEEDS CONTROLLED" section of this label. For specific rates of application for release of listed Coniferous species, see the "Conifer Release" part of this section of this label.

Where repeat applications are necessary, do not exceed 10.6 quarts of this product (7.9 lbs. glyphosate a.i.) per acre per year.

**Aerial Application**

This product may be applied using aerial spray equipment for silvicultural site preparation, Conifer release and right-of-ways treatments. See the "APPLICATION EQUIPMENT AND TECHNIQUES" part of the "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" section of this label for information on how to apply this product by air. DO NOT APPLY THIS PRODUCT BY AIR TO RIGHT-OF-WAY SITES IN THE STATE OF CA.

To reduce the aerial application drift hazard to aquatic sites\*, to non-target sites or any site containing desirable vegetation, always maintain appropriate buffer zones. A buffer zone of the following minimum distances should be maintained:

- Helicopters using a Microfoil™ boom, a Thru-Valve™ boom (TVB-45) or equivalent drift control systems, should maintain at least a 50-foot buffer zone.
- When using other aerial equipment:
  1. Maintain at least a 75-foot buffer zone for applications using 2 quarts or less per acre of this product.
  2. Maintain at least a 125-foot buffer zone for applications using more than 2 quarts per acre of this product.
  3. Maintain at least a 400-foot buffer zone for applications on right-of-ways when applied from 75 feet or more above ground level.

These distances should be increased if conditions favoring drift exist.

\*Aquatic sites include all lakes, ponds and streams used for significant domestic purposes or angling.

**Site Preparation**

Following pre-plant applications of this product, any silvicultural species may be planted.

**Post-directed Spray**

In established silvicultural sites, use a spray on the foliage of undesirable vegetation. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of desirable species.

**Conifer Release**

For release, apply only where Conifers have been established for more than one year. Vegetation should not be disturbed prior to treatment or until visible symptoms appear after treatment. Symptoms of treatment are slow to appear, especially in Woody species treated in late Fall. Injury may occur to Conifers treated for release, especially where spray patterns overlap or the higher rates are applied or when applications are made during periods of active Conifer growth. Do not use additional surfactant with Conifer release applications.

Applications must be made after formation of final conifer resting buds in the Fall or prior to initial bud swelling in Spring. Some Autumn colors on undesirable Deciduous species are acceptable provided no major leaf drop has occurred. Use the following rates for Conifer release to control or partially control the weeds listed in the "WEEDS CONTROLLED" section of this label.

For release of the following Conifer species:

<b>Douglas fir</b> <i>Pseudotsuga menziesii</i>	<b>Pine*</b> <i>Pinus spp.</i>
<b>Fir</b> <i>Abies spp.</i>	<b>Spruce</b> <i>Picea spp.</i>
<b>Hemlock</b> <i>Tsuga spp.</i>	

\*Includes all species except Eastern white pine, Loblolly pine or Slash pine.

Apply 1.5 to 2 quarts of this product per acre except in WA and OR, West of the crest of the Cascade Mountains. For Spring treatments West of the crest of the Cascade Mountains, apply 1 quart of this product per acre before Conifer bud swell for control of Annual weeds. For Fall treatments in WA and OR, West of the crest of the Cascade Mountains, apply 1 to 1.5 quarts of this product per acre before any major leaf drop of Deciduous species. For release of Western hemlock, apply 1 quart of this product per acre.

For release of the following Conifer species:

<b>Loblolly pine</b> <i>Pinus taeda</i>	<b>Slash pine</b> <i>Pinus elliottii</i>
<b>Eastern white pine</b> <i>Pinus strobus</i>	

**Late season application**—Apply 1.5 to 2 quarts of this product in a minimum of 5 gallons of spray solution per acre in early Autumn. Applications made prior to September 1 or when conditions are conducive to rapid growth of Conifers will create the potential for increased injury in the form of tip and/or needle burn. Injury may decrease with later applications. Some Autumn colors are acceptable at the time of applications. Apply prior to frost or leaf drop of undesirable plants. Applications made according to label directions will release Loblolly pine, Eastern white pine and Slash pine by reducing competition from the following species:

<b>Ash</b> <i>Fraxinus spp.</i>	<b>Persimmon</b> <i>Diospyros spp.</i>
<b>Cherry:</b> <b>Black</b> <i>Prunus serotina</i>	<b>Poplar, yellow (Tulip tree)</b> <i>Liriodendron tulipifera</i>
<b>Pin</b> <i>Prunus pensylvanica</i>	<b>Sassafras</b> <i>Sassafras albidum</i>
<b>Elm</b> <i>Ulmus spp.</i>	<b>Sourwood</b> <i>Oxydendrum arboreum</i>
<b>Hawthorn</b> <i>Crataegus spp.</i>	<b>Sumac:</b>
<b>Locust, black</b> <i>Robinia pseudoacacia</i>	<b>Poison</b> <i>Rhus vemic</i>
<b>Maple, red</b> <i>Acer rubra</i>	<b>Smooth</b> <i>Rhus glabra</i>
<b>Oak:</b> <b>Black</b> <i>Quercus velutina</i>	<b>Winged</b> <i>Rhus copallina</i>
<b>Post</b> <i>Quercus stellata</i>	<b>Sweetgum</b> <i>Liquidambar styraciflua</i>
<b>Southern red</b> <i>Quercus falcata</i>	
<b>White</b> <i>Quercus alba</i>	

Apply only to those sites where Woody brush and trees listed in this label constitute the majority of the undesirable species.

**This Product Plus Oust Tank Mixtures for Conifer Release from Herbaceous Weeds**

To release Loblolly pines from Herbaceous weeds, tank mixtures of this product with Oust will provide control of Annual weeds listed in the "WEEDS CONTROLLED" section of this and the Oust label and partial control of the Perennial weeds listed below.

Apply 16 to 24 fluid ounces of this product with 2 to 4 ounces of Oust in 10 to 30 gallons of spray solution per acre. Make application to actively growing weeds as a broadcast spray over the top of the young Loblolly pines.

**THIS PRODUCT PLUS OUST TANK MIXTURES MAY NOT BE APPLIED BY AIR IN CA.**

This tank mixture may be applied using aerial equipment. When applying by air, use the recommended rate in 5 to 15 gallons of spray solution per acre.

For control of Annual weeds below 12 inches in height (or runner length on annual vines), use the lower rates of both products. Use higher rates of both products when Annual weeds are in more advanced stages of growth and are approaching flower or seed formation.

Use the higher rates of both products for partial control of the following Perennial weeds. Use the lower rates for suppression of growth.

<b>Bahiagrass</b> <i>Paspalum notatum</i>	<b>Johnsongrass*</b> <i>Sorghum halepense</i>
<b>Broomsedge</b> <i>Andropogon virginicus</i>	<b>Poorjoe*</b> <i>Diodia teres</i>
<b>Dock, curly</b> <i>Rumex crispus</i>	<b>Trumpet creeper**</b> <i>Campsis radicans</i>
<b>Dogfennel</b> <i>Eupatorium capillifolium</i>	<b>Vaseygrass</b> <i>Paspalum urvillei</i>
<b>Fescue, tall</b> <i>Festuca arundinacea</i>	<b>Vervain, blue</b>
	<i>Veronica haicata</i>

\*Control at higher rates.

\*\*Suppression at higher rates only.

Pine damage may occur or can be accentuated if treatment takes place when young trees are under stress from drought, flood water, insects or disease.

Read and observe the cautionary statements and all other information appearing on the labels of the herbicides used.

**Note to User:** This product must not be used in areas where adverse impact on Federally designated endangered/threatened plant or aquatic species are likely.

Prior to making applications, the user of this product must determine no such species are located in or immediately adjacent to the area to be treated.

**CUT STUMP TREATMENTS**

Woody vegetation may be controlled by treating freshly cut stumps of trees and resprouts with this product. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut vegetation close to the soil surface. Apply a 50 to 100% solution of

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this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, leaf application should be made during periods of active growth and full expansion.

When used according to directions for cut stump application, this product will CONTROL, PARTIALLY CONTROL or SUPPRESS many types of Woody brush and tree species, some of which are listed below:

<b>Alder</b> <i>Alnus spp.</i>	<b>Saltcedar</b> <i>Tamarix spp.</i>
<b>Eucalyptus</b> <i>Eucalyptus spp.</i>	<b>Sweetgum</b> <i>Liquidambar styraciflua</i>
<b>Madrone</b> <i>Arbutus menziesii</i>	<b>Tan oak</b> <i>Lithocarpus densiflorus</i>
<b>Oak</b> <i>Quercus spp.</i>	<b>Willow</b> <i>Salix spp.</i>
<b>Reed, Giant</b> <i>Arundo donax</i>	

**INJECTION AND FRILL APPLICATIONS**

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment that must penetrate into living tissue. Apply the equivalent of 1 milliliter of this product per each 2 to 3 inches of trunk diameter (DBH). This is best achieved by applying a 50 to 100% concentration of this material 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 frill or cut areas in species that exude sap freely after frills or cutting. In species such as this, make frill or cut at an oblique angle so as to produce a cupping effect and use undiluted material. For best results, application should be made during periods of active growth and after full leaf expansion.

This treatment WILL CONTROL the following Woody species:

<b>Oak</b> <i>Quercus spp.</i>	<b>Sweetgum</b> <i>Liquidambar styraciflua</i>
<b>Poplar</b> <i>Populus spp.</i>	<b>Sycamore</b> <i>Platanus occidentalis</i>

This treatment WILL SUPPRESS the following Woody species:

<b>Black gum</b> <i>Nyssa sylvatica</i>	<b>Hickory</b> <i>Carya spp.</i>
<b>Dogwood</b> <i>Cornus spp.</i>	<b>Maple, Red</b> <i>Acer rubrum</i>

**TURFGRASSES AND GRASSES FOR SEED PRODUCTION**

**Pre-plant and Renovation**

When applied as directed for "NON-CROP USES", under conditions described, this product controls most existing vegetation prior to the planting and renovation of either Turfgrasses or Grass seed production areas. For specific rates of application and instructions for control of various Annual and Perennial weeds and Woody brush and trees, see the "WEEDS CONTROLLED" section of this label.

For maximum control of existing vegetation, delay planting 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, such as Bermudagrass, Summer or Fall applications provide best control.

DO NOT DISTURB SOIL OR UNDERGROUND PLANT PARTS BEFORE TREATMENT. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts.

**Turfgrasses:** Where existing vegetation is growing in a field or unmowed situation, apply this product to actively growing weeds at the stages of growth listed in the "WEEDS CONTROLLED" section of this label. 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. Desirable Turfgrasses may be planted following the above procedure.

**Grasses for Seed Production:** Apply this product to actively growing weeds at the stages of growth recommended in the "WEEDS CONTROLLED" section of this label prior to planting or renovation of Turf or Forage grass areas grown for seed production. DO NOT feed or graze treated areas within 8 weeks after application.

**Annual Weed Control in Dormant Bermudagrass and Bahiagrass Turf**

When applied as directed for "NON-CROP USES" under the conditions described, this product will provide control or suppression of many Winter annual weeds and Tall fescue for effective release of dormant Bermudagrass and Bahiagrass turf. Refer to the rate table "Weeds Controlled or Suppressed with This Product Alone" under the "RELEASE OF BERMUDAGRASS OR BAHIAGRASS" section of this label for recommended rates and volumes on the species to be suppressed or controlled. Treat only when turf is dormant and prior to Spring greenup. Spot treatments or broadcast applications of this product in

excess of 16 fluid ounces per acre may result in injury or delayed greenup in highly maintained turfgrass areas; i.e., golf courses, lawns, etc. DO NOT APPLY TANK MIXTURES of this product plus Oust in highly maintained Turfgrass areas.

**RELEASE OF BERMUDAGRASS OR BAHIAGRASS**

**Note:** Use only in areas where Bermudagrass or Bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. Use tank mixtures of this product plus Oust only on railroads, highways, utility plant sites or other right-of-way areas. When applied as directed for "NON-CROP USES" under the conditions described, this product will provide control or suppression of many Winter annual weeds and Tall fescue for effective release of dormant Bermudagrass or Bahiagrass. This product may be tank-mixed with Oust as recommended for residual control. Make applications to dormant Bermudagrass or Bahiagrass. Tank mixtures of this product plus Oust may delay greenup. To avoid delays in greenup and minimize injury, do not add more than 1 ounce per acre of Oust on Bermudagrass or more than 0.5 ounce per acre on Bahiagrass, or treat when these Grasses are in a semi-dormant condition.

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 in or beyond the 4- to 6-leaf stage.

**Weeds Controlled**

Rate recommendations for control or suppression of Winter annuals and Tall fescue are listed below:

Apply the recommended rates of this product alone or as a tank mixture in 10 to 25 gallons of water, plus 0.5 to 1% non-ionic surfactant by total spray volume per acre.

For the best recommendation for the mixture of weeds within your geographic area, contact your sales representative.

Weeds Controlled or Suppressed with This Product Alone*						
Weed Species	This Product (fl. ozs. per acre)					
	8	12	16	24	32	64
<b>Barley, little</b> <i>Hordeum pusillum</i>	S	C	C	C	C	C
<b>Bedstraw, catchweed</b> <i>Galium aparine</i>	S	C	C	C	C	C
<b>Bluegrass, annual</b> <i>Poa annua</i>	S	C	C	C	C	C
<b>Chervil</b> <i>Chaerophyllum tainturieri</i>	S	C	C	C	C	C
<b>Chickweed, common</b> <i>Stellaria media</i>	S	C	C	C	C	C
<b>Clover, crimson</b> <i>Trifolium incarnatum</i>	.	S	S	C	C	C
<b>Clover, large hop</b> <i>Trifolium campestre</i>	.	S	S	C	C	C
<b>Fescue, tall</b> <i>Festuca arundinacea</i>	.	.	.	.	S	S
<b>Geranium, Carolina</b> <i>Geranium carolinianum</i>	.	.	S	S	C	C
<b>Henbit</b> <i>Lamium amplexicaule</i>	.	S	C	C	C	C
<b>Ryegrass, Italian</b> <i>Lolium multiflorum</i>	.	.	S	C	C	C
<b>Speedwell, corn</b> <i>Veronica arvensis</i>	S	C	C	C	C	C
<b>Vetch, common</b> <i>Vicia sativa</i>	.	C	C	C	C	C

**Note:** C = Control S = Suppression  
\*These rates apply only to sites where established competitive Turf is present.



Weed Species	Weeds Controlled or Suppressed with This Product Plus Oust*						
	This Product (1.0 ozs. per acre) + Oust (oz. per acre)						
	8 +	12 +	12 +	16 +	16 +	12 +	16 +
	0.25	0.25	0.5	0.25	0.5	1	1
Barley, little <i>Hordeum pusillum</i>	C	C	C	C	C	C	C
Bedstraw, catchweed <i>Galium aparine</i>	C	C	C	C	C	C	C
Bluegrass, annual <i>Poa annual</i>	S	C	C	C	C	C	C
Chervil <i>Chaerophyllum tainturieri</i>	C	C	C	C	C	C	C
Chickweed, common <i>Stellaria media</i>	S	C	C	C	C	C	C
Clover, crimson <i>Trifolium incarnatum</i>	S	S	S	S	C	C	C
Clover, large hop <i>Trifolium campestre</i>	.	.	S	S	S	C	C
Fescue, tall <i>Festuca arundinacea</i>	.	.	.	.	.	S	S
Geranium, Carolina <i>Geranium carolinianum</i>	.	S	S	C	C	C	C
Henbit <i>Lamium amplexicaule</i>	.	S	C	C	C	C	C
Ryegrass, Italian <i>Lolium multiflorum</i>	.	S	S	C	C	C	C
Speedwell, corn <i>Veronica arvensis</i>	S	C	C	C	C	C	C
Vetch, common <i>Vicia sativa</i>	C	C	C	C	C	C	C

Note: C = Control S = Suppression  
\*These rates or mixtures of rates apply only to sites where established competitive Turf is present.

**Release of Actively Growing Bermudagrass**  
When applied as directed, this product will aid in the release of Bermudagrass by providing control of annual species listed in the "WEEDS CONTROLLED" section of this and the Oust label and suppression or partial control of certain Perennial weeds.  
For control or suppression of those Annual species listed on this label, use 1 to 3 pints of this product as a broadcast spray in 10 to 25 gallons of spray solution per acre. Use the lower rate when treating Annual weeds below 6 inches in height (or length of runner in Annual vines). Use the higher rate as Weeds increase in size or as they approach flower or seedhead formation.  
Use the higher rate of this product for partial control of the following Perennial species. Use the lower rate for suppression of growth. For best results, see the "WEEDS CONTROLLED" section of this label for proper stage of growth.

<b>Bahiagrass</b> <i>Paspalum notatum</i>	<b>Johnsongrass*</b> <i>Sorghum halepense</i>
<b>Bluestem, silver</b> <i>Andropogon saccharoides</i>	<b>Trumpetreeper**</b> <i>Campsis radicans</i>
<b>Fescue, tall</b> <i>Festuca arundinacea</i>	<b>Vaseygrass</b> <i>Paspalum urvillei</i>

\*Control at higher rates.  
\*\*Suppression at higher rates only.

This product may be tank-mixed with Oust. If tank-mixed, use no more than 1 to 2 pints per acre of this product with 1 to 2 ounces of Oust per acre.  
Use the lower rates of both mixtures to control Annual weeds below 6 inches in height (or runner length in Annual vines) that are listed in the "WEEDS CONTROLLED" section of this booklet and the Oust label. Use the higher rates as Annual weeds increase in size and approach the flower and seedhead stages. Use the higher rates of this product to provide partial control of the following Perennial weeds. Use the lower rates for suppression of growth.

<b>Bahiagrass</b> <i>Paspalum notatum</i>	<b>Johnsongrass*</b> <i>Sorghum halepense</i>
<b>Bluestem, silver</b> <i>Andropogon saccharoides</i>	<b>Poorjoe**</b> <i>Diodia teres</i>
<b>Broomsedge</b> <i>Andropogon virginicus</i>	<b>Trumpetreeper*</b> <i>Campsis radicans</i>
<b>Dock, curly</b> <i>Rumex crispus</i>	<b>Vaseygrass</b> <i>Paspalum urvillei</i>
<b>Dogfennel</b> <i>Eupatorium capilliflorum</i>	<b>Vervain, blue</b> <i>Verbena hastata</i>
<b>Fescue, tall</b> <i>Festuca arundinacea</i>	

\*Suppression at higher rates only.  
\*\*Control at the higher rates.

Use only on well-established Bermudagrass. Bermudagrass injury may result from the treatment but regrowth will occur under moist conditions. Repeat applications in the same season are not recommended, since severe injury may result.  
Read and carefully observe all cautionary statements and all other information appearing on the labels of all herbicides used.  
**COOL SEASON TURF GROWTH REGULATION**  
When applied as directed, this product will suppress growth and seedhead development of listed Turf species in industrial areas. This product is recommended for management of coarse Turf on roadside right-of-ways or industrial plant yards, lumberyards, petroleum tank farms, pumping installations, fence rows, storage areas, airports and utility substations. Do not use on high-quality Turf or other areas where Turf color changes cannot be tolerated. Slight Turf discoloration may occur but Turf will re-green and regrow under moist conditions as effects of this product will wear off.  
Apply 4 to 6 fluid ounces of this product per acre alone or in a recommended tank mixture. Spray volumes of 10 to 40 gallons per acre are recommended.  
When using this product, mix 2 quarts of a non-ionic surfactant per 100 gallons of spray solution.  
This product can be used for growth and seedhead suppression of:

<b>Tall fescue</b>	<b>Smooth brome</b>
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For best results, apply this product in a recommended tank mixture to actively growing Turfgrasses after greenup in the Spring of the year. For suppression of seedheads, applications must be made before boot-to-seedhead stage of development. Applications made from seedhead emergence until maturity may result in Turf discoloration or injury. After mowing or removal of seedheads, this product, in a recommended tank mixture may also be used to suppress the growth of certain Turfgrasses. Allow Turf to recover from stress caused by heat, drought or mowing before making applications. Applications made to Turf under stress may increase the potential for discoloration or injury.  
**Annual Grasses**  
For growth suppression of some Annual grasses such as Annual ryegrass, Wild barley and Wild oats, apply 3 to 4 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Applications should be when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments made after seedhead emergence may cause injury to the desired grasses.  
**Tank Mixtures**  
For the following tank mixtures, consult each product label for weeds controlled and the correct stage of application. Do not treat Turf under stress.  
**Tank mixtures plus 2,4-D Amine:** This product may be tank-mixed with 2,4-D amine provided that 2,4-D amine is registered for use on this site. For additional weed control benefits, up to 1 pound of active ingredient per acre of 2,4-D amine may be added to the following tank mixtures. Consult the label for 2,4-D amine for weeds controlled.  
**Tall Fescue**  
**This product plus Telar®:** For suppression of Tall fescue growth and seedheads and control or partial control of some Annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use 0.5 ounce of Telar per acre. This tank mixture can also be applied after mowing or removal of tall fescue seedheads for turf growth suppression. Make only one of the above applications per growth season.  
**This product plus Oust:** For suppression of Tall fescue growth and seedheads and control or partial control of some Annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use up to 0.25 ounce of Oust per acre.  
**This product plus Escort®:** This tank mixture can be applied after mowing or removal of Tall fescue seedheads for Turf growth suppression and control of some Annual weeds. Use up to 0.33 ounce of Escort per acre.

**NOTE: THIS PRODUCT IS NOT REGISTERED FOR USE WITH ESCORT IN CA.**  
**Smooth Brome**  
**This product plus Oust:** For suppression of Smooth brome growth and seedheads and control or partial control of some Annual weeds, apply this tank mixture after greenup or prior to boot-to-seedhead stage of development. Use up to 0.25 ounce of Oust per acre.

## BHIAGRASS SEEDHEAD AND VEGETATIVE SUPPRESSION

When applied as directed in the indicated non-crop areas (roadsides, airports, golf course roughs and plant sites), this product will provide significant inhibition of seedhead emergence and will suppress vegetative growth for a period of approximately 45 days with single applications and approximately 120 days with sequential applications. Apply this product 1 to 2 weeks after full greenup of Bahiagrass or after Bahiagrass has been mowed to a uniform height of 3 to 4 inches. Applications must be made prior to seedhead emergence. Apply 6 fluid ounces per acre of this product plus 0.5 to 1% of non-ionic surfactant by total spray volume in 10 to 25 gallons of water per acre.

Sequential applications of this product plus 0.5 to 1% of non-ionic surfactant by total spray volume may be made at approximately 45-day intervals to extend the period of seedhead and vegetative growth suppression. For continued seedhead suppression, sequential applications must be made prior to seedhead emergence. Apply no more than 2 sequential applications per year. As a first sequential application, apply 4 fluid ounces of this product per acre plus non-ionic surfactant. A second sequential application of 2 to 4 fluid ounces per acre plus non-ionic surfactant may be made approximately 45 days after the last application.

A tank mixture of this product plus Oust may be applied only on roadsides for seedhead inhibition and vegetative suppression. Apply 6 fluid ounces per acre of this product plus 0.25 ounce per acre of Oust, plus 0.5 to 1% non-ionic surfactant by total spray volume 1 to 2 weeks following an initial Spring mowing. When using this product plus Oust for suppression of Bahiagrass, make only 1 application per year.

**NOTE TO USERS:** Where maximum allowable rate of glyphosate per acre per year is indicated for this product, this also includes other glyphosate-containing products, such as Glyphos Herbicide, Glyphos X-TRA, Glyphos AU, Roundup, Roundup Ultra and Touchdown.

## STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, State or Local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed.

### CONTAINER DISPOSAL:

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into a mix tank or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into 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. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Container (rigid material; 5 gallons or greater):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into a mix tank. Fill container one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Refillable Containers:** Refillable container. Refill this container with this pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into 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 a mix tank or rinsate collection system. Repeat this rinsing procedure two more times.

### For Residential/Household Use:

**PESTICIDE DISPOSAL:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. If empty, place in trash or offer for recycling if available. If partially filled, call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

## WARRANTY — DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with 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 the manner of use or application, all of which are beyond the control of Seller. To the extent consistent with applicable law, all such risks shall be assumed by the user.

Seller warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the "DIRECTIONS FOR USE" set forth in the complete directions for use booklet ("Directions"), subject to the risks referred to above.

Any damage arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or values or any other special or indirect damages.

To the extent consistent with applicable law, Seller makes no other expressed or implied warranty including any other expressed or implied warranty of fitness or merchantability.

IMITATOR is a registered trademark of Drexel Chemical Company. All other brand names, product names, or trademarks belong to their respective holders.

### Additional Statements that may be used on or attached to the label:

- 41% glyphosate concentrate with surfactant
- Complete broad spectrum postemergence herbicide for vegetation management, ornamental weed control, and non-planted areas around residential, industrial locations, and their immediate vicinities
- For use around residential, industrial, institutional and their immediate vicinity
- Controls many annual and perennial grasses and broadleaf weeds as listed
- Contains the same active ingredient used in Roundup
- Grass and weed killer
- Weed and grass killer
- 41% glyphosate isopropylamine salt with full surfactant load

