

# ZipZap®

## A COMPLETE BROAD SPECTRUM NONSELECTIVE POSTEMERGENCE HERBICIDE

### ACTIVE INGREDIENT:

Glufosinate ammonium\* ..... 24.5%\*\*

OTHER INGREDIENTS: ..... 75.5%

TOTAL: ..... 100.0%

\*CAS Number 77182-82-2

\*\*Equivalent to 2.34 pounds of active ingredient per gallon

Shake Well Before Use

## KEEP OUT OF REACH OF CHILDREN

## CAUTION

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

SEE BELOW INSIDE BOOKLET FOR ADDITIONAL FIRST AID AND PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300  
For Medical Emergencies Only, Call (877) 325-1840

### FIRST AID

<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

### NOTE TO PHYSICIAN

If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration.

EPA REG. NO. 228-743-104141

EPA EST. NO. 104270-GA-1

NET CONTENTS: 8 fl oz

DISTRIBUTED BY  
PROPORTIONS LLC  
P.O. BOX 26  
LEXINGTON, NC 27293



**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

**Personal Protective Equipment (PPE)**

- All handlers must wear long-sleeved shirt, long pants, shoes and socks and chemical-resistant gloves.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon possible, wash thoroughly and change into clean clothing.

**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.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water or to areas where surface water is present. Do not apply to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters or rinsate. This pesticide is toxic to vascular plants and must be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures. Under some conditions, this product may have a potential to run-off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, such as no tillage to reduce pesticide run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands, etc. or on the downhill side of fields where run-off could occur to minimize water run-off is recommended.

**PHYSICAL AND CHEMICAL HAZARDS**

Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.  
Combustible. Do not use or store near heat or open flame.

**DIRECTIONS FOR USE**

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

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

**In the State of New York Only: Not for use in Nassau and Suffolk Counties.**

### AGRICULTURAL USE REQUIREMENTS

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

**Restricted entry-interval (REI) 12 hours for all post-application activities, with the following exception: Workers engaged in scouting or irrigation activities in corn, canola, and soybean is 4 days. The REI for workers to move irrigation piping is 7 days for all crops.**

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

- Coveralls worn over short-sleeved shirt and short pants;
- Chemical resistant gloves;
- Chemical resistant footwear plus socks;
- Protective eyewear (goggles, face shield or safety glasses).

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or greenhouses. Do not enter or allow others to enter treated areas until sprays have dried.

### PRODUCT INFORMATION

This product may be applied for the control of undesirable plant vegetation, including emerged annual and perennial grass, sedge and broadleaf weeds in a variety of settings. This product is foliar-active with little or no activity in soil. Weeds that emerge after application will not be controlled. Necrosis of leaves and young shoots occur within 2 to 4 days after application under active growing conditions.

### RESISTANCE MANAGEMENT

For resistance management, this product is a Group 10 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 10 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same area. Appropriate resistance management strategies should be followed.

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

- Rotate the use of this product or other Group 10 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation and that considers mechanical control methods, cultural (e.g., timing to favor the turf or crop higher crop seeding rates; precision fertilizer application method and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other areas by cleaning equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report non-performance or suspected resistance, contact ProPortions at 1-888-424-0090

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

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

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.

- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

## INTEGRATED PEST MANAGEMENT

ProPortions recommends the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

## APPLICATION METHODS

When applied as directed in this label, this herbicide controls annual and perennial weeds. Applications may be made on a broadcast, banded or spot treatment basis. Avoid direct spray or drift to desirable vegetation. Regrowth may occur due to the weed stage of growth at application, low use rate, or environmental conditions. Repeat treatments may be necessary to control plants generating from underground parts or seed.

### Application Restrictions:

- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply directly to or allow drift to contact desirable green tissue or green, thin, or uncalloused bark of desirable vegetation.
- **DO NOT** allow grazing of vegetation treated with this product.

### Application Precautions:

- Uniform, thorough spray coverage is necessary to achieve consistent weed control.
- This product is rainfast 4 hours after application to most weed species; therefore, rainfall within 4 hours may necessitate retreatment or may result in reduced weed control.
- Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness.
- Plants may be safely planted into treated areas after spray has dried.

### Compatibility Testing:

- If this product is to be mixed with pesticides, test the compatibility of the intended tank mixture prior to mixing the products in the spray tank. The following procedure assumes a spray volume of 25 gallons per acre. For other spray volumes, adjust the amount of the water used accordingly. Check compatibility as follows:
- Place 1 pint of water from the source that will be used to prepare the spray solution in a clear 1-quart jar.
- For each pound of a dry tank mix partner to be applied per acre, add 1.5 teaspoons to the jar.
- For each 16 fl. oz. of a liquid tank mix partner to be applied per acre, add 0.5 teaspoon to the jar.
- For each 16 fl. oz. of this product to be applied per acre, add 0.5 teaspoon to the jar.
- After adding all the ingredients, place a lid on the jar and tighten. Invert 10 times to mix.
- Let the mixture stand for 15 minutes and evaluate the solution for uniformity and stability. Look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. If the tank mix partners are not compatible, **DO NOT** use the mixture in a spray tank.
- After compatibility testing is complete, dispose of any pesticide wastes in accordance with the STORAGE AND DISPOSAL section of this label.

## MIXING INSTRUCTIONS:

**Tank Mix Instructions:** It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Prior to adding this product to the spray tank, ensure that the spray tank is thoroughly clean, particularly if an herbicide with the potential to injure crops was previously used (see Cleaning Instructions).

Mix this product with water to make a finished spray solution as follows:

1. Properly calibrate and clean equipment
2. Fill the spray tank half full with water.
3. Start agitation.
4. If mixing with a flowable/wettable powder tank mix partner, prepare a slurry of the proper amount of the product in a small amount of water. Add the slurry to the spray tank.
5. If hard water is a concern, add 17 lbs per 100 gallons of spray solution of ammonium sulfate (AMS) to the spray tank. No surfactant is required when applying this product.
6. If mixing with a liquid tank mix partner, add the liquid mix partner next.
7. Complete filling the spray tank with water before adding this product, as foaming may occur.
8. Add the proper amount of this product and continue agitation.
9. If foaming occurs, use a silicone-based antifoam agent.

Ensure that all spray system lines including pipes, booms, etc. have the correct concentration of spray solution by flushing out the spray system lines before starting the crop application. Maintain good agitation at all times until contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to re-suspend the mixture before spraying is resumed. Keep bypass line on or near bottom of tank to minimize foaming. Screen size in nozzles or line strainers must be 50 mesh or larger.

### **Cleaning Instructions:**

Before using this product, thoroughly clean bulk storage tank, refillable tank, nurse tanks, spray tank, lines, and filter, particularly if an herbicide with the potential to injure crops was previously used. Thoroughly rinse equipment using a commercial tank cleaner and as instructed on the prior herbicide label.

After using this product, triple rinse the spray equipment and clean with a commercial tank cleaner before using the equipment. Make sure any rinsate or foam is thoroughly removed from spray tank and boom. Rinsate may be disposed following the pesticide disposal directions on this label.

### **MANDATORY SPRAY DRIFT**

- When applying to crops via aerial application equipment, the spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip or rotor blade vortices. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- When applying to crops via aerial application equipment, applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- For aerial applications, do not release spray at a height greater than 10 feet above the crop canopy, unless a greater application height is required for pilot safety.
- For ground applications and aerial applications, select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1.
- Spray the appropriate boom height based on nozzle selection and nozzle spacing, but do not exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.
- For non-crop vegetation management ground applications, apply with the nozzle height no more than 4 feet above the ground or target vegetation, unless necessitated by the application equipment. Examples would include roadside, railroad, utility rights of way, forestry and other industrial vegetation management applications where safety or natural barriers obstruct application.

### **SPRAY DRIFT ADVISORIES**

#### **POLLINATOR ADVISORY STATEMENT**

This product contains an herbicide. Follow all label directions and precautions to minimize potential off-target exposure in order to prevent effects to non-target plants adjacent to the treated site which may serve as habitat or forage for pollinators.

#### **• SPRAY DRIFT MANAGEMENT**

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

#### **• 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. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. **APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS!** See Wind, Temperature and Humidity, and Temperature Inversions sections of this label.

#### **• Techniques for 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 A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
  - Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrow spray angles produce larger droplets. Consider using low-drift nozzles.
  - Controlling Droplet Size – Aircraft
  - Number of Nozzles – Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
  - Nozzle Orientation – Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations. **AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**
  - Nozzle Type – Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
  - Boom Length – Longer booms increase drift potential. Therefore a shorter boom length is recommended.
  - Application height – Application more than 10 ft. above the canopy increases the potential for spray drift.
  - Boom Height
- Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **• Drift Reduction Technology (DRT)**

The EPA Drift Reduction Technology (DRT) Program was developed to encourage the manufacturer, marketing, and use of spray technologies scientifically verified to significantly reduce pesticide drift. The use of DRTs should result in significantly less pesticide from spray applications drifting and being deposited in areas not targeted by those applications, compared to spray technologies that do not

meet the minimum DRT standard. EPA-verified drift reduction technologies (DRTs) and their ratings will be added to the following webpage when they become available: <https://www.epa.gov/reducing-pesticide-drift/epa-verified-and-rated-drift-reduction-technologies>

- Wind

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors including droplet size and equipment type determine drift potential at any given wind speed. **AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.** Note: Local terrain can influence wind patterns. Every applicator needs to be familiar with local wind patterns and how they affect spray drift.

- Temperature and Humidity

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

- Temperature Inversions

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

- Shielded Sprayers

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

## **NON-AGRICULTURAL USE SITES AND APPLICATION DIRECTIONS**

When applied as directed, this product non-selectively controls undesirable plant vegetation on private, public and military lands in the following areas: airfields, airports, alleys, lanes, paths, trails, access roads, around commercial or industrial structures or outbuildings, around farm and ranch structures and outbuildings, around ornamental gardens, around ornamental trees and shrubs (including Christmas trees), site preparation areas for conifer and hardwood, bare ground, beaches\*, campgrounds, construction sites, ditch banks, barrier strips, drive-in theaters, driveways and ramps, dry ditches and canals, fences and fencerows, firebreaks, golf courses\* (excluding greens, tees, aprons, fairways and roughs)\*, gravel yards, Conservation Reserve Program (CRP)\*, habitat restoration and management areas, highways and roadsides (including aprons, medians, guardrails and right of ways), industrial plant sites, industrial areas, lumber yards, nurseries\*, greenhouses and shade houses, landscapes and mulched areas, natural areas, parking areas, parks, paved areas, petroleum and other tank farms, pumping installations, pipeline, power, telephone and utility rights-of-way, sewage disposal areas, fuel storage areas, power stations, preplant to turf and ornamental plants, railroad rights-of-way, recreation areas, refineries, resorts, schools, sidewalks, sports areas, storage areas, substations, tennis courts, shelter belts, uncropped farmstead areas, vacant lots, walkways, wastelands, wildlife openings, wildlife habitat areas, wildlife food plots\*

\*Not for use in CA

### **RESTRICTIONS**

#### **Maximum Rate – Annual**

- **DO NOT** apply more than 246 fl. oz./A per year (4.5 lb. ai/A/year).

#### **Maximum Rate – Single Application**

- **DO NOT** apply more than 82 fl. oz./A per single application (1.5 lb. ai/A/application).

#### **Maximum Number of Applications Per Year**

**DO NOT** apply more than a total of 3 broadcast applications (excluding spot treatments) per year. **DO NOT** exceed a maximum total of 4.5 lb. ai/A/year.

#### **Re-treatment Interval:**

- Minimum re-treatment interval is 5 days.

### **APPLICATION RATES**

Mix 0.5 to 2.0 fl. oz. (0.009 to 0.036 lb. ai) of this product per gallon of spray solution (24 to 82 fl. oz./A (0.44 to 1.5 lb. ai/A) and apply 1 gallon of spray solution to 1,000 square feet to actively growing weeds. Adjust application rate as needed when using spray volumes delivering greater or less than 1 gallon per 1,000 square feet. Determine proper use rate based on weed size in Table 1. Larger weeds will require a higher use rate and see Table 1 for details.

**Table 1: USE RATE FOR THIS HERBICIDE**

Apply this product at the rates listed below for broadcast applications based on weed size and stage of growth.

Weed Size and Stage	Rate of this product (Per Gallon of Water)	Rate of this product (Per 1,000 sq. ft.)	Rate of this product (Per Acre)	Spot Spray % Solution
Easily Controlled Weeds < 3 in height*	0.5 fl. oz. (0.009 lb. ai)	0.5 fl. oz. (0.009 lb. ai)	24 fl. oz./A (0.44 lb. ai)	0.5
Weeds < 3 in height	1.0 fl. oz. (0.018 lb. ai)	1.0 fl. oz. (0.018 lb. ai)	48 fl. oz./A (0.88 lb. ai)	0.5-0.75
Weeds < 6 in height pre-tiller grasses	1.25 fl. oz. (0.023 lb. ai)	1.25 fl. oz. (0.023 lb. ai)	56 fl. oz./A (1.0 lb. ai)	0.75-1.25
Weeds > 6 in height and/or grasses that have tillered	1.25 to 2.0 fl. oz. (0.023 to 0.036 lb. ai)	1.25 to 2.0 fl. oz. (0.023 to 0.036 lb. ai)	56 to 82 fl. oz./A (1.0 to 1.5 lb. ai)	1.25-1.5

\*See Weeds Controlled Table below for details.

For spot or directed spray applications by backpack sprayers, mix this product at 0.5 to 2.0 fl. oz. of product (0.009 to 0.036 lb. ai) per gallon of water. Larger and more difficult to control weeds require a higher use rate. When using the per gallon rate, calibrate



sprayers to deliver 1 gallon of spray solution per 1,000 square feet. Adjust application rate as needed when using spray volumes delivering greater or less than 1 gallon per 1,000 square feet. Thorough spray coverage of weeds is necessary to maximize weed control. Spray coverage needs to be uniform, but **DO NOT** spray to the point of runoff. Thoroughly clean the sprayer following use. **DO NOT** make spot or directed spray applications to desired plant foliage or stems as injury may occur.

**Use Restrictions:**

- **DO NOT** apply this product within any enclosed structure in residential or commercial landscapes.
- **DO NOT** apply this product over-the-top as a broadcast application to ornamentals, conifers or hardwood plantings.
- **DO NOT** apply this product over-the-top of ornamental plants, and **DO NOT** allow spray of this product to contact or drift onto the foliage, green stems, exposed roots or fruit of desirable plants. Avoid application of this product under conditions that favor drift of sprays onto desired ornamentals or residential lawns.

This product offers postemergence control of susceptible grasses, sedges and broadleaf weeds (See WEEDS CONTROLLED Table), as well as additional mode of action to assist in the control of resistant weeds.

**IMPORTANT:** Contact with spray or spray drift of this product may cause severe injury or destruction of certain desirable plants, especially herbaceous species including bedding plants or direct seeded annual and perennial flowers. The use of spray shields that limit the plant exposure to this product is highly advised when applying this product near desirable plants.

**Trim and Edge:** This product may be used to trim and edge around trees, buildings, sidewalks, roads, potted plants and other objects in a nursery setting, along fences, in dry ditches and canals, and prior to planting landscape ornamentals.

**Site Preparation:** Following preplant applications of this product, any ornamental, nursery species or Christmas Tree species may be planted. Precautions need to be taken to protect nontarget plants during site preparation applications.

**Greenhouse:** This product may be used to control weeds listed on this label which are growing in greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

**Industrial:** This product may be used to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way, and wayside structures. This product may be tank mixed with other herbicides for these use sites unless specifically prohibited by the product label.

**Conservation Reserve Program (CRP)\*:** 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 selective applications with broadcast spray equipment, apply 48 to 56 fl. oz./A (0.88 to 1.0 lb. ai/A) of this product in early spring before desirable CRP grasses, including 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.

\* Not for use in CA

**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.

\* Not for use in CA

**Dormant Bermudagrass and/or Bahiagrass\*:** When applied to dormant Bermudagrass and/or Bahiagrass\*, this product will provide control or suppression of many winter annual weeds. Treat with 56 to 82 fl. oz./A (1.0-1.5 lb. ai/A) only when turfgrass is fully dormant in late fall or winter and prior to spring green-up. Spot treatments or broadcast applications of this product to non-dormant turfgrass may result in injury or delayed green-up. Avoid high volume and spot applications where spray volume exceeds 80 gallons per acre or injury or delayed green-up may occur. Applications to residential lawns are limited to spot treatments only. The maximum application rate must not exceed 4 fl. oz./gal. of water/1000 sq. ft. (corresponding to a rate of 0.0312 lb. ai/100 sq. ft.). Applications for renovating Bermudagrass lawns must be conducted when the weather is cool and Bermudagrass is dormant.

\*Not for use in CA

**Side Trimming:** To control only a portion of the plant, direct the spray solution to thoroughly cover (spray to wet) only the portion of the plant to be controlled.

**Site Preparation for Conifer and Hardwood Production Areas:** When applied in site preparation prior to planting conifer and hardwood species, this product will provide control of undesirable vegetation. Seedling conifer and hardwood trees may be planted into the treated area after the restricted entry interval (REI) of 12 hours has elapsed.

**Brush Control:** This product will provide control or suppression of the perennial woody species (brush) listed below. Use this product at rates from 1 to 3 quarts of this product per acre to impact the growth of woody plants and not to exceed 1.9 gallons per acre per year (4.5 lb ai/A/yr). Non-ionic surfactants (NIS) or methylated seed oils (MSO) may be used when making foliar applications. Follow any instructions on the surfactant manufacturer's label.

For hard-to-control woody plants including elm, certain oaks or when plant leaf surfaces have hardened off, use the higher rate of this product or tank mix this product with other herbicides registered for control of these woody plants. Higher specified rates per acre of

this product must be used when conditions are not optimum for spray coverage, including when weed growth is heavy or dense. Lower specified rates must be used when the target species is conifer and when vegetation growth conditions allow for uniform spray coverage.

## HOW TO APPLY

### Spot or Directed Applications

This product may be used as a spot- or directed-spray application. Prepare the desired volume of spray solution by mixing this product in water with the amounts indicated in the following table:

**Table 2.** Amount of this product added to water to make 1, 25, or 100 gallons of spray solution at dosages of ½ to 3%. See Table 1 for % solution to use based on target vegetation.

% SOLUTION	VOLUME OF SPRAY SOLUTION			
		1 GALLON	25 GALLONS	100 GALLONS
	Lbs. ai/A*	THIS PRODUCT		
0.5 %	0.25	0.75 fl. oz.	1 pint	1/2 gallon
1%	0.5	1.5 fl. oz.	1 quart	1 gallon
2%	1.0	3 fl. oz.	2 quarts	2 gallons
3%	1.5	4.5 fl. oz.	3 quarts	3 gallons

\*Assumes each gallon of spray covers 2,400 sq. ft.

Select appropriate solution concentration and spray undesirable vegetation foliage on a spray-to-wet basis. **DO NOT** apply beyond runoff. Ensure uniform and complete coverage. Use a coarse spray. To minimize drift, avoid spraying during windy conditions. Backpack, pump-up, and hydraulic sprayers may be used. Thoroughly clean the sprayer following use.

**Use of Spray Adjuvants:** The addition of a nonionic antifoaming agent may reduce foaming, especially when using soft water. The use of Methylated seed oil (MSO) at 1% v/v (1 gal. per 100 gal. of spray solution) or non-ionic surfactant (NIS) at a minimum rate of 0.25% v/v (1 qt. per 100 gal. of spray solution) may be used for foliar applications. The addition of 8.5 to 17.0 lbs. of ammonium sulfate (spray grade) per 100 gal. of water (1 to 2% by weight) or 2 to 4 lbs. of ammonium sulfate per acre may result in better weed control.

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

This herbicide can be tank mixed with other non-selective herbicides including glyphosate and preemergence residual herbicides including flumioxazin. Follow the most restrictive label restrictions and precautions for each product. A combination with a residual herbicide including flumioxazin provides effective control of existing weeds as well as lasting residual weed control in areas including landscape beds and xeriscapes.

**Aerial Applications (Helicopter Application Only):** Use a drift control device including a "Microfoil," or "Thru Valve-Boom" or equivalent drift control system when applying as a foliar treatment to utility rights-of-way, tree production areas, ditch banks or other approved sites that may be near susceptible crops. The application volume required will vary with the height and density of the vegetation and the application equipment used. Aerial applications will require a minimum of 15 gallons per acre to ensure thorough coverage. Drift control additives may be used. If a drift control additive is used, observe and follow all directions and precautions as specified on the additive label.

### Foliar Treatments with Ground Equipment

**\*High Volume Applications:** Use high volume applications for optimum performance when spraying medium to high density vegetation. Use equipment calibrated to deliver 50 to 100 gallons of finished spray per acre. For best results, make sure that the targeted plant foliage is thoroughly covered. **Low Volume Applications:** Use low volume applications when brush height is less than 6 feet and brush cover is less than 60% of the area. Use equipment calibrated to deliver 10 to 50 gallons of finished spray per acre.

**\*Low Volume Applications:** Use low volume applications when brush height is less than 6 feet and brush cover is less than 60% of the area. Use equipment calibrated to deliver 10 to 50 gallons of finished spray per acre.

**\*Broadcast Applications with Ground Equipment:** Use equipment calibrated to deliver 20 to 100 gallons of finished spray per acre. The amount of spray solution to use will depend on the height and density of the brush. Use spray nozzles and equipment that will provide thorough coverage of the targeted brush species.

### BRUSH\* SUPPRESSED OR CONTROLLED

Blackberry	Poison ivy/oak
Deer brush	Pine
Douglas fir	Roundleaf Greenbrier
Gallberry	Salmonberry
Hazel	Sweetgum
Honeysuckle	Sumac
Huckleberry	Thimbleberry



Maple  
Multiflora rose  
Oak

Trumpet creeper  
Vine Maple  
Western Red Cedar

\*not for use in CA

## WEEDS CONTROLLED

Alfalfa+	Gallinsoga, small flower+	Puncturevine
Alkali sida	Geranium, cutleaf+	Purslane, common*^
Amaranth, Palmer+	Goosefoot	Pusley, Florida+
Ammannia, purple	Goosegrass*^	Quackgrass
Anoda, spurred*^	Goldenrod, gray	Radish, wild
Arrowhead, California	Gromwell, field	Ragweed, common
Artichoke, Jerusalem+	Groundcherry, cutleaf	Ragweed, giant
Aster, white heath	Groundsell, common	Ragweed, Parthenium+
Bahiagrass	Guineagrass	Redmaids
Barley, volunteer*^	Hempnettle+	Rocket, yellow
Barnyardgrass*	Henbit	Rose, wild
Beggarweed, Florida+	Horsenettle, Carolina*^	<i>Rubus</i> spp.
Bermudagrass+	Horsetail	Rice, red+
Bindweed, field	Johnsongrass, rhizome+	Rice, volunteer+
Bindweed, hedge	Johnsongrass, seedling*^	Rush, toad***
Black medic+	Jimsonweed	Ryegrass, annual**
Bluegrass, annual	Junglerice*^	Sandbur, field
Bluegrass, Kentucky	Knotweed*^	Senna coffee+
Blueweed, Texas+	Kochia	Shattercane
Brome, ripgut	Ladysthumb+	Shepherd's Purse
Bromegrass, downy	Lambsquarters, common	Sicklepod (java bean)+
Bromegrass, smooth	Lettuce, miners	Sida, prickly+
Buckwheat, wild	Lettuce, prickly	Signalgrass, broadleaf*^
Buffalobur	London rocket	Smartweed, Pennsylvania
Bulrush***	Lovegrass	Smellmelon+
Burclover, California	Mallow, common	Sowthistle, annual
Burcucumber+	Mallow, Venice+	Sowthistle, perennial+
Burdock	Malva (little mallow)	Soybean, volunteer+
Bursage, woolyleaf+	Marestail	Sprangletop
Canarygrass	Marshelder, annual+	Spurge, prostrate*^
Carpetgrass	Mayweed	Spurge, leafy
Carpetweed	Milkweed, common***+	Spurge, spotted*^
Catchweed bedstraw (cleavers) *^	Milkweed, honeyvine***+	Starbur, bristly+
Chess, soft	Millet, wild proso+	Starthistle, yellow
Chickweed, common	Millet, proso volunteer+	Stinkgrass
Chickweed, mouse-ear+	Morningglory, entireleaf	Sunflower, common
Chinese thornapple	Morningglory, ivyleaf	Sunflower, prairie*^
Clover, Alsike	Morningglory, pitted	Sunflower, volunteer
Clover, red	Morningglory, sharpod*^	Swinecress
Clover, white	Morningglory, smallflower+	Thistle, bull
Cocklebur, common	Morningglory, tall+	Thistle, Canada
Copperleaf, hophornbeam+	Mugwort	Thistle, musk
Copperleaf, Virginia	Muhly, wirestem***+	Thistle, Russian
Corn, volunteer+	Mullein, common	Timothy+
Cotton, volunteer+	Mullein, turkey	Torpedograss
Crabgrass, large*^	Mustard, tansy	Turnip, wild
Crabgrass, smooth*^	Mustard, wild	Vaseygrass
Croton, tropic*^	Nettle	Velvetleaf*^
Croton, woolly*^	Nightshade, black	Vervain
Cudweed	Nightshade, eastern black	Vetch
Cupgrass, woolly	Nightshade, hairy	Waterhemp, common+
Cutleaf eveningprimrose	Nightshade, silverleaf+	Waterhemp, tall+
Dallisgrass	Nutsedge, purple	Wheat, volunteer
Dandelion	Nutsedge, yellow	Willowherb, panicle
Devil's claw*^	Oat, wild*^	Windgrass
Dock, curly	Onion, wild	Witchgrass
Dock, smooth+	Orchardgrass	Woodsorrel
Dodder	Panicum, fall*^	Wormwood, biennial+
Dogbane (hemp)	Panicum, Texas	Yarrow, common
Eclipta	Paragrass	
Fescue	Pennycress	
Fleabane, annual	Pigweed, redroot*^	
Fiddleneck	Pigweed, prostrate*^	
Filaree	Pigweed, spiny*^	
Filaree, redstem	Pigweed, smooth*^	
Foxtail, bristly+	Pigweed, tumble*^	
Foxtail, giant	Pineapple weed	
Foxtail, green	Plantain	
Foxtail, robust purple+	Pointsettia, wild+	
Foxtail, yellow*^	Poison ivy/oak	
Gallinsoga, hairy+	Pokeweed+	

+Not for use in CA

^Use rate in CA 24 fl. oz./A (0.44 lb. ai)

\*easily controlled species

\*\*apply to annual ryegrass prior to 3 inches in height

\*\*indicates suppression only

## AGRICULTURAL USE SITES AND APPLICATION DIRECTIONS

### IMPORTANT CROP SAFETY INFORMATION READ BEFORE USING THIS PRODUCT

This product may be applied as a burndown treatment prior to planting or prior to crop emergence of any canola, sweet corn<sup>1</sup>, corn, cotton, olive, soybean or sugar beet.

#### POST EMERGENT TREATMENTS

Post emergence row crop applications of this product may be made only to crops containing LibertyLink trait, the active ingredient in this product. Tank mixtures of this product with other products may impact crop resistance and increase risk of crop injury. Many seed trade names are available under the LibertyLink trait, contact the seed manufacturer or seed distributor to determine if the seed variety is designated and supported to be LibertyLink. Crops not containing the LibertyLink gene will not be resistant to this product and severe crop injury and/or death may occur. **DO NOT** allow spray to contact foliage or green tissue of desirable vegetation other than crops containing LibertyLink trait to the active ingredient in this product. Post emergent applications of this product may be applied to crops not containing the LibertyLink trait using a hooded sprayer.

#### TREE, NUT, VINE AND BERRY TREATMENTS

Applications to trees, vines and berries must avoid contact with this product's solution, spray drift or mist with green bark, stems or foliage as injury may occur to trees, berries and vines. Only trunks with callused mature brown bark needs to be sprayed unless protected from spray contact by nonporous wraps, grow tubes or waxed containers. Contact of this product with parts of trees, berries or vines other than mature brown bark can result in serious damage.

<sup>1</sup> – Not for use in California

This product is registered for use:

- as a burndown treatment prior to planting or prior to emergence of canola, corn, cotton, sweet corn, olive, soybean and sugar beets
- post emergence weed control herbicide to be applied on crops containing LibertyLink trait, including canola, soybean, corn, sweet corn and cotton
- post emergence weed control in cotton when applied with a hooded sprayer in-crop
- post emergence weed control in listed tree, olives, vine, and berry crops
- applied for potato vine desiccation.

**Many seed trade names are available under the LibertyLink trait contact the seed manufacturer or seed distributor to determine if the seed variety is designated and supported as containing the LibertyLink trait.** It is important to always follow a responsible integrated weed management program. Contact your local agronomic advisor for more specific information on integrated weed management in your area. ZipZap is only foliar-active with little or no activity in soil. Weeds that emerge after application will not be controlled.

Apply this product to actively growing weeds as described in the WEED CONTROL FOR ROW CROPS section to get maximum weed control. Uniform, thorough spray coverage is necessary to achieve consistent weed control. Necrosis of leaves and young shoots occur within 2 to 4 days after application under good growing conditions.

- This product is rainfast 4 hours after application to most weed species; therefore, rainfall within 4 hours may necessitate retreatment or may result in reduced weed control.
- Make applications between dawn and 2 hours before sunset to avoid the possibility of reduced lambsquarters and velvetleaf control.
- Consult your local Cooperative Extension Service or ProPortions, Inc. representative for guidelines on the optimum application timing for th in your region.
- Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness.
- To maximize weed control, **DO NOT** cultivate from 5 days before an application to 7 days after an application.

**Many seed trade names are available under the LibertyLink trait contact the seed manufacturer or seed distributor to determine if the seed variety is designated and supported as containing the LibertyLink trait.**

### ROTATIONAL CROP RESTRICTIONS\*

Rotational crop planting intervals following application of this product are listed below. Failure to comply with these restrictions may result in illegal residues in rotated crops.

Rotational Crop	Plant Back Interval (Minimum Rotational Crop Planting Interval from Last Application)
Canola, Corn, Cotton, Soybeans, Sweet Corn, and Sugar beets	May be planted at any time
Root and Tuber Vegetables, Leafy Vegetables, Brassica Leafy Vegetables and Small Grains (Barley, Buckwheat, Oats, Rye, Teosinte, Triticale, and Wheat)	70 days
All other crops	180 days

\*See **Application Directions for Potato Vine Desiccation** for Rotational Crop Restrictions specifically after application of this product to potatoes.

## WEED CONTROL FOR ROW CROPS

Rates in fluid ounce of formulated product per acre for the control of weeds as shown in the weed control tables. In weed populations with mixed species, apply at a rate needed for the species targeting less than three inch weeds.

<b>Table 3. Broadleaf Weeds Controlled</b> <b>(including Glyphosate-, Triazine-, PPO-, ALS-, HPPD-, and Auxin-Resistant Biotypes)</b>			
Common Name	Scientific Name	22.0 fl. oz./A (0.40 lbs. ai/A)	29.0 – 43.0 fl. oz./A <sup>1</sup> (0.53-0.79 lbs. ai/A)
		C=Control NA = Not Advised S = Suppression	C=Control NA = Not Advised S = Suppression
Amaranth, Palmer	<i>Amaranthus palmeri</i>	NA	C
Anoda, spurred	<i>Anoda cristata</i>	C	C
Beggarweed, Florida	<i>Desmodium tortuosum</i>	C	C
Black medic	<i>Medicago lupulina</i> L.	C	C
Blueweed, Texas	<i>Helianthus ciliaris</i> DC.	C	C
Buckwheat, wild	<i>Polygonum convolvulus</i>	C	C
Buffalobur	<i>Solanum comutum</i>	C	C
Burcucumber	<i>Sicyos angulatus</i>	C	C
Canola, volunteer <sup>2</sup>	<i>Brassica</i> spp.	C <sup>2</sup>	C <sup>2</sup>
Catchweed bedstraw (cleavers)	<i>Galium aparine</i> L.	C	C
Carpetweed	<i>Mollugo verticillata</i>	C	C
Chickweed, common	<i>Stellaria media</i>	C	C
Cocklebur, common	<i>Xanthium strumarium</i>	C	C
Copperleaf, hophornbeam	<i>Acalypha ostryaefolia</i>	C	C
Cotton, volunteer <sup>2</sup>	<i>Gossypium</i> spp.	C <sup>2</sup>	C <sup>2</sup>
Croton, tropic	<i>Croton glandulosus</i>	C	C
Croton, woolly	<i>Croton capitatus</i>	C	C
Eclipta	<i>Eclipta alba</i>	C	C
Devil's claw	<i>Proboscidea Louisiana</i>	C	C
Fleabane, annual	<i>Erigeron annuus</i>	C	C
Galinsoga, hairy	<i>Galinsoga ciliate</i>	C	C
Galinsoga, small flower	<i>Galinsoga parviflora</i>	C	C
Groundcherry, cutleaf	<i>Physalis angulate</i>	C	C
Geranium, cutleaf	<i>Geranium dissectum</i> L.	C	C
Hempnettle	<i>Galeopsis</i> spp.	C	C
Horsenettle, Carolina <sup>3</sup>	<i>Solanum carolinense</i>	C <sup>3</sup>	C <sup>3</sup>
Jimsonweed	<i>Datura stramonium</i>	C	C
Knotweed	<i>Polygonum spec.</i>	C	C
Kochia	<i>Kochia scoparia</i>	C	C
Ladysthumb	<i>Polygonum persicaria</i>	C	C
Lambsquarters, common	<i>Chenopodium album</i>	C	C
Mallow, common	<i>Malva spec.</i>	C	C
Mallow, Venice	<i>Hibiscus trionum</i>	C	C
Marestail <sup>3</sup>	<i>Conyza Canadensis</i>	S	C
Marsh-elder, annual	<i>Iva annua</i>	C	C
Morningglory, entireleaf	<i>Ipomoea hederacea</i> var. <i>intergriuscula</i>	C	C
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>	C	C
Morningglory, pitte	<i>Ipomoea lacunose</i>	C	C
Morningglory, sharppod	<i>Ipomoea cordatotriloba</i>	C	C
Morningglory, Smallflower	<i>Jacquemontia tamnifolia</i>	C	C
Morningglory, tall	<i>Ipomoea purpurea</i>	C	C
Mustard, wild	<i>Sinapis arvensis</i>	C	C
Nightshade, black	<i>Solanum nigrum</i>	C	C
Nightshade, eastern black	<i>Solanum ptycanthum</i>	C	C
Nightshade, hairy	<i>Solanum sarachoides</i>	C	C
Pennycress	<i>Thlaspi arvense</i>	C	C
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C	C
Pigweed, prostrate	<i>Amaranthus blitoides</i>	C	C
Pigweed, spiny	<i>Amaranthus spinosus</i>	C	C
Pigweed, smooth	<i>Amaranthus hybridus</i>	C	C
Pigweed, tumble	<i>Amaranthus albus</i>	C	C
Puncturevine	<i>Tribulus terrestris</i>	C	C
Purslane, common	<i>Portulaca oleracea</i>	C	C
Pusley, Florida	<i>Richardia scabra</i>	S	C
Ragweed, common	<i>Ambrosia artemisiifolia</i>	C	C
Ragweed, giant	<i>Ambrosia trifida</i>	C	C
Senna coffee	<i>Cassia occidentalis</i>	C	C

Sesbania, hemp	<i>Sesbania herbacea</i>	C	C
Shepherd's-Purse	<i>Capsella bursa-pastoris</i>	C	C
Sicklepod (java bean)	<i>Senna obtusifolia</i>	C	C
Sida, prickly	<i>Sida spinosa</i> L.	C	C
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>	C	C
Smell melon	<i>Cucumis melo</i> L. var. <i>Dudaim</i>	C	C
Sowthistle, annual	<i>Sonchus oleraceus</i> L.	C	C
Soybeans, volunteer <sup>2</sup>	<i>Glycine max</i>	C <sup>2</sup>	C <sup>2</sup>
Spurge, prostrate	<i>Euphorbia humifusa</i>	C	C
Spurge, spotted	<i>Euphorbia maculate</i> L.	C	C
Starbur, bristly	<i>Acanthospermum hispidum</i>	C	C
Sunflower, common	<i>Helianthus annuus</i>	C	C
Sunflower, prairie	<i>Corythucha pura</i>	C	C
Sunflower, volunteer	<i>Girassol</i>	C	C
Thistle, Russian <sup>3</sup>	<i>Salsola kali</i>	S <sup>3</sup>	C <sup>3</sup>
Velvetleaf	<i>Abutilon theophrasti</i>	C	C
Waterhemp, common	<i>Amaranthus rudis</i>	NA	C
Waterhemp, tall	<i>Amaranthus tuberculatos</i>	NA	C

<sup>1</sup> Maximum rate on canola, field corn, sweet corn and soybean in California is 36 fl oz/A (0.66 lbs. ai/A).

<sup>2</sup> Volunteer LibertyLink crops from the previous year will not be controlled.

<sup>3</sup> May require sequential applications for control.

<sup>4</sup> For optimum control apply this product on 6" marestail

Table 4. Grass Weeds Controlled (including Glyphosate-, Triazine-, PPO-, ALS-, HPPD-, and Auxin-Resistant Biotypes)			
Common Name	Scientific Name	22.0 fl. oz./A (0.40 lbs. ai/A)	29.0 – 43.0 fl. oz./A <sup>1</sup> (0.53-0.79 lbs. ai/A)
		C=Control NA = Not Advised S = Suppression	C=Control NA = Not Advised S = Suppression
Barley, volunteer <sup>3</sup>		C <sup>3</sup>	C <sup>3</sup>
Barnyardgrass	<i>Echinochloa spec.</i>	C	C
Bluegrass, annual	<i>Poa annua</i> L.	C	C
Corn, volunteer <sup>2</sup>	<i>Zea mays</i> L.	C <sup>2</sup>	C <sup>2</sup>
Crabgrass, large <sup>4</sup>	<i>Digitaria sanguinalis</i>	C <sup>4</sup>	C <sup>4</sup>
Crabgrass, smooth <sup>4</sup>	<i>Digitaria ischaemum</i>	C <sup>4</sup>	C <sup>4</sup>
Cupgrass, woolly	<i>Eriochloa villosa</i>	C	C
Foxtail, bristly	<i>Setaria verticillata</i>	C	C
Foxtail, giant	<i>Setaria faberi</i>	C	C
Foxtail, green	<i>Setaria viridis</i>	C	C
Foxtail, robust purple	<i>Setaria viridis</i>	C	C
Foxtail, yellow <sup>4</sup>	<i>Pennisetum glaucum</i>	C <sup>4</sup>	C <sup>4</sup>
Goosegrass <sup>3</sup>	<i>Eleusine indica</i>	C <sup>3</sup>	C <sup>3</sup>
Johnsongrass, seedling	<i>Sorghum halepense</i>	C	C
Junglerice	<i>Echinochloa colonum</i>	C	C
Millet, wild-proso	<i>Panicum miliaceum</i> L.	C	C
Millet, proso volunteer	<i>Milium vernale</i>	C	C
Oat, wild <sup>4</sup>	<i>Avena fatua</i>	C <sup>4</sup>	C <sup>4</sup>
Panicum, fall	<i>Panicum dichotomiflorum</i>	C	C
Panicum, Texas	<i>Panicum texanum</i>	C	C
Rice, red	<i>Oryza sativa</i> L.	C	C
Sandbur, field <sup>4</sup>	<i>Cenchrus pauciflorus</i>	S <sup>4</sup>	C <sup>4</sup>
Shattercane	<i>Sorghum vulgare</i> PERS.	C	C
Signalgrass, broadleaf	<i>Brachiaria platyphylla</i>	C	C
Sprangletop	<i>Leptochloa spec.</i>	C	C
Sorghum, volunteer	<i>Sorghum spp.</i>	C	C
Stinkgrass	<i>Eragrostis cilianensis</i>	C	C
Wheat, volunteer <sup>3,4</sup>	<i>Triticum spec.</i>	C <sup>3,4</sup>	C <sup>3,4</sup>
Witchgrass	<i>Panicum virgatum</i> L.	C	C

<sup>1</sup> Maximum rate on canola, field corn, sweet corn and soybean in California is 36 fl oz/A (0.66 lbs. ai/A).

<sup>2</sup> Volunteer LibertyLink crops from the previous year will not be controlled. A timely cultivation 7 to 10 days after an application and/or retreatment 10-21 days after the first application is needed for controlling dense clumps of volunteer corn.

<sup>3</sup> May require sequential applications for control.

<sup>4</sup> For best control of yellow foxtail, field sandbur, crabgrass, and wild oats, treat prior to tiller initiation.

Table 5. Biennial and Perennial Weeds Controlled (including Glyphosate-, Triazine-, PPO-, ALS-, HPPD-, and Auxin-Resistant Biotypes)		
For control of the biennial and perennial weeds listed below, tank mix partners or sequential applications of this product are specified by crop (see crop sections)		
Common Name	Scientific Name	29.0 – 43.0 fl. oz./A <sup>1</sup> (0.53-0.79 lbs. ai/A)
		C=Control S = Suppression
Alfalfa	<i>Medicago sativa</i> L.	C
Bermudagrass	<i>Cynodon dactylon</i>	C
Bindweed, field	<i>Convolvulus arvensis</i> L.	C
Bindweed, hedge	<i>Calystegia sepium</i>	C
Bluegrass, Kentucky	<i>Poa pratensis</i> L.	C
Blueweed, Texas	<i>Helianthus ciliaris</i> DC.	C
Bromegrass, smooth	<i>Bromus inermis</i>	C
Burdock	<i>Arctium</i> spp.	C
Bursage, woollyleaf	<i>Ambrosia grayi</i>	C
Chickweed, Mouse-ear	<i>Cerastium vulgatum</i> L.	C
Clover, red	<i>Trifolium pretense</i> L.	C
Dandelion	<i>Taraxacum officinale</i>	C
Dock, smooth	<i>Rumex</i> spec.	C
Dogbane, hemp	<i>Apocynum cannabinum</i>	S
Goldenrod, gray	<i>Solidago nemoralis</i>	S
Johnsongrass, rhizome	<i>Sorghum halepense</i>	C
Milkweed, common	<i>Asclepias syriaca</i>	S
Milkweed, honeyvine	<i>Ampelamus albidus</i>	S
Muhly, wirestem	<i>Muhlenbergia frondosa</i>	S
Nightshade, silverleaf	<i>Solanum elaeagnifolium</i>	C
Nutsedge, purple	<i>Cyperus rotundus</i>	S
Nutsedge, yellow	<i>Cyperus ferax</i>	S
Orchardgrass	<i>Dactylis glomerata</i> L.	C
Poinsettia, wild	<i>Euphorbia heterophylla</i> L.	C
Pokeweed	<i>Phytolaccaceae</i>	C
Quackgrass	<i>Agropyron repens</i>	S
Sowthistle, perennial	<i>Sonchus arvensis</i> L.	C
Thistle, bull	<i>Cirsium vulgare</i>	C
Thistle, Canada	<i>Cirsium arvense</i>	C
Timothy	<i>Phleum pretense</i> L.	S
Wormwood, biennial	<i>Artemisia biennis</i>	S

<sup>1</sup> Maximum rate on canola, field corn, sweet corn and soybean in California is 36 fl oz/A (0.66 lbs. ai/A).

### APPLICATION DIRECTIONS FOR BURNDOWN USE

This product may be applied as a **burndown treatment prior to planting or prior to emergence** of any variety of canola, corn, sweet corn, cotton, soybean or sugar beet.

#### Application Timing:

Apply to small and actively growing weeds, targeting less than 3 inch weeds in height. For additional information on weed heights refer to the **WEED CONTROL FOR ROW CROPS** section. Warm temperatures, high humidity, and bright sunlight improve the performance of this product. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. For optimum results on lambsquarters, Palmer amaranth and velvetleaf make applications between dawn and 2 hours before sunset. This product is rainfast 4 hours after application, therefore, rainfall within 4 hours may necessitate retreatment.

#### Application Rates:

Apply 29.0 – 43.0 fl. oz./A (0.53-0.79 lbs. ai/A) of this product depending on crop, weed species and intention of post application use. Please see application charts below.

- In **cotton**, if environmental conditions prevent timely applications, a single application may be made of up to 43.0 fl. oz./A (0.79 lb. ai/A) of this product. **If more than 29.0 fl. oz./A (0.53 lb. ai/A) are used in any single application, the annual total may not exceed 72.0 fl. oz./A (1.32 lbs. ai/A), including all application timings.**

- In **canola, corn (sweet and field) and soybean**, if environmental conditions prevent timely applications, a single application may be made of up to 43.0\*fl. oz./A (0.79 lbs ai/A) of this product. The year total may not exceed 43.0\* fl. oz./A (0.79 lbs ai/A), including all application timings, for non-LL crops. \*Maximum rate in California is 36 fl. oz./A (0.66 lbs. ai/A).

- In **sugar beets**, if environmental conditions prevent timely applications, a single application may be made of up to 36.0 fl. oz./A (0.66 lbs ai/A) of this product. No additional applications of this product may be made post emergence to the crop during the year.

**Adjuvant:**

Ammonium sulfate (AMS) may be used at 1.5 to 3 pounds per acre. Adjuvant rates are dependent on tank mix partners, temperatures, environmental conditions and potential for leaf burn.

AMS has shown to improve weed control of difficult-to-control weeds, like lambsquarters and velvetleaf, under difficult environmental conditions (low relative humidity) or hard water.

**Surfactants / Crop Oils:**

The use of surfactants may be included. Please refer to the surfactant label for more detailed information.

**Table 6. APPLICATION DIRECTIONS FOR NON-LL CROPS**

Crop	Burndown	In Season Applications	Annual Max
Canola, Soybean, Sweet Corn, Field Corn	29 – 43* fl. oz./A (0.53 – 0.79 lbs ai/A)	None	43* fl. oz./A (0.79 lbs ai/A)
Sugar beets	29 - 36 fl. oz./A (0.53 – 0.66 lbs ai/A)	None	36 fl. oz./A (0.66 lbs ai/A)
Cotton Use Pattern 1	29 fl. oz./A (0.53 lbs ai/A)	2 applications at 29 fl oz/A** (0.53 lbs ai/A) Make second application 10-14 days after the first application.	87 fl. oz./A (1.59 lbs ai/A)
Cotton Use Pattern 2	30-43 fl. oz./A (0.55 – 0.79 lbs ai/A)	1 application at 29 fl oz/A** (0.53 lbs ai/A)	72 fl. oz./A (1.32 lbs ai/A)

\* Maximum rate in California is 36 fl oz/A (0.66 lbs ai/A).

\*\* Cotton containing the LibertyLink trait OR with hooded sprayer for all varieties (see **COTTON** use directions).

**Table 7. APPLICATION DIRECTIONS FOR CROPS CONTAINING LIBERTYLINK TRAIT**

Crop	Burndown	In Season Applications of Crops Containing the LibertyLink® (LL) Trait	Annual Max
LL Soybean	29 – 43* fl. oz./A (0.53 – 0.79 lbs ai/A)	1 to 2 applications at 29 – 43* fl. oz./A (0.53 – 0.79 lbs ai/A) For soybeans, make second application at least 5 days after the first application.	87* fl. oz./A (1.59 lbs ai/A)
LL Field Corn	29 – 43** fl. oz./A (0.53 – 0.79 lbs ai/A)	1 to 2 applications at 29 – 43** fl. oz./A (0.53 – 0.79 lbs ai/A) For field corn, make second application at least 7 days after first application.	87** fl. oz./A (1.59 lbs ai/A)
LL Sweet Corn***	22 fl. oz./A (0.40 lbs ai/A)	1 to 2 applications at 22 fl. oz./A (0.4 lbs ai/A) Make second application at least 7 days after the first application.	44 fl. oz./A (0.8 lbs ai/A)
LL Canola	29 – 43* fl. oz./A (0.53 – 0.79 lbs ai/A)	1 to 2 applications at 29 fl. oz./A (0.53 lbs ai/A) Make second application at least 10 days after the first application.	87* fl. oz./A (1.59 lbs ai/A)
LL Cotton Use Pattern 1	29 fl. oz./A (0.53 lbs ai/A)	1 to 2 applications at 29 fl. oz./A**** (0.53 lbs ai/A) Make second application 10-14 days after the first application.	87 fl. oz./A (1.59 lbs ai/A)
LL Cotton Use Pattern 2	30 - 43 fl. oz./A (0.55 – 0.79 lbs ai/A)	1 application at 29 fl. oz./A**** (0.53 lbs ai/A)	72 fl. oz./A (1.32 lbs ai/A)
LL Sugar beets	29 - 36 fl. oz./A (0.53 – 0.66 lbs ai/A)	1 application at 29 fl. oz./A (0.53 lbs ai/A)	60 fl. oz./A (1.1 lbs ai/A)

\* Maximum rate in California is 36 fl oz/A (0.66 lbs ai/A) with annual maximum of 72 fl oz/A (1.32 lbs ai/A).

\*\* Maximum rate in California is 22 fl oz/A (0.40 lbs ai/A) with annual maximum of 44 fl oz/A (0.8 lbs ai/A).

\*\*\* Not for use in California

\*\*\*\* Cotton containing the LibertyLink trait OR with hooded sprayer for all varieties (see **COTTON** use directions).

## APPLICATION DIRECTIONS FOR USE ON SUGAR BEETS CONTAINING THE LIBERTYLINK TRAIT

### Not for use in California

Apply this product only to sugar beets containing LibertyLink trait. This product is a contact herbicide and requires uniform, thorough spray coverage to achieve optimum weed control.

#### Application Timing:

Apply to small and actively growing weeds, targeting less than 3 inch weeds in height. For additional information on weed heights refer to the **WEED CONTROL FOR ROW CROPS** section.

Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to drought, cool temperatures, or extended periods of cloudiness.

Applications of this product on sugar beets containing the LibertyLink trait may be made from the cotyledon stage up to the 10-leaf stage of the sugar beet. This product is a foliar-active material with little or no soil-residual activity.

This product is rainfast 4 hours after application, therefore, rainfall within 4 hours may necessitate retreatment.

For best result:

- On lambsquarters, Palmer amaranth and velvetleaf control, make applications of this product between dawn and 2 hours before sunset.
- Warm temperatures, high humidity, and bright sunlight improve the performance of this product.

#### Application Rates:

Apply 29 - 36 fl. oz./A (0.53 – 0.66 lbs ai/A) depending on weed species, size and density per weed chart.

If a second application is needed, make the second application in a minimum of 10 days after the first application.

The maximum annual rate of this product on sugar beets is 60.0 fl. oz./A (1.1 lbs ai/A).

Use a minimum spray volume of 15 gallons per acre, unless there is a difficult to control situation (including dense canopy, large weeds or unfavorable growing conditions are present). In difficult to control situations use a minimum spray volume of 20 gallons per acre.

#### Adjuvants:

Ammonium sulfate (AMS) may be used at 1.5 to 3.0 pounds per acre. Adjuvant rates are dependent on a variety of factors including tank mix partners, environmental conditions (including temperature) and potential for leaf burn.

AMS has shown to improve weed control of difficult-to-control weeds, like lambsquarters and velvetleaf, under difficult environmental conditions (including low relative humidity) or hard water.

The use of an anti-foam agent is advised.

#### Surfactants / Oils:

The use of additional surfactants or crop oils in tank mixes with may increase the risk of crop response. Please refer to the surfactant label for more detailed information.

#### Nozzle Spray Quality:

This product is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. See **SPRAY DRIFT MANAGEMENT** section for more detailed information.

#### Restrictions to the Directions for Use on Sugar Beets Containing the LibertyLink Trait:

- **DO NOT** apply more than 60.0 fl. oz./A (1.1 lbs ai/A) of this product on the sugar beet per year.
- **DO NOT** apply this product within 60 days of harvesting sugar beets.
- If a second application is needed, make the second application a minimum of 10 days after the first application.
- **DO NOT** exceed the single application rate maximum of 36 fl. oz./A (0.66 lbs ai/A).
- **DO NOT** make more than 2 applications per year.
- **DO NOT** plant rotation crops in a field treated with this product within 120 days after the last application of this product with the exception of wheat, barley, buckwheat, millet, oats, rye, sorghum, and triticale which may be planted 70 days after the last application of this product. Corn, soybeans, canola, and sugar beets resistant to the active ingredient of this product may be planted at any time.
- **DO NOT** graze the treated crop or cut for hay.
- **DO NOT** apply this product if sugar beets show injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply this product through any type of irrigation system.

## APPLICATION DIRECTIONS FOR USE ON CANOLA CONTAINING THE LIBERTYLINK TRAIT

Apply this product only to canola containing the LibertyLink trait. Uniform, thorough spray coverage is necessary to achieve consistent weed control.

#### Application Timing:

Apply to small and actively growing weeds, targeting less than 3 inch weeds in height. For additional information on weed heights refer to the **WEED CONTROL FOR ROW CROPS** section.

Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to drought, cool temperatures, or extended periods of cloudiness.

Applications of this product on canola containing the LibertyLink trait may be made from the cotyledon stage up to the early bolt stage of



the canola. Slight discoloration of the canola may be visible after application. This effect is temporary and will not influence crop growth, maturity, or yield.

This product is a foliar-active material with little or no soil-residual activity.

This product is rainfast 4 hours after application, therefore, rainfall within 4 hours may necessitate retreatment.

For best result:

- On lambsquarters, Palmer amaranth and velvetleaf control, make applications of this product between dawn and 2 hours before sunset.
- Warm temperatures, high humidity, and bright sunlight improve the performance of this product.

#### **Application Rates:**

Apply this product at 22.0 to 29.0 fl. oz./A (0.4 to 0.53 lbs ai/A) per application, depending on weed species, size and density per weed chart.

If a second application is needed, make the second application in a minimum of 7 days after the first application.

The maximum annual rate of this product on canola is 87.0 fl. oz./A (1.59 lbs ai/A).

Use a minimum spray volume of 15 gallons per acre, unless there is a difficult to control situation (including dense canopy, large weeds or unfavorable growing conditions are present). In difficult to control situations use a minimum spray volume of 20 gallons per acre.

#### **Application Rates with Tank Mix Partners:**

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

Apply this product at 22.0 to 29.0 fl. oz./A (0.4 to 0.53 lbs ai/A) per application, depending on weed species, size and density per weed chart.

Tank mix partners advised to enhance grass control, including quizalofop p-ethyl, sethoydim, and clethodim.

If a second application is needed, make the second application in a minimum of 7 days after the first application.

Tank mixes may aid in the performance of this product. Please refer to weed chart tables for a listing of weed species controlled at this rate.

No additional surfactant is needed with any tank mix partner.

The tank mix partner must be used in accordance with the label limitations, restrictions and precautions.

**DO NOT** exceed any labeled dosage rates.

**DO NOT** mix this product mix with any product containing a label prohibition against such mixing.

#### **Adjuvants:**

Ammonium sulfate (AMS) may be used at 1.5 to 3.0 pounds per acre. Adjuvant rates are dependent on a variety of factors including tank mix partners, environmental conditions (including temperature) and potential for leaf burn.

AMS has shown to improve weed control of difficult-to-control weeds, like lambsquarters and velvetleaf, under difficult environmental conditions (including low relative humidity) or hard water.

The use of an anti-foam agent is advised.

#### **Surfactants / Oils:**

The use of additional surfactants or crop oils in tank mixes with this product may increase the risk of crop response. Please refer to the surfactant label for more detailed information.

#### **Nozzle Spray Quality:**

This product is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. See **SPRAY DRIFT MANAGEMENT** section for more detailed information.

#### **Restrictions to the Directions for Use on Canola Containing the LibertyLink Trait:**

- **DO NOT** use on canola containing the LibertyLink trait in the states of Alabama, Delaware, Georgia, Kentucky, Maryland, New Jersey, North Carolina, South Carolina, Tennessee, Virginia and West Virginia.
- **DO NOT** apply more than 2 applications of this product per year. Sequential applications must be at least 10 days apart.
- **DO NOT** apply this product within 65 days of harvesting canola.
- **DO NOT** exceed the maximum single application rate of 43 fl. oz./A (0.79 lbs/A).
- **DO NOT** apply more than 87.0 fl. oz./A (1.59 lbs ai/A) of this product per year.
- **DO NOT** graze the treated crop or cut for hay.
- **DO NOT** apply this product if canola shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply this product through any type of irrigation system.

Refer to the **ROTATIONAL CROP RESTRICTIONS** section under the **PRODUCT INFORMATION** heading of this label for the appropriate rotational crop plant back intervals.

## APPLICATION RATE AND TIMING FOR CANOLA CONTAINING LIBERTYLINK TRAIT SEED PROPAGATION

### Not for use in California

Up to 3 applications of this product at up to 29.0 fl. oz./A (0.53 lbs ai/A) per application may be made to canola containing the LibertyLink trait for seed propagation. Applications may be made from the cotyledon stage up to the early bolting stage (e.g., BBCH 18-30, between just prior to stem elongation/bolting, 8 or more leaves and beginning of stem elongation, no internodes).

#### Restrictions to the Directions for Canola Containing the LibertyLink Trait for Seed Propagation:

- **DO NOT** apply more than 3 applications of this product at up to 29.0 fl. oz./A (0.53 lbs ai/A) per application per year. Sequential applications must be at least 10 days apart.
- **DO NOT** apply more than 87.0 fl. oz./A (1.59 lbs ai/A) of this product per year.
- **DO NOT** exceed the maximum single application rate of 43 fl. oz./A (0.79 lbs ai/A).
- **DO NOT** apply this product beyond the early bolting stage or within 65 days of harvesting canola seed.
- **DO NOT** use treated canola seed for food, feed or oil purposes.
- **DO NOT** apply this product if canola shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply this product through any type of irrigation system.

## APPLICATION DIRECTIONS FOR USE ON SWEET CORN CONTAINING THE LIBERTYLINK TRAIT

### Not for use in California

Apply this product only to sweet corn containing the LibertyLink trait. Uniform, thorough spray coverage is necessary to achieve consistent weed control.

#### Application Timing:

Apply to small and actively growing weeds, targeting less than 3 inch weeds in height. For additional information on weed heights refer to the **WEED CONTROL FOR ROW CROPS** section.

Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to drought, cool temperatures, or extended periods of cloudiness.

Applications for this product on sweet corn may be made from emergence until the V-6 stage of growth.

This product is a foliar-active material with little or no soil-residual activity.

This product is rainfast 4 hours after application, therefore, rainfall within 4 hours may necessitate retreatment.

For best result:

- On lambsquarters, Palmer amaranth and velvetleaf control, make applications of this product between dawn and 2 hours before sunset.
- Warm temperatures, high humidity, and bright sunlight improve the performance of this product.

#### Application Rate:

Apply this product at 22.0 fl. oz./A (0.4 lbs ai/A), depending on weed species, size and density per weed chart.

If a second application is needed, make the second application in a minimum of 7 days after the first application.

The maximum annual rate of this product on sweet corn is 44.0 fl. oz./A (0.8 lbs ai/A).

Use a minimum spray volume of 15 gallons per acre, unless there is a difficult to control situation (including dense canopy, large weeds or unfavorable growing conditions are present). In difficult to control situations use a minimum spray volume of 20 gallons per acre.

#### Application Rates with Tank Mix Partners:

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

Apply this product at 22.0 fl. oz./A (0.4 lbs ai/A) per application, depending on weed species, size and density per weed chart.

Advised tank mix partners, including atrazine, tembotrione, thienencarbazone-methyl, and dicamba, DGA salt.

If a second application is needed, make the second application in a minimum of 7 days after the first application.

Tank mixes may aid in the performance of this product. Please refer to weed chart tables for a listing of weed species controlled at this rate.

No additional surfactant is needed with any tank mix partner.

The tank mix partner must be used in accordance with the label limitations, restrictions and precautions.

**DO NOT** exceed any labeled dosage rates.

**DO NOT** mix this product mix with any product containing a label prohibition against such mixing.

#### Adjuvants:

Ammonium sulfate (AMS) may be used at 1.5 to 3.0 pounds per acre. Adjuvant rates are dependent on a variety of factors including tank mix partners, environmental conditions (including temperature) and potential for leaf burn.

AMS has shown to improve weed control of difficult-to-control weeds, like lambsquarters and velvetleaf, under difficult environmental conditions (including low relative humidity) or hard water.

The use of an anti-foam agent is advised.

#### Surfactants / Oils:

The use of additional surfactants or crop oils in tank mixes with this product may increase the risk of crop response. Please refer to the surfactant label for more detailed information.

**Nozzle Spray Quality:**

This product is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. See **SPRAY DRIFT MANAGEMENT** section for more detailed information.

**Restrictions to the Directions for Use on Sweet Corn Containing the LibertyLink Trait:**

- **DO NOT** apply this product within 50 days of harvesting sweet corn ears and within 55 days of harvesting stover.
- **DO NOT** apply more than 44.0 fl. oz./A (0.8 lbs ai/A) of this product on sweet corn per year.
- **DO NOT** apply more than 2 applications of this product to the sweet corn per year. Sequential applications must be at least 7 days apart.
- **DO NOT** exceed the maximum single application rate of 22 fl. oz./A (0.40 lbs ai/A).
- If this product was used in a burndown application, no post emergence applications may be applied to the crop.
- **DO NOT** use nitrogen solutions as spray carriers.
- **DO NOT** apply this product if corn shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.)
- **DO NOT** apply this product through any type of irrigation system.

Refer to the **ROTATIONAL CROP RESTRICTIONS** section under the **PRODUCT INFORMATION** heading of this label for the appropriate rotational crop plant back intervals.

See **APPLICATION DIRECTIONS FOR USE ON FIELD CORN AND SILAGE CORN** for **APPLICATION METHODS, MIXING INSTRUCTIONS**, and **WEED CONTROL TABLES**.

**APPLICATION DIRECTIONS FOR USE ON FIELD CORN AND SILAGE CORN CONTAINING THE LIBERTYLINK TRAIT**

Apply this product only to corn containing the LibertyLink trait. Uniform, thorough spray coverage is necessary to achieve consistent weed control.

**Application Timing:**

Apply to small and actively growing weeds, targeting less than 3 inch weeds in height. For additional information on weed heights refer to the **WEED CONTROL FOR ROW CROPS** section.

Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to drought, cool temperatures, or extended periods of cloudiness.

Applications for this product on corn may be made from emergence until the V-6 stage of growth.

This product is a foliar-active material with little or no soil-residual activity.

This product is rainfast 4 hours after application, therefore, rainfall within 4 hours may necessitate retreatment.

For best result:

- On lambsquarters, Palmer amaranth and velvetleaf control, make applications of this product between dawn and 2 hours before sunset.
- Warm temperatures, high humidity, and bright sunlight improve the performance of this product.

**Application Rate:**

Apply this product at 29 – 43\* fl. oz./A (0.53 – 0.79 lbs ai/A), depending on weed species, size and density per weed chart. \*Maximum rate in California is 22 fl. oz./A (0.4 lb ai/A).

If a second application is needed, make the second application at up to 29 fl. oz./A (0.53 lbs ai/A) with a minimum of 7 days after the first application. \*Maximum rate in California is 22 fl oz/A (0.4 lb ai/A).

The maximum annual rate of this product on field corn and silage corn is 87.0\* fl. oz./A (1.59 lbs ai/A). \*Maximum annual rate in California is 44 fl oz/A (0.8 lbs ai/A)

Use a minimum spray volume of 15 gallons per acre, unless there is a difficult to control situation (including dense canopy, large weeds or unfavorable growing conditions are present). In difficult to control situations use a minimum spray volume of 20 gallons per acre.

**Application Rates with Tank Mix Partners:**

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

Apply this product at 29.0 – 43.0\* fl. oz./A (0.53 – 0.79 lbs ai/A), depending on weed species, size and density per weed chart. \*Maximum rate in California is 22 fl oz/A (0.4 lb ai/A).

Advised tank mix partners, including atrazine, tembotrione, thiencazuron-methyl, and dicamba, DGA salt.

If a second application is needed, make the second application in a minimum of 7 days after the first application.

Tank mixes may aid in the performance of this product. Please refer to weed chart tables for a listing of weed species controlled at this rate.

No additional surfactant is needed with any tank mix partner.

The tank mix partner must be used in accordance with the label limitations, restrictions and precautions.

**DO NOT** exceed any labeled dosage rates.

**DO NOT** mix this product mix with any product containing a label prohibition against such mixing.

**Adjuvants:**

Ammonium sulfate (AMS) may be used at 1.5 to 3.0 pounds per acre. Adjuvant rates are dependent on a variety of factors including tank mix partners, environmental conditions (including temperature) and potential for leaf burn.

AMS has shown to improve weed control of difficult-to-control weeds, like lambsquarters and velvetleaf, under difficult environmental conditions (including low relative humidity) or hard water.

The use of an anti-foam agent is advised.

**Surfactants / Oils:**

The use of additional surfactants or crop oils in tank mixes with this product may increase the risk of crop response. Please refer to the surfactant label for more detailed information.

**Restrictions to the Directions for Use on Field Corn and Corn Silage Containing LibertyLink Trait:**

- **DO NOT** apply this product within 60 days of harvesting corn forage and within 70 days of harvesting corn grain and corn fodder.
- **DO NOT** apply more than 2 applications of this product to the crop per year. Sequential applications must be at least 10 days apart.
- **DO NOT** apply more than 87.0\* fl. oz./A (1.59 lbs ai/A) of this product on corn per year. \* Maximum annual rate in California is 44 fl. oz./A (0.8 lbs ai/A)
- **DO NOT** exceed the maximum single application rate of 43 fl. oz./A (0.79 lbs ai/A).
- **DO NOT** use nitrogen solutions as spray carriers.
- **DO NOT** apply this product if corn shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.)
- **DO NOT** apply this product through any type of irrigation system.

Refer to the **ROTATIONAL CROP RESTRICTIONS** section under the **PRODUCT INFORMATION** heading of this label for the appropriate rotational crop plant back intervals.

**APPLICATION DIRECTIONS FOR USE ON COTTON CONTAINING THE LIBERTYLINK TRAIT**

Uniform, thorough spray coverage is necessary to achieve consistent weed control. This product may be applied as a broadcast, over-the-top, post-emergence spray or as a directed spray only to cotton containing the LibertyLink trait.

**Application Timing:**

Apply to small and actively growing weeds, targeting less than 3 inch weeds in height. For additional information on weed heights refer to the **WEED CONTROL FOR ROW CROPS** section.

Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to drought, cool temperatures, or extended periods of cloudiness.

This product is a foliar-active material with little or no soil-residual activity.

This product is rainfast 4 hours after application, therefore, rainfall within 4 hours may necessitate retreatment.

For best result:

- On lambsquarters, Palmer amaranth and velvetleaf control, make applications of this product between dawn and 2 hours before sunset.
- Warm temperatures, high humidity, and bright sunlight improve the performance of this product.

Apply this product to cotton from emergence up to the early bloom stage at 29.0 fl. oz./A (0.53 lbs ai/A). If environmental conditions prevent a timely herbicide application, a single application of up to 43.0 fl. oz./A (0.79 lbs ai/A) of this product may be made to cotton. If more than 29.0 fl. oz./A (0.53 lbs ai/A) are used in any single application, the annual total may not exceed 72.0 fl. oz./A (1.32 lbs ai/A), including all application timings. See **Restrictions to the Directions for use on Cotton Containing the LibertyLink Trait** below for additional information.

**Application Rates:****Option 1****3 post applications**

Apply 29 fl. oz./A (0.53 lbs ai/A) per application depending on weed species, size and density per weed chart.

If required, a second application of 29 fl. oz./A (0.53 lbs ai/A) can be applied, followed by a third application of 29 fl. oz./A (0.53 lbs ai/A).

The sequential applications must be made minimum 10 days and must be made up to 14 days after each other.

The maximum annual rate of this product on cotton is 87.0 fl. oz./A (1.59 lbs ai/A).

Use a minimum spray volume of 15 gallons per acre, unless there is a difficult to control situation (including dense canopy, large weeds or unfavorable growing conditions are present). In difficult to control situations use a minimum spray volume of 20 gallons per acre.

**Option 2****2 post applications**

Apply 32 - 43 fl. oz./A (0.59 – 0.79 lbs ai/A) per application depending on weed species, size and density per weed chart.

If required, a second application of 29 fl. oz./A (0.53 lbs ai/A) can be applied.

The sequential applications must be made minimum 10 days and must be made up to 14 days after each other.

The maximum annual rate of this product on cotton is 72 fl. oz./A (1.32 lbs ai/A).

Use a minimum spray volume of 15 gallons per acre, unless there is a difficult to control situation (including dense canopy, large weeds

or unfavorable growing conditions are present). In difficult to control situations use a minimum spray volume of 20 gallons per acre.

Use Pattern	1 <sup>st</sup> Application	2 <sup>nd</sup> Application Minimum 10 Days Up to 14 Days After 1 <sup>st</sup> Application	3 <sup>rd</sup> Application Minimum 10 Days Up to 14 Days After 2 <sup>nd</sup> Application	Annual Maximum
Option 1	29 fl. oz./A (0.53 lbs ai/A)	29 fl. oz./A (0.53 lbs ai/A)	29 fl. oz./A (0.53 lbs ai/A)	87 fl. oz./A (1.59 lbs ai/A)
Option 2	32-43 fl. oz./A (0.59 – 0.79 lbs ai/A)	29 fl. oz./A (0.53 lbs ai/A)	None	72 fl. oz./A (1.32 lbs ai/A)

#### Tank Mix on Cotton Containing the LibertyLink Trait:

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

Certain herbicide tank mixes may aid in the performance of this product. This product may be applied in tank mix combinations with labeled rates of other products provided these other products are labeled for the timing and method of application for the cotton to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

#### Adjuvants:

Ammonium sulfate (AMS) may be used at 1.5 to 3.0 pounds per acre. Adjuvant rates are dependent on a variety of factors including tank mix partners, environmental conditions (including temperature) and potential for leaf burn.

AMS has shown to improve weed control of difficult-to-control weeds, like lambsquarters and velvetleaf, under difficult environmental conditions (including low relative humidity) or hard water.

The use of an anti-foam agent is advised.

#### Surfactants / Oils:

The use of additional surfactants or crop oils in tank mixes with this product may increase the risk of crop response. Please refer to the surfactant label for more detailed information.

#### Restrictions to the Directions for Use on Cotton Containing the LibertyLink Trait:

- **DO NOT** apply this product to cotton **containing the LibertyLink trait** in Florida, South of Tampa (Florida Route 60), or in Hawaii, except for test plots or breeding nurseries.
- **DO NOT** apply this product within 70 days prior to cotton harvest.
- Up to 3 applications of this product may be made to cotton per year at a maximum application rate of 29.0 fl. oz./A (0.53 lb ai/A). **DO NOT** apply more than 87.0 fl. oz./A (including all application timings) to cotton (1.59 lbs ai/A) under this application scenario. Sequential applications must be at least 10 days apart.
- If environmental conditions prevent timely applications resulting in large weeds or heavy infestations, a single application of this product at up to 43.0 fl. oz./A (0.79 lb ai/A) may be made to cotton. **DO NOT** apply more than 43.0 fl. oz./A (0.79 lb ai/A) of this product in a single application under this use scenario. If a single application greater than 29.0 fl. oz./A (0.53 lb ai/A) is made, a subsequent application not to exceed 29.0 fl. oz./A (0.53 lb ai/A) may be made to cotton. The annual total use rate under this scenario may not exceed 72.0 fl. oz./A (1.32 lb ai/A) of this product. Sequential applications must be at least 10 days apart.
- **DO NOT** apply this product through any type of irrigation system.
- Refer to the **ROTATIONAL CROP RESTRICTIONS** section under the **PRODUCT INFORMATION** heading of this label for the appropriate rotational crop plant back intervals.

#### APPLICATION DIRECTIONS FOR USE ON COTTON

Application of this product to cotton varieties not containing the LibertyLink trait requires the use of hooded spray equipment designed to minimize exposure of the spray to the cotton stand. Uniform, thorough spray coverage is necessary to achieve consistent weed control.

#### Application Timing:

Apply to small and actively growing weeds, targeting less than 3 inch weeds in height. For additional information on weed heights refer to the **WEED CONTROL FOR ROW CROPS** section.

Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to drought, cool temperatures, or extended periods of cloudiness.

Applications for this product on cotton may be made from emergence up to early bloom.

This product is a foliar-active material with little or no soil-residual activity.

This product is rainfast 4 hours after application, therefore, rainfall within 4 hours may necessitate retreatment.

For best result:

- On lambsquarters, Palmer amaranth and velvetleaf control, make applications of this product between dawn and 2 hours before sunset.



- Warm temperatures, high humidity, and bright sunlight improve the performance of this product.

#### Application Rates:

##### Option 1

##### 3 post applications

Apply 29 fl. oz./A (0.53 lbs ai/A) per application depending on weed species, size and density per weed chart.

If required a second application of 29 fl. oz./A (0.53 lbs ai/A) can be applied followed by a third application of 29 fluid ounces per acre (0.53 lbs ai/A).

The sequential applications must be made minimum 10 days and must be made up to 14 days after each other.

The maximum annual rate of this product on cotton is 87.0 fl. oz./A (1.59 lbs ai/A).

Use a minimum spray volume of 15 gallons per acre, unless there is a difficult to control situation (including dense canopy, large weeds or unfavorable growing conditions are present). In difficult to control situations use a minimum spray volume of 20 gallons per acre.

##### Option 2

##### 2 post applications

Apply 32 - 43 fl. oz./A (0.59 – 0.79 lbs ai/A) per application depending on weed species, size and density per weed chart.

If required a second application of 29 fl. oz./A (0.53 lbs ai/A) can be applied.

The sequential applications must be made minimum 10 days and must be made up to 14 days after each other.

The maximum annual rate of this product on cotton is 72 fl. oz./A (1.32 lbs ai/A).

Use a minimum spray volume of 15 gallons per acre, unless there is a difficult to control situation (including dense canopy, large weeds or unfavorable growing conditions are present). In difficult to control situations use a minimum spray volume of 20 gallons per acre.

Use Pattern	1 <sup>st</sup> Application	2 <sup>nd</sup> Application Minimum 10 Days Up to 14 Days After 1 <sup>st</sup> Application	3 <sup>rd</sup> Application Minimum 10 Days Up to 14 Days After 2 <sup>nd</sup> Application	Annual Maximum
Option 1	29 fl. oz./A (0.53 lbs ai/A)	29 fl. oz./A (0.53 lbs ai/A)	29 fl. oz./A (0.53 lbs ai/A)	87 fl. oz./A (1.59 lbs ai/A)
Option 2	32-43 fl. oz./A (0.59 – 0.79 lbs ai/A)	29 fl. oz./A (0.53 lbs ai/A)	None	72 fl. oz./A (1.32 lbs ai/A)

#### Adjuvants:

Ammonium sulfate (AMS) may be used at 1.5 to 3.0 pounds per acre. Adjuvant rates are dependent on a variety of factors including tank mix partners, environmental conditions (including temperature) and potential for leaf burn.

AMS has shown to improve weed control of difficult-to-control weeds, like lambsquarters and velvetleaf, under difficult environmental conditions (including low relative humidity) or hard water.

The use of an anti-foam agent is advised.

#### Surfactants / Oils:

The use of additional surfactants or crop oils in tank mixes with this product may increase the risk of crop response. Please refer to the surfactant label for more detailed information.

#### Nozzle Spray Quality:

This product is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. See **SPRAY DRIFT MANAGEMENT** section for more detailed information.

#### Application Methods to Cotton:

Application of this product to cotton varieties not containing the LibertyLink trait requires the use of hooded spray equipment designed to minimize exposure of the spray to the cotton stand. A hooded sprayer directs the spray onto weeds, while shielding the cotton stand from contact. Use nozzles that provide uniform coverage within the treated area. Keep hoods on these sprayers adjusted to protect desirable vegetation. Extreme care must be exercised to avoid exposure of the desirable vegetation to the spray.

With a hooded sprayer, the spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground. If the hoods are raised, spray particles may escape and come into contact with the cotton, causing damage or destruction of the crop.

Herbicide rates and spray volume instructions are presented as broadcast equivalents and must be reduced in proportion to the area actually treated. Use the following formulas to calculate the correct rate and volume per planted (field) acre:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast RATE per acre} = \text{Amount of banded product needed per acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast spray VOLUME per acre} = \text{Banded spray volume needed per acre}$$

### Post-Harvest – Fall Burndown:

This product may be applied as a post-harvest burndown treatment to fields (after cotton harvest). Up to 43.0 fl. oz./A (0.79 lb ai/A) of this product may be applied in a single application to control larger weeds growing in the crop at the time of harvest. If more than 29.0 fl. oz./A (0.53 lb ai/A) is used in a single application, the annual total may not exceed 72.0 fl. oz./A (1.32 lb ai/A), including all application timings. Refer to the **ROTATIONAL CROP RESTRICTIONS** section of this label for appropriate rotational crop information.

### Tank Mix on Cotton:

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

Certain herbicide tank mixes may aid in the performance of this product. This product may be applied in tank mix combinations with labeled rates of other products provided these other products are labeled for the timing and method of application for the cotton to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

## APPLICATION DIRECTIONS FOR USE ON SOYBEANS CONTAINING THE LIBERTYLINK TRAIT

Apply this product only to soybeans containing the LibertyLink trait. Uniform, thorough spray coverage is necessary to achieve consistent weed control.

### Application Timing:

Apply to small and actively growing weeds, targeting less than 3 inch weeds in height. For additional information on weed heights refer to the **WEED CONTROL FOR ROW CROPS** section.

Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to drought, cool temperatures, or extended periods of cloudiness.

Applications for this product on soybeans may be made from emergence up to bloom or R1 growth stage.

This product is a foliar-active material with little or no soil-residual activity.

This product is rainfast 4 hours after application, therefore, rainfall within 4 hours may necessitate retreatment.

For best result:

- On lambsquarters, Palmer amaranth and velvetleaf control, make applications of this product between dawn and 2 hours before sunset.
- Warm temperatures, high humidity, and bright sunlight improve the performance of this product.

### Application Rate:

Apply this product at 29 – 43\* fl. oz./A (0.53 – 0.79 lbs ai/A), depending on weed species, size and density per weed chart. \*Maximum rate in California is 36 fl. oz./A (0.66 lbs ai/A)

If a second application is needed, make the second application of 29 – 43\* fl. oz./A (0.53 – 0.79 lbs ai/A), can be applied up to a yearly maximum of 87.0\* fl. oz./A (1.59 lbs ai/A). \*Maximum rate in California is 36 fl. oz./A (0.66 lbs ai/A) and maximum annual rate in California is 72 fl. oz./A (1.32 lbs ai/A).

The maximum annual rate of this product on soybeans is 87.0\* fl. oz./A (1.59 lbs ai/A). \*Maximum annual rate in California is 72 fl. oz./A (1.32 lbs ai/A)

Use a minimum spray volume of 15 gallons per acre, unless there is a difficult to control situation (including dense canopy, large weeds or unfavorable growing conditions are present). In difficult to control situations use a minimum spray volume of 20 gallons per acre.

Use Pattern Rate Ranges		
1st Application	2nd Application Minimum of 5 Days After 1 <sup>st</sup> Application	Annual Maximum
29.0 to 43.0* fl. oz./A (0.53 – 0.79 lbs ai/A)	29.0 to 43.0* fl. oz./A (0.53 – 0.79 lbs ai/A)	87.0* fl. oz./A (1.59 lbs ai/A)

\*Maximum rate in California is 36 fl oz/A (0.66 lbs ai/A) with annual maximum of 72 fl oz/A (1.32 lbs ai/A).

### Adjuvants:

Ammonium sulfate (AMS) may be used at 1.5 to 3.0 pounds per acre. Adjuvant rates are dependent on a variety of factors including tank mix partners, environmental conditions (including temperature) and potential for leaf burn.

AMS has shown to improve weed control of difficult-to-control weeds, like lambsquarters and velvetleaf, under difficult environmental conditions (including low relative humidity) or hard water.

The use of an anti-foam agent is advised.

### Surfactants / Oils:

The use of additional surfactants or crop oils in tank mixes with this product may increase the risk of crop response. Please refer to the surfactant label for more detailed information.

### Nozzle Spray Quality:

This product is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. See **SPRAY DRIFT MANAGEMENT** section for more detailed information.



**Restrictions to the Directions for Use on Soybeans Containing the LibertyLink Trait:**

- **DO NOT** apply this product within 70 days of harvesting soybean seed.
- **DO NOT** apply more than 87.0 fl. oz./A (1.59 lbs ai/A) of this product on soybeans per year.
- **DO NOT** apply more than 43.0\* fl. oz./A (0.79 lbs ai/ A) of this product in a single application. \*Maximum rate in California is 36 fl. oz./A (0.66 lbs ai/A).
- **DO NOT** make more than 3 applications per year.
- **DO NOT** graze the treated crop or cut for hay.
- **DO NOT** use nitrogen solutions as spray carriers. A silicone-based antifoam agent may be added if needed.
- **DO NOT** apply this product if soybeans show injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply this product through any type of irrigation system.
- Refer to the **ROTATIONAL CROP RESTRICTIONS** section under the **PRODUCT INFORMATION** heading of this label for the appropriate rotational crop plant back intervals.
- Sequential applications must be at least 5 days apart.

**Soybean Tank Mix Instructions:**

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

Certain herbicide tank mixes may complement this product. No additional surfactant is needed with any tank mix partner. This product may be applied in tank mix combinations with labeled rates of other products provided these other products are labeled for the timing and method of application for the soybean to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

**APPLICATION DIRECTIONS FOR CANOLA, CORN, COTTON, AND SOYBEAN SEED PROPAGATION**

This product may be applied to select out susceptible "segregates", i.e., canola, corn, cotton, and soybean plants that do not contain the LibertyLink trait during seed propagation.

**• Canola Containing as LibertyLink Trait:**

This product may also be used in canola seed propagation as a foliar spray to selectively eliminate canola plants that do not carry a gene that imparts resistance to glufosinate-ammonium and as such, can be applied to remove susceptible segregates during canola seed propagation. Breeding material not possessing the glufosinate-ammonium resistance gene will be severely injured or killed if treated with this herbicide. See **APPLICATION DIRECTIONS FOR USE ON CANOLA CONTAINING THE LIBERTYLINK TRAIT** for use rates and application timing.

**• Corn Containing the LibertyLink Trait:**

Inbred lines, plants not containing the LibertyLink trait, will be severely injured or killed if treated with this herbicide. A hooded sprayer may be used to protect plants from coming into contact with the herbicide application. For the selection of resistant corn "segregates," This product may be applied at 22.0 fl. oz./A (0.4 lbs ai/A) plus AMS at 3.0 pounds per acre (17.0 pounds per 100 gallons) when corn is in the V-3 to V-4 stage of growth, i.e., 3 to 4 developed collars. A second treatment of 22.0 fl. oz./A plus AMS at 3.0 pounds per acre may be applied when the corn is in the V-6 to V-7 stage of growth or up to 24 inches tall. Sequential applications must be at least 10 days apart. When temperatures exceed 85 °F, the rate of AMS can be reduced to 1.5 pounds per acre (8.5 pounds per 100 gallons) to reduce potential leaf burn.

**• Cotton Containing the LibertyLink Trait:**

This product may also be used in cotton seed propagation as a foliar spray to selectively eliminate cotton plants that do not carry the LibertyLink trait and as such, can be applied to remove susceptible segregates during cotton seed propagation. Breeding material not containing the LibertyLink trait will be severely injured or killed if treated with this herbicide. See **APPLICATION DIRECTIONS FOR USE ON COTTON CONTAINING THE LIBERTYLINK TRAIT** for use rates and application timing.

**• Soybeans Containing the LibertyLink Trait:**

For the selection of resistant soybean "segregates," this product may be applied at up to 29.0 to 43.0\* fl. oz./A (0.53 – 0.79 lbs ai/A) when soybean is in the third trifoliolate stage. A second treatment of 29.0 to 43.0\* fl. oz./A (0.53 – 0.79 lbs ai/A) may be applied up to but not including the bloom growth stage of soybean. Sequential applications must be at least 5 days apart. \* Maximum rate in California is 36 fl. oz./A (0.66 lbs ai/A)

**APPLICATION DIRECTIONS FOR USE ON LISTED TREE, VINE, AND BERRY CROPS**

Apply this to the tree, vine, and berry crops listed below. Uniform, thorough spray coverage is necessary to achieve consistent weed control.

**REGISTERED CROPS:****BERRIES:****Crop Subgroup 13-B: Bushberry Subgroup**

Blueberry, highbush; blueberry, lowbush; currant; elderberry; gooseberry; huckleberry

Juneberry; lingonberry; salal

### Citrus Crop Group 10–10

Orange or tangerine/mandarin - Calamondin; citron; citrus hybrids; Mediterranean mandarin; orange, sour; orange, sweet; satsuma darin; tachibana orange; tangerine (mandarin); tangelo; tangor; trifoliate orange; cultivars, varieties, and/or hybrids of these.

Lemon or lime - Australian desert lime; Australian finger lime; Australian round lime; brown river finger lime; kumquat; lemon; lime; mount white lime; New Guinea wild lime; Russell River lime; sweet lime; Tahiti lime; cultivars, varieties, and/or hybrids of these.

Grapefruit - Grapefruit; Japanese summer grapefruit; pummelo; tangelo; uniq fruit; cultivars, varieties, and/or hybrids of these.

**Olives:** all olive varieties

### Pome Fruit (Crop Group 11-10):

#### Crop Group 11. Pome Fruits Group

Apple; crabapple; loquat; mayhaw; pear; pear, oriental; quince; azarole; hook; medlar; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties and/or hybrids of these.

### Stone Fruit (Crop Group 12-12):

#### Crop Group 12. Stone Fruit Group

Apricot; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, chickasaw; plum, damson; plum, Japanese; plumcot; prune; capulin; jujube and sloe; cultivars, varieties and/or hybrids of these

### Tree Nuts (Crop Group 14 including Pistachios):

#### Crop Group 14. Tree Nuts Group

Almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut (bush nut); pecan; pistachios; walnut, black and English

**Grapes:** all grape varieties (table, wine and raisins)

### Application Rate and Timing:

For best results, apply to emerged, young, actively growing weeds. Warm temperatures, high humidity, and bright sunlight improve the performance of this product. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. Weeds under stress or in dense populations will require application at the highest specified label use rate. Stressed conditions also include prior treatments of other contact or systemic herbicides. **DO NOT** retreat these weeds with this product until sufficient regrowth has occurred.

Apply this product as a directed spray to control undesirable vegetation in tree, vine, and berries listed on this label. Apply as a broadcast, banded, or spot treatment application depending on the situation to control weeds listed under the heading **Weeds Controlled in Tree, Vine and Berry Crops**. Avoid direct spray or drift to desirable vegetation. Regrowth may occur due to the weed stage of growth at application, low use rate, or environmental conditions. Repeat applications of this product may be necessary to control plants generating from underground parts or seed.

Avoid contact of this product solution, spray, drift or mist with green bark, stems, or foliage, as injury may occur to trees, vines, and berries. **Only trunks with callused, mature brown bark needs to be sprayed unless protected from spray contact by nonporous wraps, grow tubes, or waxed containers. Contact of this product with parts of trees, vines, or berries other than mature brown bark can result in serious damage.**

### Application Methods for Broadcast Applications:

Apply this product at the rates listed below for broadcast applications based on weed size and stage of growth.

Weed Size and Stage	Rate of this product
Weeds < 3 in height	48 fl. oz./A (0.88 lbs ai/A)
Weeds < 6 in height pre tiller grasses	56 fl. oz./A (1.02 lbs ai/A)
Weeds > 6 in height and/or grasses that have tillered	56-82 fl. oz./A (1.02 – 1.5 lbs ai/A)

### Application Methods for Banded Spray Applications:

Banded applications may be used using the following formula to calculate the amount of herbicide needed for orchard or vineyard strip sprays:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Rate per acre broadcast} = \text{Amount of herbicide needed for treatment}$$

### Application Methods for Spot or Directed-Spray Applications:

For spot or directed spray applications: mix this product at 1.7 fl. oz. of product (0.031 lbs ai) per gallon of water. Apply to undesirable vegetation foliage until wet but prior to runoff. Ensure uniform and complete coverage. Thoroughly clean the sprayer following use. **DO**

**NOT** make spot or directed spray applications to tree or vine trunk as injury may occur.

## Weeds Controlled in Tree, Vine and Berry Crops:

### Broadleaf Weeds

Alkali sida	Fleabane, annual	Morningglory, ivyleaf	Smartweed, Pennsylvania
Ammannia, purple	Goosefoot	Morningglory, pitted	Sowthistle, annual
Arrowhead, California	Gromwell, field	Mullein, turkey	Spurge, prostrate
Buckwheat, wild	Groundcherry, cutleaf	Mustard, wild	Starthistle, yellow
Buffalobur	Groundsel, common	Nettle	Sunflower, common
Burclover, California	Henbit	Nightshade, black	Sunflower, prairie
Carpetweed	Jimsonweed	Nightshade, eastern black	Sunflower, volunteer
Chickweed, common	Knotweed	Nightshade, hairy	Swinecress
Chinese thornapple	Kochia	Pennycress	Thistle, Russian
Cocklebur, common	Lambsquarters, common	Pigweed, redroot	Turnip, wild
Copperleaf, Virginia	Lettuce, miner's	Pineapple-weed	Velvetleaf
Cudweed	Lettuce, prickly	Puncturevine	Vervain
Cutleaf eveningprimrose	London rocket	Purslane, common	Vetch
Dodder	Mallow, common	Radish, wild	Virginia copperleaf
Eclipta	Malva (little mallow)	Ragweed, common	Willowherb, panicle
Fiddleneck	Marestail	Ragweed, giant	
Filaree	Mayweed	Redmaids	
Filaree, redstem	Morningglory, entireleaf	Shepherd's-purse	

### Grass Weeds

Barnyardgrass	Crabgrass, smooth	Junglerice	Shattercane
Bluegrass, annual	Cupgrass, woolly	Oat, wild	Sprangletop
Brome, ripgut	Foxtail, giant	Panicum, fall	Stinkgrass
Bromegrass, downy	Foxtail, green	Panicum, Texas	Wheat, volunteer
Canarygrass	Foxtail, yellow	Rush, toad**	Windgrass
Chess, soft	Goosegrass	Ryegrass, annual*	Witchgrass
Crabgrass, large	Johnsongrass, seedling	Sandbur, field	

### Biennial and Perennial Weeds

Aster, white heath	Clover, red	Horsetail	Paragrass	Thistle, musk
Bindweed, field	Clover, white	Lovegrass	Plantain	Torpedograss
Bindweed, hedge	Dallisgrass	Mugwort	Poison ivy/oak	Vaseygrass
Bluegrass, Kentucky	Dandelion	Mullein, common	Quackgrass	Woodsorrel
Bromegrass, smooth	Dock, curly	Mustard, tansy	Rocket, yellow	Yarrow, common
Bulrush**	Dogbank (hemp)	Nutsedge, purple	Rose, wild	
Burdock	Fescue	Nutsedge, yellow	<i>Rubus</i> spp.	
Canada thistle	Golden rod, gray	Onion, wild	Spurge, leafy	
Clover, Alsike	Guineagrass	Orchardgrass	Thistle, bull	

\* apply to annual ryegrass prior to 3 inches in height

\*\*indicates suppression

### Restrictions to the Directions for Use on Tree, Vine, and Berry Crops:

- **DO NOT** apply more than 164 fl. oz./A (3 lbs ai/A) to berry bushes and stone fruit in a 12-month period.
- **DO NOT** exceed the maximum single application rate of 82 fl. oz./A (1.50 lbs ai/A).
- **DO NOT** make more than 2 applications per year at a maximum application rate of 82 fl. oz./A (1.5 lbs ai/A) per application to berry bushes and stone fruit.
- **DO NOT** apply more than 246 fl. oz./A (4.5 lbs ai/A) of this product per acre to tree nuts, vines, pome fruit, citrus and olives in any calendar year.
- **DO NOT** make more than 3 applications at a maximum rate of 82 fl. oz./A (1.5 lbs ai/A) per application to tree nuts, vines, pome fruits, citrus and olives.
- **DO NOT** graze harvest, and/or feed treated orchard cover crops to livestock.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply this product aerially to tree, berry, or vine crops.
- **DO NOT** apply this product within 14 days of nut, fruit, berry, or grape harvest.
- Applications to citrus fruits, pome fruits and olives must be a minimum of 14 days apart.
- Applications to stone fruit must be a minimum of 28 days apart.
- Applications to berry bushes must be a minimum of 14 days apart.
- **DO NOT** make spot spray applications to suckers, as tree injury may occur.

### Sucker Control with this product:

This product will reduce or eliminate sucker growth when applied to suckers that are young, green, and uncalled. For sucker control, apply a split application approximately 4 weeks apart at 56.0 fl. oz./A (1.02 lbs ai/A). Coverage of all sucker foliage is necessary for optimum control. Suckers must not exceed 12 inches in length.

### Tank Mix Partner Instructions:

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

This product does not provide residual weed control or control of unexposed plant parts. Certain herbicide tank mixes may aid in the performance of this product or be added to provide residual herbicide activity. No additional surfactant is needed with any tank mix partner. This product may be applied in tank mix combinations with labeled rates of other products provided these other products are labeled for the timing and method of application for the crop to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

Diuron  
Flumioxazin

Napropamide  
Norflurazon

Oryzalin  
Simazine

Terbacil

## APPLICATION DIRECTIONS FOR POTATO VINE DESICCATION

### Application Rates and Timing:

Apply this product at the beginning of natural senescence of potato vines. Apply 21.0 fl. oz./A (0.38 lbs ai/A). **DO NOT** split this application or apply more than 1 application per harvest (per year). Potato varieties with heavy or dense vines may require an application of another desiccation product to complete vine desiccation.

Thorough coverage of the potato vines to be desiccated is essential. Use a sufficient volume of water (20.0 to 100 gallons per acre) to obtain a thorough coverage of the potato vines. Vary the gallons of water per acre and the spray pressure as indicated by the density of the potato vines to assure thorough spray coverage. Increase the spray volume to at least 30.0 gallons of water per acre when the potato vine canopy is dense or under cool and dry conditions. Apply this product with the spray boom as low as possible to achieve thorough coverage of the potato vines for best control and to minimize drift potential.

### Restrictions to the Directions for Use in Potato Vine Desiccation:

- **DO NOT** apply more than 21.0 fl. oz./A (0.38 lbs ai/A) to potato vines per year or per single application.
- **DO NOT** harvest potatoes until 9 days or more after application of this product.
- **DO NOT** apply to potatoes grown for seed.
- Potatoes, canola, corn, cotton, soybean, and sugar beets may be planted at any time after the application of this product as a potato vine desiccant.
- **DO NOT** plant treated areas to wheat, barley, buckwheat, millet, oats, rye, sorghum, and triticale until 30 or more days after an application of this product as a potato vine desiccant.
- **DO NOT** plant treated areas to crops other than those listed in this use precautions section until 120 or more days after an application of this product as a potato vine desiccant.
- **DO NOT** split this application or apply more than one application per harvest (per year).

## FALLOW FIELDS OR POST HARVEST

This product may be used as a substitute for tillage to control or suppress weeds in the **WEED CONTROL FOR ROW CROPS** section of this label. Applications may be made in fallow fields, post harvest, prior to planting or emergence of any crop listed on this label.

Apply this product at 22.0 or 29.0 fl. oz./A (0.2 to 0.53 lb ai/A) to fallow fields to control specific weeds. This product must be applied with ammonium sulfate. Tank mixes with 2,4-D, glyphosate or atrazine are specified with this product to enhance total weed control. When using this product in tank mix combinations, follow the precautions and directions of use of the most restrictive label. See **APPLICATION AND MIXING PROCEDURES** section of this label for additional information on how to apply this product. See the **PRODUCT INFORMATION** section of this label for rotational crop restrictions.

### Restrictions to the Directions for Use on Fallow Fields or Post Harvest:

- **DO NOT** apply more than 29.0 fl. oz./A (0.53 lbs ai/A) in a single application.
- **DO NOT** make more than 3 applications per year.
- **DO NOT** make sequential applications sooner than 14 days apart.
- **DO NOT** apply more than 87 fl. oz./A (1.59 lbs ai/A) per year.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Do not use or store near heat or open flame. Keep container tightly closed and dry in a cool, well ventilated place. Storage temperature must not exceed 125° F. If storage temperature of this product is below 32° F, the material must not be pumped until its temperature exceeds 32° F. Protect against direct sunlight.

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

### CONTAINER HANDLING:

**NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "No refillable" or "Refillable" designation. Follow the container handling instructions below that apply to your container type / size."

**Non-refillable Containers 5 Gallons or Less:** Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**SEED DISPOSAL:** To dispose of out-of-date or otherwise unmarketable seed from plants, which have been treated with this product, broadcast and lightly incorporate seed into field soils using disc or other suitable implement. Any resulting crop may be destroyed by chemical or mechanical means. Alternatively, seed may be destroyed by deep burial, incineration or landfill disposal.

## WARRANTY DISCLAIMER

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

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