



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505T)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

89442-63

Date of Issuance:

2/27/23

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Surmise 5 PRO

Name and Address of Registrant (include ZIP Code):

Prime Source
A Division of Albaugh, LLC
1525 NE 36th Street
Ankeny, IA 55021

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, "EPA Reg. No. 89442-63."
3. Submit one copy of the final printed label for the record before you release the product for shipment.

Continues page 2

Signature of Approving Official:

Heather McFarley, Product Manager 24
Fungicide Herbicide Branch, Registration Division (7505T)

Date:

2/27/23

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF(s):

- Basic CSF dated 01/31/2022

If you have any questions, please contact BeWanda Alexander at (202)566-2465 or at alexander.bewanda@epa.gov.

Enclosure:

- Stamped label

SURMISE 5 PRO

HERBICIDE FOR NONSELECTIVE WEED CONTROL OF EMERGED WEEDS

ACTIVE INGREDIENT

Glufosinate ammonium* 45.9%

OTHER INGREDIENTS 54.1%

TOTAL **100.0%**

* Liquid soluble concentrate containing 4.6 pounds of active ingredient per U.S. gallon

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • DO NOT induce vomiting unless told to do so by a poison control center or doctor. • DO NOT give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
<p>HOTLINE NUMBER: Have the product container or label with you when calling a poison control center or doctor or going for treatment. FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL CHEMTREC® TOLL FREE AT 1-800-424-9300.</p>	
<p>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.</p>	

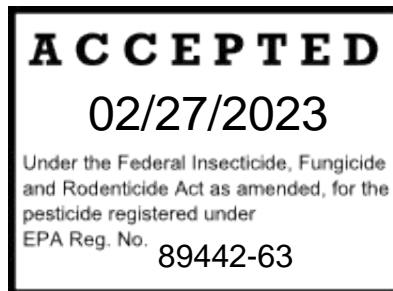
See inside label booklet for additional PRECAUTIONARY STATEMENTS and DIRECTIONS FOR USE.

EPA Reg. No. 89442-__

EPA Est. No. _____

Net Contents: _____ (gallons)

Manufactured [for][by]:
Prime Source, A Division of Albaugh, LLC
1525 NE 36th Street
Ankeny, IA 50021



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers/Loaders/Applicators and other handlers must wear:

- Long-sleeved shirt and long pants, socks, shoes, and waterproof gloves (including Natural Rubber).
- Wear protective eyewear (goggles, face shield, or safety glasses).

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **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 as possible, wash thoroughly and change into clean clothing.

ENGINEERING CONTROL 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 wash waters 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 including no till limited till and contour plowing these methods also 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 runoff is advised.

PHYSICAL OR CHEMICAL HAZARDS

DO NOT mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur.

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 any 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.

[NOTE TO REVIEWER: The statement "Not for use in _____" (e.g. Not for use in California) may be added or removed from Directions for Use as required.]

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, nurseries, or greenhouses. The application for trimming and edging, industrial, recreational and public areas, and farmsteads are not within the scope of the WPS.

DO NOT allow children, pets or people to enter the sprayed area until treated foliage is completely dry.

WEED RESISTANCE MANAGEMENT

For resistance management, SURMISE 5 PRO is a Group 10 herbicide (glutamine synthetase inhibitor). Any weed population may contain or develop plants naturally resistant to SURMISE 5 PRO and other Group 10 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

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.

Report any incidence of non-performance of this product against a particular weed species to your Prime Source, A Division of Albaugh, LLC representative or call 1-800-247-8013 or at www.primesource-albaugh.com. If resistance is suspected, treat weed escapes with an herbicide having a different mode of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

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 that considers mechanical control methods, cultural (e.g., timing to favor the turf and not the weeds), biological (weed-competitive varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. 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. Prevent movement of resistant weed seeds to other areas by cleaning equipment.
- 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 more information on Weed Resistance Management, visit the Herbicide Resistance Action Committee (HRAC) on the web at <http://www.hracglobal.com>.

PRODUCT INFORMATION

SURMISE 5 PRO is a nonselective water-soluble herbicide for application as a foliar spray for the control of a broad-spectrum of emerged annual and perennial grass and broadleaf weeds. SURMISE 5 PRO will also control certain woody species. Plants that have not yet emerged at the time of application will not be controlled. THOROUGH SPRAY COVERAGE IS IMPORTANT. Visual effects and control from application of SURMISE 5 PRO occur within 2 to 4 days after application under good growing conditions.

This product is nonselective and will injure or kill all green vegetation contacted by the spray. Avoid all contact with foliage or green tissue of desirable vegetation. If desirable vegetation is contacted, rinse the sprayed portion with water immediately.

SURMISE 5 PRO works best when weeds are actively growing. 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 rate specified. Refer to the **How to Apply** section of this label.

NONCROP USES

When applied as specified in this label, SURMISE 5 PRO controls annual and perennial weeds.

Refer to the **How to Apply** section of this labeling for specified rates and a list of weeds controlled. Applications may be made on a broadcast, banded or spot treatment basis depending on the situation. 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.

WHERE TO APPLY

Trimming and edging

SURMISE 5 PRO may be used for trimming and edging landscape areas including:

Around individual trees and shrubs, Around buildings and foundations, landscape beds, around sign and light posts, along fences, driveways, sidewalks and paths, parking areas, golf course cart paths and around sand traps.

For control of weeds emerging from seed, the use of SURMISE 5 PRO in a tank mix with preemergence herbicides is specified. If spraying in areas adjacent to desirable plants, use a shield made of cardboard, plywood, or sheet metal while spraying to help prevent spray from contacting foliage of desirable plants.

Refer to the **How to Apply** section of this labeling for appropriate application rates to control specific weeds.

Recreational and Public Areas

When applied as a spot or directed spray application, this product controls annual and perennial weeds listed on this label in areas including: airports, educational facilities, roadsides, parking lots, schools, storage areas,. Refer to the **How to Apply** section of this labeling for appropriate application rates to control specific weeds.

Dormant Bermudagrass

SURMISE 5 PRO may be used to control winter annual weeds in well-established ornamental dormant hybrid or common Bermudagrass. Apply only when the turf is fully dormant and prior to spring green-up or severe turfgrass injury or delayed green-up may occur. For best results, apply SURMISE 5 PRO at a rate of 16.6 – 41.6 fl. oz. (0.52 to 1.3 quarts) (0.6 – 1.5 lbs AI) per acre after most weeds have germinated and are in an early growth stage. Refer to the **Broadleaf Weeds, Grass and Sedge** table in the **Use Rates** section for selecting specified rates. Applications of SURMISE 5 PRO may also be used to suppress or control undesirable biennial or perennial weeds.

DO NOT apply more than 40.6 fl. oz. (1.27 quarts) (1.46 lbs AI) of SURMISE 5 PRO per acre per year for this use. Avoid high volume and spot applications where spray volume exceeds 80 gallons per acre or injury or delayed green-up may occur.

Not for use on Residential Turf/Turfgrass/Lawns.

Ornamentals and Christmas Trees

When applied as specified by this label, this product may be used for the control of undesirable vegetation in site preparation prior to planting, around and within shade and greenhouses, and as a directed spray around containers and field-grown established ornamentals and Christmas trees.

DO NOT apply directly to or allow drift to contact desirable green tissue or green, thin, or uncalloused bark of desirable vegetation or injury may result. DO NOT apply SURMISE 5 PRO as an over-the-top broadcast spray in ornamentals and shade or Christmas trees.

Directed spray application:

SURMISE 5 PRO may be applied as a directed spray to control in-row weeds in field-grown woody plants. Refer to the **How to Apply** section of this labeling for appropriate application rate to control specific weeds. This product may also be used between and around containers and in site preparation for new planting.

Site preparation application:

This product may be used for pre-plant site preparation for the control of annual and perennial weeds listed on this label, in ornamental and Christmas tree plantings.

Refer to the **How to Apply** section of this labeling for appropriate application rates to control specific weeds.

Greenhouse and shade house applications (WPS USE):

SURMISE 5 PRO may be used to control weeds in greenhouses and shadehouses.

Air circulation fans must be turned off during application. Apply SURMISE 5 PRO as a directed spray, using large droplet and low-pressure type nozzles. Avoid drift and direct contact with desirable vegetation. **DO NOT** use in greenhouses or shade houses containing edible crops.

Farmsteads:

When applied as specified, this product controls undesirable plant vegetation in noncrop areas around farmstead building foundations, shelter belts, and along fences. Refer to the **How to Apply** section of this labeling for appropriate application rates to control specific weeds. **DO NOT** allow grazing of treated vegetation.

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

WHEN TO APPLY

SURMISE 5 PRO is a foliar-active material. Best results are obtained when weeds are actively growing. 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 of the highest rate specified. Refer to the **How to Apply** section of this label.

SURMISE 5 PRO must be applied at the rate specified in the **How to Apply** section of this label. Repeat applications of SURMISE 5 PRO or tank mixes of SURMISE 5 PRO plus one or more appropriate residual herbicide(s) listed on this label will be needed to control weeds emerging from underground parts or seeds.

HOW TO MIX

SURMISE 5 PRO must be mixed with water to make a finished spray solution as follows:

1. Fill the spray tank with the required amount of water.
2. Add the proper amount of this product, then mix thoroughly.

USE RESTRICTIONS

- **DO NOT** apply by air.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** allow grazing of vegetation treated with this product.
- **DO NOT** apply directly to or allow drift to contact desirable green tissue or green, thin, or uncalloused bark of desirable vegetation.
- For spot or directed applications, **DO NOT** apply beyond runoff.
- **DO NOT** use in greenhouses or shade houses containing edible crops.
- Plants may be safely planted into SURMISE 5 PRO treated areas after spray has dried.
- Maximum Rate – Annual
 - **DO NOT** apply more than 125.2 fl. oz. (3.9 quarts) of this product per acre per year (4.5 lb ai/A/year)
- Maximum Rate – Single Application
 - **DO NOT** apply more than 41 fl. oz. (1.3 quarts) of this product per acre per year (1.5 lb ai/A/year)
- Maximum Number of Applications per Year
 - **DO NOT** apply more than 3 broadcast applications per year when using reduced application rates (not to exceed a maximum of 1.5 lb ai/A/year).
- Minimum Retreatment Interval is 14 days for non-crop areas and 28 days for conifer/hardwood trees and lawns/gardens.
- **DO NOT** apply more than 2 applications per year on dormant bermudagrass.
- **DO NOT** make more than 3 spot applications (same spot of <1,000 sq. ft.) per year.
- Not for use on residential turf/turfgrass/lawns.
- **DO NOT** spray plants or grasses you like – they will die.

USE PRECAUTIONS

- SURMISE 5 PRO is rainfast in a minimum of 30 minutes and up to 4 hours after application depending upon environmental conditions, weed species and herbicide application rate.
- Plants may be safely planted into SURMISE 5 PRO treated areas after spray has dried.
- Uniform and thorough coverage is necessary to achieve consistent control
- Weed control may be reduced if application is made when weeds are under drought stress.

HOW TO APPLY

Spot or Directed Applications

This product may be used as a spot or directed spray application using 0.19 to 0.39 fl. oz. (0.007- 0.014 lbs AI) per gallon of water. Spray undesirable vegetation foliage on a spray-to-wet basis. **DO NOT** apply beyond runoff. Ensure uniform and complete coverage. Use a coarse spray. **DO NOT** spray during windy conditions. Backpack, pump-up, and hydraulic sprayers may be used. Thoroughly clean the sprayer following use.

Broadcast or Boom Applications

Apply 16.6 – 41.6 fl. oz. (0.52 to 1.3 quarts) (0.6 – 1.5 lbs AI) per acre depending upon the weed and stage of growth as shown in the following sections. Use a minimum of 40 gallons of water per acre with a minimum of 30-psi spray pressure. 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.

Tank Mix Instructions for Noncrop Uses

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 8.5 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 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

- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.
- Applicators must select nozzles and pressure that deliver medium to coarse droplets in accordance with American Society of Agricultural & Biological Engineers Standard 527 (ASABE 572).
- 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

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.
- **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.

USE RATES

BROADLEAF WEEDS, GRASS AND SEDGE

[LOWER USE RATE]

Spot Application:

Apply 0.5 fl. oz. (0.018 lbs AI) per gallon of water when the weed height or diameter is less than 6 inches.
Apply 0.75 fl. oz. (0.027 lbs AI) per gallon of water when the weed height or diameter is 6 inches or greater.

Broadcast Application:

Apply 25 fl. oz. (0.78 quarts) (0.9 lbs AI) per acre when the weed height or diameter is less than 6 inches.
Apply 41.6 fl. oz. (1.3 quarts) (1.5 lbs AI) per acre when the weed height or diameter is 6 inches or greater.

Broadleaf Weeds		Grass and Sedge	
Chickweed	London Rocket	Barnyardgrass	Lovegrass
Clover	Malva (little mallow)	Cupgrass	Shattercane
Common Cocklebur	Marestail	Fall panicum	Smallflower Alexandergrass
Filaree	Purslane	Giant	(signal grass)
Jimsonweed	Shepherdspurse	Foxtail	Stinkgrass
Kochia	Smartweed	Goosegrass	Windgrass
		Green foxtail	Yellow Foxtail

[HIGHER USE RATE]

Spot Application:

Apply 0.75 fl. oz. (0.027 lbs AI) per gallon of water when the weed height or diameter is less than 6 inches.
Apply 1 fl. oz. (0.036 lbs AI) per gallon of water when the weed height or diameter is 6 inches or greater.

Broadcast Application:

Apply 32 fl. oz. (1 quarts) (1.2 lbs AI) per acre when the weed height or diameter is less than 8 inches tall.
Apply 41.6 fl. oz. (1.3 quarts) (1.5 lbs AI) per acre when the weed height or diameter is 8 inches or greater.

Broadleaf Weeds		Grass and Sedge	
annual sowthistle	pennycress	annual bluegrass	nutsedge
bindweed	pigweed, red root	bahiagrass	paragrass
buffalobur	plantain	barley	quackgrass
burdock	prickly lettuce	Bermudagrass	ryegrass
Canada thistle	ragweed	carpetgrass	sandbur
curly dock	Russian thistle	crabgrass	smooth bromegrass
dandelion	Tansy mustard	dallisgrass	Torpedograss
dogbane (hemp)	Velvetleaf	downy bromegrass	Vaseygrass
field gromwell	Virginia copperleaf	fescue	Wheat
fleabane	white heath aster	guineagrass	Wild oat
goldenrod	wild buckwheat	Kentucky bluegrass	
horsetail	wild mustard		
lambsquarters	wild onion		
leafy spurge	wild rose		
mugwort	wild turnip		
musk thistle	woodsorrel		
nettle	yellow rocket		
nightshade			

USE NOTES:

1. Use higher rates within the specified rate range for plant sizes listed when vegetation cover is dense or when weeds are growing under stressed conditions including drought or when average temperatures are below 50°F.
2. The addition of 8.5 to 17 pounds of ammonium sulfate (spray grade) per 100 gallons of water (1 to 2% by weight) or 2 to 4 pounds of ammonium sulfate per acre may improve the level of weed control.

WOODY SPECIES

When applied as specified, SURMISE 5 PRO will provide control, partial control, or suppression of certain perennial woody weed species.

Blackberry (*Rubus* spp.), Deer brush (*Ceanothus integerrimus*), Douglas Fir (*Pseudotsuga menziesii*), Gallberry (*Ilex* spp.), Hazel (*Corylus* spp.), Honeysuckle (*Lonicera* spp.), Huckleberry (*Gaylussacia* spp.), Maple (*Acer* spp.), Multiflora rose (*Rosa multiflora*), Oak (*Quercus* spp.), Pine (*Pinus* spp.), Poison ivy (*Toxicodendron radicans*), Poison oak (*Toxicodendron toxicarium*), Roundleaf greenbriar (*Smilax rotundifolia*), Salmonberry (*Rubus spectabilis*), Sweet gum (*Liquidambar styraciflua*), Sumac (*Rhus* spp.), Thimbleberry (*Rubus parviflorus*), Trumpetcreeper (*Campsis radicans*), Vine maple (*Acer circinatum*), Western red cedar (*Thuja plicata*)

Application Rate: Apply 16.6 – 41.6 fl. oz. (0.52 to 1.3 quarts) (0.6 – 1.5 lbs AI) per acre.

USE NOTES:

1. Use the higher specified rates per acre of this product when conditions are not optimum for spray penetration, including when vegetation growth is heavy or dense.
2. Lower specified rates may be used when the target species is a conifer and when vegetation growth conditions allow for uniform spray coverage.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage, disposal or cleaning of equipment. Containers are not to be reused or refilled.

PESTICIDE STORAGE: Store in a cool, dry place and in such a manner as to prevent potential contamination of water, food, or feed by storage or disposal. Store in original container and out of reach of children, preferably in a locked storage area. Containers are not to be reused or refilled unless marked as refillable.

DO NOT store above 100°F for extended periods of time. Storage below 20°F can result in formation of crystals. If product crystallizes, store at 50°F to 70°F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

PESTICIDE DISPOSAL: Open dumping is prohibited. Pesticide wastes are toxic. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. 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:

[Rigid, Plastic, Nonrefillable containers small enough to shake (i.e. with capacities equal to or less than five gallons).]: Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 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 if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

[Rigid, Plastic, Nonrefillable containers that are too large to shake (i.e. with capacities greater than 5 gallons or 50 lb).]: Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling or reconditioning if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

CONDITIONS OF SALE AND WARRANTY

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Prime Source, A Division of Albaugh, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, Prime Source, A Division of Albaugh, LLC MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Prime Source, A Division of Albaugh, LLC is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, PRIME SOURCE, A DIVISION OF ALBAUGH, LLC DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR PRIME SOURCE, A DIVISION OF ALBAUGH, LLC'S ELECTION, THEREPLACEMENT OF PRODUCT.

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LABEL HISTORY
(Not included in final printed label)

File Name	Version Mark	Comment
089442-XX.20220131.DRAFT	013122	Initial Draft Labeling
089442-000AG.20230123.DRAFT	012323	(e) Label Revisions
089442-000AG.20230222.DRAFT	022223	(e) Label Revisions