



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

October 4, 2019

Robert L. Hamilton  
Senior Regulatory Scientist  
Valent U.S.A. LLC  
1600 Riviera Ave., Suite 200  
Walnut Creek, CA 94596

Subject: Label Amendment – Update rotational restrictions  
Product Name: V-10452 3.04 SC Herbicide  
EPA Registration Number: 59639-237  
Application Date: 08/30/2019  
Decision Number: 555246

Dear Mr. Hamilton:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.


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 the Federal Insecticide Fungicide and Rodenticide Act 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) list 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.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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with FIFRA section 6. If you have any questions, please contact Marc Sheahin by phone at 703-347-8639, or via email at [sheahin.marc@epa.gov](mailto:sheahin.marc@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Erik Kraft". The signature is fluid and cursive, with a large initial "E" and a long, sweeping tail.

Erik Kraft, Product Manager 24  
Fungicide and Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure



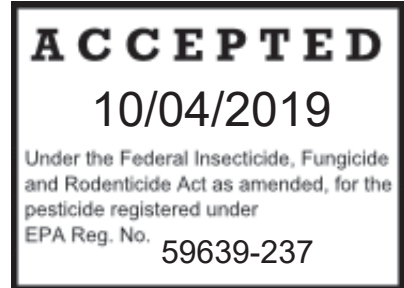
FLUMIOXAZIN	GROUP	14	HERBICIDE
PYROXASULFONE	GROUP	15	HERBICIDE

[MASTER LABEL]

[Bracketed text is optional]

***[Bracketed Bold Italicized text is information for the reviewer]***

## V-10452 3.04 SC Herbicide



**FOR RESIDUAL CONTROL AND/OR SUPPRESSION OF LISTED WEEDS IN COTTON, FIELD CORN, GRASS GROWN FOR SEED, SOYBEAN, WHEAT, FALLOW LAND AND NON CROP AREAS**

Active Ingredient	By Wt
Flumioxazin* .....	14.04%
Pyroxasulfone** .....	17.81%
Other Ingredients .....	68.15%
Total	100.00%

\*N-(7-fluoro-3,4-dihydro-3-oxo-4-prop-2-ynyl-2H-1,4-benzoxazin-6-yl) cyclohex-1-ene-1,2-dicarboxamide

\*\*5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)-1H-pyrazol-4-ylmethyl  
4,5-dihydro-5,5-dimethyl-1,2-oxazol-3-yl sulfone

V-10452 3.04 SC Herbicide is a suspension concentrate containing 1.34 lb flumioxazin and 1.70 lb pyroxasulfone per gallon.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

**SEE NEXT [PAGE][PANEL] FOR ADDITIONAL PRECAUTIONARY STATEMENTS.**

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**NET CONTENTS** \_\_\_\_\_

**[Always Mix Product Thoroughly Before Use]**

**[Shake Well Before Using]**

**[Sub Label 1]**

**V-10452 3.04 SC Herbicide**

For residual control and/or suppression of listed weeds use in cotton, field corn, grass grown for seed, soybean, wheat, fallow land and non-crop areas.



FLUMIOXAZIN	GROUP	14	HERBICIDE
PYROXASULFONE	GROUP	15	HERBICIDE

[Bracketed information is optional text]  
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**NET CONTENT \_\_\_\_\_**

**[Always Mix Product Thoroughly Before Use]  
 [Shake Well Before Using]**

<b>FIRST AID</b>	
<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 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 800-892-0099 for emergency medical treatment information.</p>	

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

Harmful if absorbed through skin. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:** long-sleeved shirt, long pants, shoes, socks and chemical-resistant gloves made of any waterproof material including polyethylene or polyvinyl chloride ≥ 14 mils.

**User Safety Requirements**

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

**Engineering Controls**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standards (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.

<b>USER SAFETY RECOMMENDATIONS</b>
<ul style="list-style-type: none"> <li>• Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</li> <li>• Users should 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.</li> </ul>

## **ENVIRONMENTAL HAZARDS**

This product is toxic to non-target plants and aquatic invertebrates. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

This pesticide is toxic to plants and use strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

**Groundwater Advisory:** This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

**Surface Water Advisories:** Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

The product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams and springs will reduce potential loading of pyroxasulfone and its degradation product, 5-difluoromethoxy-1H-pyrazol-4-yl) methanesulfonic acid (M1), from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

## **DIRECTIONS FOR USE**

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

**READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

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.

### **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 statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil or water is: coveralls, chemical-resistant gloves made of waterproof material, shoes plus socks.

### **NON-AGRICULTURAL USE REQUIREMENTS**

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

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

Do not enter or allow others to enter treated areas until sprays have dried.



**DISCLAIMER, RISKS OF USING THIS PRODUCT,  
LIMITED WARRANTY  
AND LIMITATION OF LIABILITY**

**IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.**

**RISKS OF USING THIS PRODUCT**

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND TO THE FULLEST EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

**LIMITED WARRANTY**

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label **and subject to the Risks of Using This Product as described above. To the extent consistent with applicable law AND AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED.** No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

**LIMITATION OF LIABILITY**

**To the fullest extent consistent with applicable law, Valent or Seller is not liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. TO THE FULLEST EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

**PROMPT NOTICE OF CLAIM**

To the extent consistent with applicable law allowing such requirements Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

To the extent consistent with applicable law if Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

**NO AMENDMENTS**

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing **Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability**, which may not be modified by any oral or written agreement.

**TANK MIXES**

NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, to the extent allowed by applicable law.

**Read and follow the entire label of each product to be used in the tank mix with this product.** 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.

## **Weed Resistance Management**

For resistance management, please note that V-10452 3.04 SC Herbicide contains both a Group 14 /flumioxazin and a Group 15/pyroxasulfone herbicide. Any weed population may contain plants naturally resistant to Group 14 and/or Group 15 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of V-10452 3.04 SC Herbicide or other Group 14 and Group 15 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- 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 tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout 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, for example hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage 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 strategies for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Valent U.S.A. LLC at 800-6-VALENT (682-5368) or at [www.valent.com](http://www.valent.com).

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## PRODUCT INFORMATION

V-10452 3.04 SC Herbicide provides residual control of susceptible weeds in labeled crops and provides additional burndown activity when used as part of a burndown program. In addition, V-10452 3.04 SC Herbicide can be applied as part of a fall burndown program for control of susceptible winter annuals.

Weeds controlled by V-10452 3.04 SC Herbicide are listed in Table 2, Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide. [Application rates of V-10452 3.04 SC Herbicide vary depending on soil type and organic matter; refer to individual crop use instructions.]

Moisture is necessary to activate V-10452 3.04 SC Herbicide in soil for residual weed control. Dry weather following applications of V-10452 3.04 SC Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, V-10452 3.04 SC Herbicide will control susceptible germinating weeds. When adequate moisture is not received after soil applied treatments of V-10452 3.04 SC Herbicide application, weed control may be improved by shallow cultivation or irrigation with at least 1/2 inch of water. If weeds begin to emerge, irrigate (1/4 inch of water) or cultivate uniformly with shallow-tillage equipment including a rotary hoe that will not damage the crop. Deep cultivation reduces the effectiveness of V-10452 3.04 SC Herbicide.

Crop injury may occur from applications made to poorly drained soils and/or applications made under cool and/or wet conditions. Risk of crop injury can be minimized by using on well drained soils, planting soybeans at least 1.5 inches deep, using high quality seed and completely covering seeds with soil prior to preemergence applications. Treated soil that is splashed onto newly emerged crops may result in temporary crop injury.

### Rainfastness

V-10452 3.04 SC Herbicide is rainfast one hour after application. **DO NOT** apply V-10452 3.04 SC Herbicide if rain is expected within one hour of application or postemergence efficacy may be reduced.

### Soil Characteristics

Application of V-10452 3.04 SC Herbicide to soils with high organic matter and/or high clay content may require higher dosages than soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

### Tank Mixes

Read tank mix product label for rates and weeds controlled. 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.

**Table 1. V-10452 3.04 SC Herbicide Rate Summary**

<b>fl oz of V-10452 3.04 SC Herbicide</b>	<b>Pounds of flumioxazin</b>	<b>Pounds of pyroxasulfone</b>
3.0	0.032	0.040
4.0	0.042	0.053
6.0	0.064	0.080
7.5	0.079	0.100
9.0	0.094	0.120
12.0	0.128	0.160

**USE RESTRICTIONS**

- **DO NOT** apply to frozen or snow covered soil.

**USE PRECAUTIONS**

- Any tillage operation after the application or mechanical incorporation into the soil will reduce residual weed control.

**APPLICATION INFORMATION**

**BURNDOWN PROGRAM**

Apply V-10452 3.04 SC Herbicide as part of a burndown program to actively growing weeds. Applying V-10452 3.04 SC Herbicide under conditions that do not promote active weed growth will reduce herbicide effectiveness. Weeds under stress due to drought, excessive water, extremes in temperature, disease or low humidity tend to become less susceptible to herbicidal action. V-10452 3.04 SC Herbicide is most effective when applied under warm sunny conditions. To ensure thorough coverage in burndown applications, use 15 to 60 gallons spray solution per acre. Use 20 to 60 gallons per acre if dense vegetation or heavy crop residue is present. **DO NOT** use flood jet nozzles.

**GROUND APPLICATION**

**Preemergence Application (Conventional Tillage):** To ensure uniform coverage, use 10 to 30 gallons of spray solution per acre for conventional tillage applications.

**AERIAL APPLICATION**

Spray drift away from the site of application may cause damage to non-target vegetation.

When used as part of a burndown weed control program, apply V-10452 3.04 SC Herbicide in 7 to 10 gallons of water per acre. Application at less than 7 gallons per acre may provide inadequate control. When used for preemergence weed control, apply V-10452 3.04 SC Herbicide in 5 to 10 gallons of water per acre. The higher gallonage applications afford more consistent weed control. **DO NOT** exceed the nozzle manufacturer's specified pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

### **Adjuvants and Drift Control Additives**

When an adjuvant is to be used with V-10452 3.04 SC Herbicide, use a Chemical Producers and Distributors Association certified adjuvant. Either a crop oil concentrate (COC) or methylated seed oil (MSO) which contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant (NIS) at 0.25% v/v, may be used when applying V-10452 3.04 SC Herbicide as part of a burndown program. Some tank mix partners, including Roundup PowerMAX<sup>®</sup>, are formulated with sufficient adjuvants and do not require the addition of a crop oil concentrate, methylated seed oil or non-ionic surfactant when tank mixed with V-10452 3.04 SC Herbicide. When tank mixing, refer to tank mix partner's label for adjuvant selection. The addition of a crop oil concentrate or methylated seed oil may increase the burndown activity on certain weeds including cutleaf evening-primrose and Carolina geranium. Verify mixing compatibility qualities by a jar test.

A spray grade nitrogen source (either ammonium sulfate at 2 to 2.5 lb/A or a 28 to 32% nitrogen solution at 1 to 2 qt/A) may be added to the spray mixture along with either a crop oil concentrate, methylated seed oil or non-ionic surfactant to enhance weed control. The addition of a nitrogen source does not replace the need for a crop oil concentrate, a methylated seed oil or a non-ionic surfactant.

When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

### **JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND V-10452 3.04 SC HERBICIDE**

When using V-10452 3.04 SC Herbicide and an adjuvant, including in stale seed bed or reduced tillage situations, perform a jar test before mixing commercial quantities of V-10452 3.04 SC Herbicide, when using V-10452 3.04 SC Herbicide for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pt of the water to a quart jar. Use water from the same source and temperature as which will be used in the spray tank mixing operation.
2. Add 1 ml of V-10452 3.04 SC Herbicide to the quart jar for every 6 fl oz of V-10452 3.04 SC Herbicide per acre being applied (1 g if 6 fl oz/A is the desired V-10452 3.04 SC Herbicide rate), gently mix until product goes into suspension.
3. Add 60 ml (4 Tbsp or 2 fl oz) of the crop oil or methylated seed oil to the quart jar or 1 ml of non-ionic surfactant if it is being used in place of oil, gently mix.
4. If nitrogen is being used, add 16 ml (1 Tbsp or 0.5 oz) of the 28 to 32% nitrogen source to the quart jar. If ammonium sulfate is being used, add 19 g AMS to the quart jar in place of the 28 to 32% nitrogen.
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank mix combination will be uniform and free of suspended particles. If any of the following conditions are observed, question the choice of adjuvant:
  - a) Layer of oil or globules on the mixture's surface.
  - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: thickening texture (coagulated) like gelatin.

## SPRAYER PREPARATION

Before applying V-10452 3.04 SC Herbicide, start with clean, well maintained application equipment. The spray tank, as well as all hoses and booms, must be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to, the sulfonylurea and phenoxy herbicides, (i.e., Classic<sup>®</sup> and 2,4-D respectively) are active at very small amounts and can cause crop injury when applied to susceptible crops. The spray equipment must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply V-10452 3.04 SC Herbicide. If two or more products were tank mixed prior to V-10452 3.04 SC Herbicide application, follow the most restrictive cleanup procedure.

## MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. If a drift retardant is to be used, add 10 lbs of spray grade ammonium sulfate per 100 gallons of spray solution, unless prohibited by the tank mix partner.
3. While agitating, slowly add V-10452 3.04 SC Herbicide to the spray tank. Agitation creates a rippling or rolling action on the water surface.
4. If tank mixing V-10452 3.04 SC Herbicide with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
5. Add any required adjuvants.
6. Fill spray tank to desired level with water. **Continue agitation until all spray solution has been applied.**
7. Mix only the amount of spray solution that can be applied the day of mixing. Apply V-10452 3.04 SC Herbicide within 6 hours of mixing.

## SPRAYER CLEANUP

Spray equipment, including mixing vessels and nurse tanks, must be cleaned each day following V-10452 3.04 SC Herbicide application. After V-10452 3.04 SC Herbicide is applied, the following steps must be used to clean the spray equipment:

1. Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles.
3. Top off tank, add 1 gallon of 3% household ammonia (or equivalent) for every 100 gallons of water, circulate through sprayer for 5 minutes, and then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes. If diaphragms are being used on the spray boom, loosen diaphragms before flushing the spray system, allowing cleaning solution to spray through the open diaphragm. If spray lines have any end caps, they must be loosened before flushing the system, allowing cleaning solution to spray through the loosened caps. To enhance removal of V-10452 3.04 SC Herbicide from the spray system, add a tank cleaner including "Valent Tank Cleaner", in place of ammonia and allow the cleaning solution to remain in the pressurized spray system (spray tank, hoses and boom) for 8 hours before flushing the system for a minimum of 15 minutes.
4. Drain tank completely.
5. Add enough clean water to the spray tank to allow all hoses, booms, screens and nozzles to be flushed for 2 minutes.
6. Remove all nozzles and screens and rinse them in clean water.

Thoroughly clean spray equipment, including all tanks, hoses, booms, screens and nozzles, before it is used to apply postemergence pesticides. Equipment with V-10452 3.04 SC Herbicide residue remaining in the system may result in crop injury to the subsequently treated crop.



## **MANDATORY SPRAY DRIFT**

### **Aerial Application**

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

### **Ground Boom Applications**

- Apply with the nozzle height specified by the manufacturer, but no more than 3 feet above the ground or crop canopy. For all other ground applications, the nozzle must be no more than 3 feet from the target vegetation.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

## **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

## **IMPORTANCE OF DROPLET SIZE**

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

### **Controlling Droplet Size – Ground Boom**

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

### **Controlling Droplet Size – Aircraft**

- Adjust Nozzles – Follow nozzle manufacturer's directions for setting up nozzles. To reduce fine droplets, orient nozzles parallel with the airflow in flight.

**BOOM HEIGHT – Ground Boom**

For ground equipment, the boom must remain level with the crop and have minimal bounce.

**RELEASE HEIGHT – Aircraft**

Higher release heights increase the potential for spray drift.

**SHIELDED SPRAYERS**

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

**TEMPERATURE AND HUMIDITY**

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

**TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

**WIND**

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**

**Boom-less Ground Applications:** Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

**Handheld Technology Applications:** Take precautions to minimize spray drift.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

**NON-TARGET ORGANISM ADVISORY**

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

**Adjuvants and Drift Control Additives:** Refer to tank mix partner's label for adjuvant specifications. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

**BUFFER RESTRICTIONS**

- Do not apply this product by air within 40 ft of non-target plants including non-target crops.
- Do not apply this product by air within 100 ft of emerged cotton crops.
- Do not apply this product by air within 40 ft of streams, wetlands, marshes, ponds, lakes and reservoirs.

**Table 2. Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide**

		V-10452 3.04 SC Herbicide Rates		
		6.0 fl oz/A [All soil textures Organic Matter <3%]	7.5 fl oz/A [Coarse and medium textured soil Organic Matter 3 to 5%]	9.0 fl oz/A [Fine textured soils Organic Matter 3 to 5%]
		[Preemergence followed by postemergence program - no glyphosate or ALS resistant weeds.]	[Preemergence followed by postemergence program -glyphosate or ALS resistant weeds or heavy weed pressure.]	[Non GMO program - or heavy weed pressure.]
Common Name	Scientific Name	C = Control or S = Suppression		
<b>BROADLEAF WEED SPECIES</b>				
Bristly Starbur	<i>Acanthospermum Hispidum</i>	S	S	S
Carpetweed	<i>Mollugo verticillata</i>	C	C	C
Chickweeds				
Common	<i>Stellaria media</i>	C	C	C
Mouseear	<i>Cerastium vulgatum</i>	C	C	C
Coffee Senna	<i>Cassia occidentalis</i>	S	C	C
Copperleaf, Hophornbeam	<i>Acalypha ostryifolia</i>	S	S	S
Dandelion	<i>Taraxacum officinale</i>	C	C	C
Eclipta	<i>Eclipta prostrate</i>	C	C	C
Evening-primrose, Cutleaf	<i>Oenothera laciniata</i>	C	C	C
Florida Beggarweed	<i>Desmodium tortuosum</i>	S	C	C
Florida Pusley	<i>Richardia scabra</i>	C	C	C
Golden Crownbeard	<i>Verbesina encelioides</i>	S	C	C
Hairy Indigo	<i>Indigofera hirsute</i>	S	C	C
Hemp Sesbania	<i>Sesbania exaltata</i>	C	C	C
Henbit	<i>Lamium amplexicaule</i>	C	C	C
Jimsonweed	<i>Datura stramonium</i>	C	C	C
Kochia	<i>Kochia scoparia</i>	C	C	C
Lambsquarters, Common	<i>Chenopodium album</i>	C	C	C
Little Mallow	<i>Malva parviflora</i>	C	C	C
Marestail/Horseweed	<i>Conyza canadensis</i>	C	C	C
Morningglories <sup>1</sup>				
Entireleaf	<i>Ipomoea hederacea</i> var. <i>Integruscula</i>	S	C	C
Ivyleaf	<i>Ipomoea hederacea</i>	S	C	C
Red/Scarlet	<i>Ipomoea coccinea</i>	S	C	C
Tall	<i>Ipomoea purpurea</i>	S	C	C
Mustard, Wild	<i>Brassica kaber</i>	C	C	C

continued

**Table 2. Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide**

		V-10452 3.04 SC Herbicide Rates		
		6.0 fl oz/A [All soil textures Organic Matter <3%]	7.5 fl oz/A [Coarse and medium textured soil Organic Matter 3 to 5%]	9.0 fl oz/A [Fine textured soils Organic Matter 3 to 5%]
		[Preemergence followed by postemergence program - no glyphosate or ALS resistant weeds.]	[Preemergence followed by postemergence program glyphosate or ALS resistant weeds or heavy weed pressure.]	[Non GMO program or heavy weed pressure.]
Common Name	Scientific Name	C = Control or S = Suppression		
<b>BROADLEAF WEED SPECIES</b>				
Nightshades				
Black	<i>Solanum nigrum</i>	C	C	C
Eastern Black	<i>Solanum ptycanthum</i>	C	C	C
Hairy	<i>Solanum sarrachoides</i>	C	C	C
Palmer Amaranth	<i>Amaranthus palmeri</i>	C	C	C
Pigweeds				
Redroot	<i>Amaranthus retroflexus</i>	C	C	C
Smooth	<i>Amaranthus hybridus</i>	C	C	C
Spiny Amaranth	<i>Amaranthus spinosus</i>	C	C	C
Tumble	<i>Amaranthus albus</i>	C	C	C
Prickly Sida (Teaweed)	<i>Sida spinosa</i>	C	C	C
Puncturevine	<i>Tribulus terrestris</i>	C	C	C
Purslane, Common	<i>Portulaca oleracea</i>	C	C	C
Radish, Wild	<i>Raphanus raphanistrum</i>	C	C	C
Ragweeds <sup>2</sup>				
Common	<i>Ambrosia artemisiifolia</i>	S	C	C
Giant	<i>Ambrosia trifida</i>	S	S	S
Redmaids	<i>Calandrinia ciliata</i> var <i>Menziessii</i>	C	C	C
Russian Thistle	<i>Salsola iberica</i>	S	C	C
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	C	C	C
Smallflower Morningglory	<i>Jacquemontia tamnifolia</i>	C	C	C
Spotted Spurge	<i>Euphorbia maculata</i>	C	C	C
Smartweeds				
Ladysthumb	<i>Polygonum persicaria</i>	S	S	S
Pennsylvania	<i>Polygonum Pennsylvanicum</i>	S	S	S
Spurred Anoda	<i>Anoda cristata</i>	S	C	C
Tropic Croton	<i>Croton glandulosus</i>	S	C	C
Velvetleaf	<i>Abutilon theophrasti</i>	C	C	C
Venice Mallow	<i>Hibiscus trionum</i>	C	C	C
Waterhemp <sup>2</sup>				
Common	<i>Amaranthus rudis</i>	C	C	C
Tall	<i>Amaranthus tuberculatus</i>	C	C	C

continued

**Table 2. Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide**

		V-10452 3.04 SC Herbicide Rates		
		6.0 fl oz/A [All soil textures Organic Matter <3%]	7.5 fl oz/A [Coarse and medium textured soil Organic Matter 3 to 5%]	9.0 fl oz/A [Fine textured soils Organic Matter 3 to 5%]
		[Preemergence followed by postemergence program - no glyphosate or ALS resistant weeds.]	[Preemergence followed by postemergence program glyphosate or ALS resistant weeds or heavy weed pressure.]	[Non GMO program or heavy weed pressure.]
Common Name	Scientific Name	C = Control or S = Suppression		
<b>BROADLEAF WEED SPECIES</b>				
Wild Buckwheat	<i>Polygonum convolvulus</i>	S	S	S
Wild Poinsettia	<i>Euphorbia heterophylla</i>	S	C	C
Wormwood, Biennial	<i>Artemisia biennis</i>	S	S	S
<b>GRASS WEED SPECIES</b>				
Barnyardgrass	<i>Echinochloa crus-galli</i>	C	C	C
Bluegrass, Annual	<i>Poa annua</i>	C	C	C
Cheat	<i>Bromus secalinus</i>	C	C	C
Crabgrass				
Large	<i>Digitaria sanguinalis</i>	C	C	C
Smooth	<i>Digitaria ischaemum</i>	C	C	C
Cupgrass, Southwestern	<i>Eriochloa gracilis</i>	C	C	C
Downy Brome	<i>Bromus tectorum</i>	C	C	C
Foxtails				
Giant	<i>Setaria faberi</i>	C	C	C
Green	<i>Setaria viridis</i>	C	C	C
Yellow	<i>Setaria glauca</i>	C	C	C
Goosegrass	<i>Eleusine indica</i>	C	C	C
Johnsongrass (seedling)	<i>Sorghum halepense</i>	C	C	C
Lovegrass, California	<i>Eragrostis diffusa</i>	C	C	C
Panicums				
Fall	<i>Panicum dichotomiflorum</i>	C	C	C
Texas	<i>Panicum texanum</i>	C	C	C
Red Rice	<i>Oryza sativa</i>	C	C	C
Ryegrass				
Italian	<i>Lolium multiflorum</i>	C	C	C
Rigid	<i>Lolium rigidum</i>	C	C	C
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>	C	C	C

<sup>1</sup> Morningglory species are not adequately controlled on fine soils or soils with greater than 3% organic matter.

<sup>2</sup> A postemergence herbicide, including Cobra<sup>®</sup>, Phoenix<sup>®</sup> or glyphosate (Roundup Ready<sup>®</sup> soybeans only) may be needed following a preemergence application of V-10452 3.04 SC Herbicide to adequately control common ragweed or waterhemp in soybean fields with heavy pressure.

## SOIL TEXTURES

[Application rates of V-10452 3.04 SC Herbicide vary depending on soil type and organic matter, soil textures are defined as:

Coarse and Medium	Fine
[sandy loam,] loamy sand, loamy, silt-loam, silt, sandy clay, sandy clay loam	silty clay, silty clay loam, clay, clay loam]

### DIRECTIONS FOR COTTON (NO-TILL AND MINIMUM TILL)

#### USE RESTRICTIONS

- **DO NOT** apply more than 6 fl oz (0.064 lb flumioxazin and 0.080 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per application.
- **DO NOT** apply more than 2 applications per acre per year.
- **DO NOT** apply more than 12 fl oz (0.128 lb flumioxazin and 0.160 pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per year.
- Minimum retreatment is 30 days.
- **DO NOT** apply within 60 days of harvest.

#### SPRING BURNDOWN USE DIRECTIONS – For Pre-plant Applications in Cotton

Use V-10452 3.04 SC Herbicide as part of a burndown program for residual weed control and to assist in postemergence burndown of many weeds where cotton will be planted directly into the residue of the previous year. For control of emerged weeds, apply V-10452 3.04 SC Herbicide with an appropriate burndown tank mix partner. To ensure thorough coverage, use a minimum of 15 gallons of spray solution per acre.

- [For no-till cotton, a minimum of 14 days must pass, and 1 inch of rainfall/irrigation must occur, between V-10452 3.04 SC Herbicide application and planting when a V-10452 3.04 SC Herbicide rate of 3 fl oz/A is used and 21 days when a V-10452 3.04 SC Herbicide rate of 4 to 6 fl oz/A is used. The field must contain the stubble from the previous crop or cover crop including rye or wheat.]
- [For strip-till cotton, V-10452 3.04 SC Herbicide may be applied up to 7 days prior to planting. Conduct strip-till operation anytime between application and planting.]
- [For fallow bed applications, cotton may be planted 7 days following application if the top 2 inches are dragged off the beds prior to planting.]
- Refer to most restrictive label for minimum interval between application and planting.

[V-10452 3.04 SC Herbicide must be applied under the following conditions for acceptable crop tolerance:

- Rate: 6 fl oz/A
- Timing: minimum of 30 days prior to planting.
- Moisture: minimum of 1" rainfall and/or irrigation must occur between application and planting.
- Residue: minimum of 25% of the soil surface covered with residue from the prior crop at the time of V-10452 3.04 SC Herbicide application.
- Soil Texture:
  - **DO NOT** use on soils classified as "Sand" in AR, AZ, LA, MS, NC, OK, SC, TX.
  - **DO NOT** use on soils classified as "Sand" or "Loamy Sand" or soils with over 80% sand in AL, FL, GA unless greater than 50% of the soil surface is covered with the previous crops residue.
- Tillage: Perform a strip till operation that inverts the soil after V-10452 3.04 SC Herbicide application in AL, FL, GA.]

## **TANK MIXES**

For control of emerged weeds, apply V-10452 3.04 SC Herbicide with an appropriate burndown tank mix partner.

## **POST DIRECTED AND LAYBY USE DIRECTIONS**

For postemergence weed control, apply V-10452 3.04 SC Herbicide through a hooded or shielded sprayer or at layby, at 6 fl oz/A, in combinations with MSMA, diuron or glyphosate, to assist in the control of weeds listed in Table 3, Emerged Broadleaf Weeds Controlled by Hooded, Shielded and Layby Application of V-10452 3.04 SC Herbicide Tank Mixes with Glyphosate or MSMA in Cotton.

For best results, apply V-10452 3.04 SC Herbicide to actively growing weeds within the growth stages indicated in this label. Applying V-10452 3.04 SC Herbicide under conditions that do not promote active weed growth will reduce herbicide effectiveness. **DO NOT** apply V-10452 3.04 SC Herbicide when the crop or weeds are under stress due to drought, excessive water, extremes in temperature, disease or low humidity. Weeds under stress tend to become less susceptible to herbicidal action. V-10452 3.04 SC Herbicide is most effective when applied under sunny conditions at temperatures above 65°F.

V-10452 3.04 SC Herbicide also provides residual weed control as listed in Table 2, when applied through hooded, shielded and layby application methods.

## **CARRIER VOLUME AND SPRAY PRESSURE**

To ensure thorough coverage in hooded, shielded and layby applications, use a minimum of 15 gallons spray solution per treated acre. Use a minimum of 20 gallons per treated acre under heavy weed pressure. Nozzle selection must meet manufacturer's gallonage and pressure guidelines for application method being used. **DO NOT** use "Flood Jet" nozzles, as they tend to increase the chance of crop injury.

## **ADDITIVES**

Weed control from hooded, shielded or layby application of V-10452 3.04 SC Herbicide in cotton requires the addition of an agronomically approved non-ionic surfactant to the spray mixture. Non-ionic surfactant must contain at least 80% active ingredient. Verify mixing compatibility qualities by a jar test. **The use of crop oil concentrates, methylated seed oils, organo-silicant surfactants or products containing these ingredients, may result in severe crop injury.**

## **APPLICATION EQUIPMENT**

Apply V-10452 3.04 SC Herbicide tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. All nozzles must be under the hood or behind the shield to ensure no spray solution comes in contact with the cotton. Application equipment must be clean and in good repair. Nozzles must meet manufacturer's guidelines for spray pattern and placement on spray boom and checked frequently for accuracy.

## **TIMING TO COTTON**

### **Hooded and Shielded Application**

V-10452 3.04 SC Herbicide tank mixes may be applied with a hooded or shielded sprayer after cotton has reached a minimum of 6 inches in height. **Care must be taken to ensure the spray solution or drift does not come in contact with the cotton or severe crop injury can occur.**

### **Layby Application**

Layby application of V-10452 3.04 SC Herbicide tank mixes may be made once cotton has reached a minimum of 16 inches in height. Cotton that is smaller than 16 inches in height may be injured by V-10452 3.04 SC Herbicide applications. V-10452 3.04 SC Herbicide application must be directed to the lower 2 inches of the cotton stem to avoid crop injury.

## **TIMING TO WEEDS**

V-10452 3.04 SC Herbicide tank mix applications must be made to weeds within the height range given in Table 3.

## **TANK MIXES**

V-10452 3.04 SC Herbicide must be tank mixed with glyphosate in Roundup Ready cotton, glufosinate in Liberty Link<sup>®</sup> cotton, and/or diuron and MSMA.



**Table 3. Emerged Broadleaf Weeds Controlled by, Hooded, Shielded and Layby Application of V-10452 3.04 SC Herbicide Tank Mixes With Glyphosate or MSMA in Cotton**

BROADLEAF WEED SPECIES		WEED HEIGHT (inches) 6 fl oz/A
COMMON NAME	SCIENTIFIC NAME	
Bindweed, Field <sup>1</sup>	<i>Convolvulus arvensis</i>	4
Carpetweed	<i>Mollugo verticillata</i>	4
Chickweed, Common	<i>Stellaria media</i>	4
Cocklebur, Common	<i>Xanthium strumarium</i>	4
Florida Beggarweed	<i>Desmodium tortuosum</i>	2
Hemp Sesbania	<i>Sesbania exaltata</i>	6
Jimsonweed	<i>Datura stramonium</i>	4
Lambsquarters, Common	<i>Chenopodium album</i>	4
Morningglories		
Entireleaf	<i>Ipomoea hederacea var. integriuscula</i>	4
Ivyleaf	<i>Ipomoea hederacea</i>	4
Pitted	<i>Ipomoea lacunose</i>	4
Red	<i>Ipomoea coccinea</i>	4
Tall	<i>Ipomoea purpurea</i>	2
Mustard, Wild	<i>Brassica kaber</i>	6
Nightshades		
Black	<i>Solanum nigrum</i>	4
Eastern Black	<i>Solanum ptycanthum</i>	4
Hairy	<i>Solanum sarrachoides</i>	4
Pigweeds		
Palmer Amaranth	<i>Amaranthus palmeri</i>	4
Redroot	<i>Amaranthus retroflexus</i>	4
Smooth	<i>Amaranthus hybridus</i>	4
Plaintain, Broadleaf	<i>Plantago major</i>	6
Prickly Sida (Teaweed)	<i>Sida spinosa</i>	4
Purslane, Common	<i>Portulaca oleracea</i>	2
Ragweeds		
Common	<i>Ambrosia artemisiifolia</i>	2
Giant	<i>Ambrosia trifida</i>	4
Rice Flatsedge	<i>Cyperus iria</i>	2
Sicklepod	<i>Senna obtusifolia</i>	4
Smartweeds		
Ladysthumb	<i>Polygonum persicaria</i>	4
Pale	<i>Polygonum lapathifolium</i>	4
Pennsylvania	<i>Polygonum pennsylvanicum</i>	4
Spotted Spurge	<i>Euphorbia maculat</i>	4
Velvetleaf	<i>Abutilon theophrasti</i>	4
Venice Mallow	<i>Hibiscus trionum</i>	2
Waterhemp		
Common	<i>Amaranthus rudis</i>	2
Tall	<i>Amaranthus tuberculatus</i>	2

<sup>1</sup>V-10452 3.04 SC Herbicide tank mixes will control the above ground portion of field bindweed. Repeated applications will be needed to control regrowth.

## **DIRECTIONS FOR FIELD CORN (NO-TILL AND MINIMUM TILL)**

### **USE RESTRICTIONS**

- **DO NOT** apply more than 6 fl oz (0.064 lb flumioxazin and 0.080 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per application.
- **DO NOT** apply more than 1 application per acre per year.
- **DO NOT** apply more than 6 fl oz (0.064 lb flumioxazin and 0.080 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per year.
- **DO NOT** use on popcorn, sweet corn or corn grown for seed.
- **DO NOT** apply after crop has emerged.

### **USE PRECAUTIONS**

- Use only on no-till or minimum tillage fields where last year's crop residue has not been incorporated into the soil.
- Use on soils with less than 1% organic matter only after an activation rainfall or irrigation of 1/2 inch or more water has occurred between application and planting.
- In the states of AR, LA, MS, OK or TX, corn may be planted within 30 days of V-10452 3.04 SC Herbicide application if planting on raised beds. If not planting on raised beds, plant 30 days after V-10452 3.04 SC Herbicide application.
- In the states of AL, FL and GA, corn may be planted within 30 days of V-10452 3.04 SC Herbicide application if strip tillage has occurred between application and planting. If strip tillage has not occurred, plant 30 days.

### **SPRING BURNDOWN USE DIRECTIONS – For Pre-plant Applications in Field Corn**

Use V-10452 3.04 SC Herbicide as part of a burndown program for residual weed control and to assist in postemergence burndown of many weeds where field corn will be planted directly into the residue of the previous year. For control of emerged weeds, apply V-10452 3.04 SC Herbicide with an appropriate burndown tank mix partner. To ensure thorough coverage, use a minimum of 15 gallons of spray solution per acre.

Apply V-10452 3.04 SC Herbicide at 6 fl oz/A early pre-plant. Plant corn between 7 and 30 days after application unless the application is made as part of a fall burndown program.

### **TANK MIXES**

V-10452 3.04 SC Herbicide may be tank mixed with 2,4-D LVE, atrazine, Basis<sup>®</sup>, dicamba, Express<sup>®</sup>, glyphosate, Hornet<sup>®</sup>, paraquat, Python<sup>®</sup> WDG, or simazine for pre-plant burndown applications. Refer to tank mix product labels for specific directions and weeds controlled.

**DIRECTIONS FOR USE IN GRASS GROWN FOR SEED  
(Fine Fescue, Perennial Ryegrass, Tall Fescue and Orchardgrass)  
(For Use in Idaho, Oregon and Washington Only)**

V-10452 3.04 SC Herbicide applied in the fall, preemergence to the weeds, in newly carbon-banded plantings, spring planted (at least 8 tillers) and established stands, for residual weed control (at beginning of fall rains) of many annual grasses, volunteer sprouts and winter annual broadleaf weeds (see Table 2. Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide). Complete applications by January 31. V-10452 3.04 SC Herbicide may be applied as a broadcast application. V-10452 3.04 SC Herbicide must be incorporated with 1/4 inch of rainfall or evenly applied irrigation. Use V-10452 3.04 SC Herbicide in a sufficient volume of water (at least 20 gallons per acre) for adequate coverage. V-10452 3.04 SC Herbicide can be tank mixed with metribuzin at 0.28 lb ai/A, Goal<sup>®</sup> 2XL at 4 oz/A (0.063 lb ai/A) or Kerb<sup>®</sup> SC at 5 oz/A (0.13 lb ai/A).

**Grass Weeds Controlled by V-10452 3.04 SC Herbicide**

Annual Bluegrass (*Poa annua*) and Roughstalk Bluegrass (*Poa trivialis*); Rattail Fescue and Annual Fescue (*Vulpia myuros*); *Brome* spp.; Italian Ryegrass and Annual Ryegrass (*Lolium perenne* L. subsp. *multiflorum*).

**New Plantings**

V-10452 3.04 SC Herbicide may be applied at 3.0 oz/A as a broadcast treatment over the seed rows that have the activated carbon band above them. The activated carbon over the seed row will adsorb V-10452 3.04 SC Herbicide and allow the seed beneath to germinate. Seed germination is dependent on the quality of the carbon band above the seed. Apply activated carbon at 25 lb/A in a 1 inch band (equal to a 300 lb/A broadcast application) at planting. Apply to smooth, crop residue-free seedbeds. A spray unit on a 12 inch drill applying a slurry band 1 inch wide directly over the seeded rows works well. Use proper agitation to keep the carbon in suspension. Mix activated carbon with water at 0.5 lb/gallon. This band may be compromised due to poor seed bed preparation, heavy rainfall, standing water, steep slopes and other possible disturbances allowing the herbicide to move into the seed row and inhibit crop germination. The grower utilizing this system assumes all risks of crop injury and/or stand loss associated with the application.

**Spring Planted Grass Seed Crops**

Apply V-10452 3.04 SC Herbicide at 3.0 to 6.0 oz/A in the fall following a spring planting if the crop has attained a growth stage of at least eight tillers and depending on stand vigor.

**Established Grass Seed Crops (at least one seed harvest)**

Apply V-10452 3.04 SC Herbicide following seed harvest at 3.0 to 6.0 oz/A depending on stand vigor.

**USE RESTRICTIONS**

- **DO NOT** apply more than 6.0 fl oz (0.064 lb flumioxazin and 0.080 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per application.
- **DO NOT** make more than 1 application of V-10452 3.04 SC Herbicide per acre per year.
- **DO NOT** apply more than 6.0 fl oz (0.064 lb flumioxazin and 0.080 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per year.
- **DO NOT** apply within 60 days of harvest.
- Graze treated fields or feed treated hay to livestock no sooner than 60 days after application.

## **DIRECTIONS FOR SOYBEAN (NO-TILL, MINIMUM TILL AND CONVENTIONAL TILL)**

### **USE RESTRICTIONS**

- **DO NOT** apply more than 9 fl oz (0.094 lb flumioxazin and 0.120 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per application.
- **DO NOT** apply more than 1 application per acre per year.
- **DO NOT** apply more than 9 fl oz (0.094 lb flumioxazin and 0.120 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per year.
- Graze treated soybean fields or feed treated hay to livestock no sooner than 21 days after application.
- **DO NOT** irrigate when soybeans are cracking.

### **USE PRECAUTIONS**

- Soybean injury may occur if V-10452 3.04 SC Herbicide is used in the same field that flufenacet (Axiom<sup>®</sup>, Domain<sup>®</sup>), alachlor (Micro-Tech<sup>®</sup>), metolachlor (Dual<sup>®</sup> products or Boundary<sup>®</sup>) or dimethenamid (Frontier<sup>®</sup> or Outlook<sup>®</sup>) will be used preemergence.
- Severe injury will occur if V-10452 3.04 SC Herbicide is applied when soybeans have begun to crack.

### **SPRING BURNDOWN USE DIRECTIONS – For Pre-plant Applications in Soybean**

Use V-10452 3.04 SC Herbicide as part of a burndown program, for residual weed control and to assist in postemergence burndown of many annual and perennial weeds where soybeans will be planted directly into the residue of the previous year. For control of emerged weeds, apply V-10452 3.04 SC Herbicide with an appropriate burndown tank mix partner. To ensure thorough coverage, use a minimum of 15 gallons of spray solution per acre.

### **PREEMERGENCE USE DIRECTIONS**

Apply V-10452 3.04 SC Herbicide to soybeans early pre-plant, prior to planting or preemergence. Preemergence application of V-10452 3.04 SC Herbicide must be made within 3 days after planting and prior to soybean emergence.

Apply V-10452 3.04 SC Herbicide at 6 to 9 fl oz per acre per year.

### **TANK MIXES**

V-10452 3.04 SC Herbicide may be tank mixed with chlorimuron, pendimethalin, clomazone, Extreme<sup>®</sup>, metribuzin, Firstrate<sup>®</sup>, Lorox<sup>®</sup>, pendimethalin, Python<sup>®</sup> WDG, Scepter<sup>®</sup>, Valor<sup>®</sup> SX, or Valor XLT. Refer to tank mix product labels for specific directions and weeds controlled.

**DIRECTIONS FOR WHEAT  
(NO-TILL AND MINIMUM TILL)**

[For use in the states of  
DE, ID, KY, MD, MN, MT, NC, ND, NJ, OR, SC, SD, TN, VA and WA Only]

**USE RESTRICTIONS**

- **DO NOT** apply more than 6 fl oz of (0.064 lb flumioxazin and 0.080 lb pyroxasulfone) V-10452 3.04 SC Herbicide per acre per application.
- **DO NOT** apply more than 1 application per acre per year.
- **DO NOT** apply more than 6 fl oz (0.064 lb flumioxazin and 0.080 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per year.
- Apply V-10452 3.04 SC Herbicide a minimum of 30 days prior to planting wheat
- **DO NOT** irrigate between emergence and spike.
- **DO NOT** graze until wheat has reached 5 inches in height.

**USE PRECAUTIONS**

- Use only on no-till or minimum tillage fields where last year's crop residue has not been incorporated into the soil.
- Plant wheat a minimum of 1" deep.
- Application of lime within 30 days before or after application of this product may result in decreased weed control.
- One inch of rainfall/irrigation must occur between V-10452 3.04 SC Herbicide application and wheat planting.

**BURNDOWN USE DIRECTIONS – For Pre-plant Applications in Wheat**

Use V-10452 3.04 SC Herbicide as part of a burndown program for residual weed control and to assist in postemergence burndown of many weeds where wheat will be planted directly into the residue of the previous year. For control of emerged weeds, apply V-10452 3.04 SC Herbicide with an appropriate burndown tank mix partner. To ensure thorough coverage, use a minimum of 15 gallons of spray solution per acre.

Apply V-10452 3.04 SC Herbicide at 6 fl oz per acre per year.

**TANK MIXES**

For control of emerged weeds, apply V-10452 3.04 SC Herbicide with an appropriate burndown tank mix partner.

## DIRECTIONS FOR USE IN FALL BURNDOWN AND FALLOW LAND

Apply V-10452 3.04 SC Herbicide at 6 to 9 fl oz/A in the fall to provide residual weed control in fields that will be planted the following spring as identified in the crop rotational interval table. Weeds controlled or suppressed by residual activity are listed in Table 2, Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide. If weeds have emerged at the time of application, use V-10452 3.04 SC Herbicide in combination with a labeled burndown herbicide. Abnormally warm or wet winters will reduce the length of weed control observed in the spring.

### TANK MIXES

V-10452 3.04 SC Herbicide, applied as part of a burndown program, may be used for residual weed control, as well as to assist in postemergence burndown of many annual and perennial weeds where crops will be planted directly into a stale seedbed, cover crop or in previous crop residues. Choose the most appropriate tank mix partner for control of emerged weeds. To ensure thorough coverage, use a minimum of 15 gals of spray solution per acre. Refer to tank mix partner's label.

## DIRECTIONS FOR USE TO MAINTAIN BARE GROUND ON NON-CROP AREAS

Use V-10452 3.04 SC Herbicide to maintain bare ground on non-crop areas for non-selective vegetation control in areas including around farm buildings, along ungrazed fence rows, wind breaks and shelter belts. Follow all directions as outlined in "Use Information" section of this label.

V-10452 3.04 SC Herbicide offers residual and postemergence control of susceptible broadleaf and grass weeds as well as an additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. V-10452 3.04 SC Herbicide can be tank mixed for increased residual or postemergence control. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase. V-10452 3.04 SC Herbicide rates of 6 to 9 fl oz/A are required to provide residual control of the weeds listed in Table 2, Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide.

### USE RESTRICTIONS

- **DO NOT** apply more than 9 fl oz (0.094 lb flumioxazin and 0.120 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per application.
- **DO NOT** apply more than 1 application per acre per year.
- **DO NOT** apply more than 9 fl oz (0.094 lb flumioxazin and 0.120 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per year.
- **DO NOT** apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- **DO NOT** apply to ditch banks.

### PREEMERGENCE APPLICATION

Apply V-10452 3.04 SC Herbicide at 6 to 9 fl oz/A per broadcast acre as a preemergence application. Make the preemergence (to weed emergence) applications of V-10452 3.04 SC Herbicide to a weed-free soil surface. Preemergence applications of V-10452 3.04 SC Herbicide must be completed prior to weed emergence. Moisture is necessary to activate V-10452 3.04 SC Herbicide on soil for residual weed control. Dry weather following application of V-10452 3.04 SC Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, V-10452 3.04 SC Herbicide will control susceptible germinating weeds.

## POSTEMERGENCE APPLICATION

Apply V-10452 3.04 SC Herbicide at 6 to 9 fl oz/A per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt/A crop oil concentrate). The addition of an adjuvant enhances V-10452 3.04 SC Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of V-10452 3.04 SC Herbicide. Emerged weeds are controlled postemergence with V-10452 3.04 SC Herbicide, however, translocation of V-10452 3.04 SC Herbicide within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with V-10452 3.04 SC Herbicide occurs when applied in combination with a surfactant to weeds less than 2 inches in height. A tank mix partner must not be used in combination with V-10452 3.04 SC Herbicide for the postemergence control of weeds larger than 2 inches.

## TANK MIXES

For control of emerged weeds, apply V-10452 3.04 SC Herbicide with an appropriate burndown tank mix partner. Completely read and follow the label of any potential tank mix partner with V-10452 3.04 SC Herbicide. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label.

<b>CROP ROTATIONAL INTERVAL</b>			
The following rotational crops may be planted after applying V-10452 3.04 SC Herbicide at the listed rate. Planting earlier than the directed rotational interval may result in crop injury.			
<b>Crops</b>	<b>V-10452 3.04 SC Herbicide Use Rates Interval Months</b>		
	<b>6 fl oz/A</b>	<b>7.5 fl oz/A</b>	<b>9 fl oz/A</b>
Alfalfa	10	10	10
Canola	12	12	15
Clover	18	18	18
Corn, Field (conventional till)	1	1	1
Corn, Field (reduced till)	7 days	1	1
Corn, Sweet	3	4	4
Cotton (conventional till)	1½	2	2
Cotton (reduced till)	1	2	2
Dry Beans (edible)	10½	10½	10½
Edible Peas and other edible beans (except field peas)	9	9	11
Grass grown for seed	18	18	18
Grass grown for seed with Charcoal band	0	2	2
Lentils	6	7	7
Peanuts	2	2	2
Peas, Field	2	2	4
Potato	4	4	4
Rice	10	10	12
Small Grains (other than wheat)	11	12	12
Sorghum, Grain	6	6	10
Soybean	0	0	0
Sugar Beet	12	12	12
Sunflower	4	4	4
Sweet Potato	9	9	9
Tobacco	12	12	12
Wheat	1	2	2
Other crops not listed above	18	18	18

## CROP FAILURE

If the crop treated with V-10452 3.04 SC Herbicide is lost due to a catastrophe, including hail or other forms of inclement weather refer to Crop Rotational Interval Table for re-plant intervals.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

#### STORAGE

Keep pesticide in original container.

Store in a cool, dry, secure place.

Do not put formulation or dilute spray solution into food or drink containers.

Do not contaminate food or foodstuffs.

Do not store or transport near feed or food.

Not for use or storage in or around the home.

For help with any spill, leak, fire or exposure involving this material, call day or night (800) 892-0099.

#### PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

#### CONTAINER HANDLING

##### ***[Use the following statement for containers equal to or less than 5 gallons]***

[Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. 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 if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.]

##### ***[Use the following statement for rigid nonrefillable containers greater than 5 gallons]***

[Nonrefillable container. Do not reuse or refill this container. Clean container 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.]



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*Cobra*, *Phoenix*, *Valor* (EPA Reg. No. 59639-99 - flumioxazin) and *Valor XLT* (EPA Reg. No. 59639-117 – flumioxazin/chlorimuron-ethyl) are registered trademarks of Valent U.S.A. LLC; Valent Tank Cleaner is a product of Valent U.S.A. LLC

Axiom, Domain and Liberty Link are registered trademarks of Bayer

Boundary and Dual are registered trademarks of Syngenta

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Firstrate (EPA Reg. No. 62719-275 - cloransulam-methyl), Goal (EPA Reg. No. 62719-424 - oxyfluorfen), Hornet (EPA Reg. No. 62719-315 - flumetsulam/clopyralid), Kerb (EPA Reg. No. 62719-578 - pronamide) and Python (EPA Reg. No. 62719-277 - flumetsulam) are registered trademarks of Dow AgroSciences LLC

Basis (EPA Reg. No. 352-571 - rimsulfuron/thifensulfuron-methyl), Classic (EPA Reg. No. 352-436 – Chlorimuron ethyl), Express (EPA Reg. No. 279-9594 - tribenuron methyl), and Lorox (EPA Reg. No. 61842-23 - linuron) are registered trademarks of E. I. DuPont de Nemours & Co., Inc  
Micro-Tech, Roundup Ready and Roundup PowerMAX (EPA Reg. No. 524-549 - glyphosate) are registered trademarks of Monsanto Co.

Manufactured for:

Valent U.S.A. LLC

P.O. Box 8025

Walnut Creek, CA 94596-8025

Made in U.S.A.

EPA Reg. No. 59639-237

EPA Est.

059639-00237.20191002.V10452\_3.04SC.Amend.Clean

**[Sub Label 2]**

**V-10452 3.04 SC Herbicide**

For control and/or suppression of listed weeds to maintain bare ground on non-crop areas.



FLUMIOXAZIN	GROUP	14	HERBICIDE
PYROXASULFONE	GROUP	15	HERBICIDE

[Bracketed text is optional]

[Bracketed Bold Italicized text is information for the reviewer]

## V-10452 3.04 SC Herbicide

**FOR CONTROL AND/OR SUPPRESSION OF LISTED WEEDS TO MAINTAIN BARE GROUND ON NON-CROP AREAS.**

**FOR RESIDUAL CONTROL AND/OR SUPPRESSION OF LISTED WEEDS IN FIELD CORN, COTTON, SOYBEAN, WHEAT, FALLOW LAND AND NON CROP AREAS**

Active Ingredient	By Wt
Flumioxazin* .....	14.04%
Pyroxasulfone** .....	17.81%
Other Ingredients .....	68.15%
Total	100.00%

\*N-(7-fluoro-3,4-dihydro-3-oxo-4-prop-2-ynyl-2H-1,4-benzoxazin-6-yl) cyclohex-1-ene-1,2-dicarboxamide

\*\*5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)-1H-pyrazol-4-ylmethyl  
4,5-dihydro-5,5-dimethyl-1,2-oxazol-3-yl sulfone

V-10452 3.04 SC Herbicide is suspension concentrate containing 1.34 lb flumioxazin and 1.70 lb pyroxasulfone per gallon.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

**SEE NEXT [PAGE][PANEL] FOR ADDITIONAL PRECAUTIONARY STATEMENTS.**

EPA Reg. No. 59639-237  
EPA Est.

### NET CONTENTS

[Always Mix Product Thoroughly Before Use]  
[Shake Well Before Using]

<b>FIRST AID</b>	
<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 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 800-892-0099 for emergency medical treatment information.</p>	

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS & DOMESTIC ANIMALS**

CAUTION: Harmful if absorbed through skin. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:** long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material including polyethylene or polyvinyl chloride ≥ 14 mils, shoes and socks.

**User Safety Requirements**

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

**Engineering Controls**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standards (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.

<b>USER SAFETY RECOMMENDATIONS</b>
<ul style="list-style-type: none"> <li>• Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</li> <li>• Users should 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.</li> </ul>

## **ENVIRONMENTAL HAZARDS**

This product is toxic to non-target plants and aquatic invertebrates. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

This pesticide is toxic to plants and should be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

**Ground Water Advisory:** This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

**Surface Water Advisories:** Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

The product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams and springs will reduce potential loading of pyrooxasulfone and its degradation product, 5-difluoromethoxy-1H-pyrazol-4-yl) methanesulfonic acid (M1), from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

## **DIRECTIONS FOR USE**

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

**READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

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.

### **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 Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forest, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

Do not enter or allow others to enter treated areas until sprays have dried.

**DISCLAIMER, RISKS OF USING THIS PRODUCT,  
LIMITED WARRANTY  
AND LIMITATION OF LIABILITY**

**IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.**

**RISKS OF USING THIS PRODUCT**

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND TO THE FULLEST EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

**LIMITED WARRANTY**

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label **and subject to the Risks of Using This Product as described above. To the extent consistent with applicable law AND AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED.** No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

**LIMITATION OF LIABILITY**

**To the fullest extent consistent with applicable law, Valent or Seller is not liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. TO THE FULLEST EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

**PROMPT NOTICE OF CLAIM**

To the extent consistent with applicable law allowing such requirements Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

To the extent consistent with applicable law if Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

**NO AMENDMENTS**

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing **Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability**, which may not be modified by any oral or written agreement.

**TANK MIXES**

**NOTICE:** Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, to the extent allowed by applicable law.

**Read and follow the entire label of each product to be used in the tank mix with this product.** 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.

## **Weed Resistance Management**

For resistance management, please note that V-10452 3.04 SC Herbicide contains both a Group 14 /flumioxazin and a Group 15/pyroxasulfone herbicide. Any weed population may contain plants naturally resistant to Group 14 and/or Group 15 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of V-10452 3.04 SC Herbicide or other Group 14 and Group 15 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- 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 tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout 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, for example hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage 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 strategies for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Valent U.S.A. LLC at 800-89-VALENT (898-2536).

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## PRODUCT INFORMATION

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V-10452 3.04 SC Herbicide is a preemergence and early postemergence herbicide for control of selected grass and broadleaf weeds to maintain bare ground and certain perennial grasses in non-crop areas.

Weeds controlled or suppressed by V-10452 3.04 SC Herbicide are listed in Table 2, Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide.

Preemergence weed control with V-10452 3.04 SC Herbicide is most effective when applied to clean, weed free soil surfaces. The most effective postemergence weed control with V-10452 3.04 SC Herbicide occurs when applied in combination with a surfactant to weeds less than 2 inches in height. Follow specific site use directions prior to using surfactant as certain over the top applications restrict the use of the surfactants.

**Table 1. V-10452 Herbicide Rate Summary**

fl oz of V-10452 3.04 SC Herbicide	Pounds of flumioxazin	Pounds of pyroxasulfone
9.0	0.094	0.120
12.0	0.128	0.160
16.0	0.167	0.213
20.0	0.209	0.267

### USE RESTRICTIONS (Applicable to all uses [on this [sub-]label])

- **DO NOT** apply more than 20 fl oz (0.209 lb flumioxazin and 0.267 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per year by ground application.
- **DO NOT** apply more than 9 fl oz (0.094 lb flumioxazin and 0.120 lb pyroxasulfone) of V-10452 3.04 SC Herbicide per acre per year by aerial application.
- **DO NOT** apply more than 1 application per acre per year.
- **DO NOT** rotate to food or feed crops after application to bare ground on noncrop areas.
- **DO NOT** apply in enclosed greenhouse structures.
- **DO NOT** apply when weather conditions favor spray drift from treated areas.
- **DO NOT** incorporate into soil after application.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply to residential lawns, golf courses, sod farms or production and landscape ornamentals.
- **DO NOT** apply to areas with adjacent non-dormant pome or stone fruit crops.
- Treatment of powdery, dry soil or light sandy soil, when there is little to no likelihood of rainfall soon after may result in off target movement and possible damage to actively growing susceptible crops when soil particles are moved by wind or water.

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## APPLICATION INFORMATION

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### SPRAYER PREPARATION

Before applying V-10452 3.04 SC Herbicide, start with clean, well maintained application equipment. The spray tank, as well as all hoses and booms, must be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to, the sulfonyleurea and phenoxy herbicides, are active at very small amounts and can cause crop injury when applied to susceptible crops. The spray equipment must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply V-10452 3.04 SC Herbicide. Follow the most restrictive cleanup procedure if two or more products were tank mixed prior to V-10452 3.04 SC Herbicide application.

### MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. If a drift retardant is to be used, add 10 lb of spray grade ammonium sulfate per 100 gallons of spray solution, unless prohibited by the tank mix partner.
3. While agitating, slowly add V-10452 3.04 SC Herbicide to the spray tank. Agitation creates a rippling or rolling action on the water surface.
4. If tank mixing V-10452 3.04 SC Herbicide with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
5. Add any required adjuvants.
6. Fill spray tank to desired level with water. **Continue agitation until all spray solution has been applied.**
7. Mix only the amount of spray solution that can be applied the day of mixing.

### APPLICATION METHOD

V-10452 3.04 SC Herbicide is applied by ground or by air.

#### 1. GROUND APPLICATION

Apply V-10452 3.04 SC Herbicide, and V-10452 3.04 SC Herbicide tank mixes, with ground equipment using standard commercial sprayers equipped with flat fan (pre-plant or preemergence applications only) designed to deliver the desired spray pressure and spray volume.

#### 2. AERIAL APPLICATION

Spray drift away from the site of application may cause damage to non-target vegetation.

### CARRIER VOLUME AND SPRAY PRESSURE

When used as part of a burndown or preemergence weed control program, apply V-10452 3.04 SC Herbicide in a minimum of 7 gallons of water per acre. Application at less than 7 gallons per acre may provide inadequate control.

## **JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND V-10452 3.04 SC HERBICIDE**

When using V-10452 3.04 SC Herbicide and an adjuvant, including in stale seed bed or reduced tillage situations, perform a jar test before mixing commercial quantities of V-10452 3.04 SC Herbicide, when using V-10452 3.04 SC Herbicide for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pt of the water to a quart jar. Use water from the same source and temperature as which will be used in the spray tank mixing operation.
2. Add 2 ml of V-10452 3.04 SC Herbicide to the quart jar for every 6 fl oz of V-10452 3.04 SC Herbicide per acre being applied (1 ml if 6 fl oz/A is the desired V-10452 3.04 SC Herbicide rate), gently mix until product goes into suspension.
3. Add 60 ml (4 Tbsp or 2 fl oz) of the crop oil or methylated seed oil to the quart jar or 1 ml of non-ionic surfactant if it is being used in place of oil, gently mix.
4. If nitrogen is being used, add 16 ml (1 Tbsp or 0.5 oz) of the 28 to 32% nitrogen source to the quart jar. If ammonium sulfate is being used, add 19 g AMS to the quart jar in place of the 28 to 32% nitrogen.
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank mix combination will be uniform and free of suspended particles. If any of the following conditions are observed question the choice of adjuvant:
  - a) Layer of oil or globules on the mixture's surface.
  - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: thickening texture (coagulated) like gelatin.

## **SPRAYER CLEANUP**

Spray equipment, including mixing vessels and nurse tanks, must be cleaned each day following V-10452 3.04 SC Herbicide application. After V-10452 3.04 SC Herbicide is applied, the following steps must be used to clean the spray equipment:

- Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
- Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles.
- Top off tank, add 1 gallon of 3% household ammonia (or equivalent) for every 100 gallons of water, circulate through sprayer for 5 minutes, and then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes. If diaphragms are being used on the spray boom, loosen diaphragms before flushing the spray system, allowing cleaning solution to spray through the open diaphragm. If spray lines have any end caps, they must be loosened before flushing the system, allowing cleaning solution to spray through the loosened caps. To enhance removal of V-10452 3.04 SC Herbicide from the spray system, add a tank cleaner including "Valent Tank Cleaner", in place of ammonia and allow the cleaning solution to remain in the pressurized spray system (spray tank, hoses and boom) for 8 hours before flushing the system for a minimum of 15 minutes.
- Drain tank completely.
- Add enough clean water to the spray tank to allow all hoses, booms, screens and nozzles to be flushed for 2 minutes.
- Remove all nozzles and screens and rinse them in clean water.

Thoroughly clean the spray equipment, including all tanks, hoses, booms, screens and nozzles, before it is used to apply postemergence pesticides. Equipment with V-10452 3.04 SC Herbicide residue remaining in the system may result in crop injury to the subsequently treated crop.

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## ADDITIVES

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When an adjuvant is to be used with this product, use a Chemical Producers and Distributors Association certified adjuvant. Mix V-10452 3.04 SC Herbicide with a crop oil concentrate that contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant containing at least 80% active ingredient when applying V-10452 3.04 SC Herbicide as part of a postemergence weed control program. Verify the mixing compatibility by a jar test before using.

A spray-grade nitrogen source (either ammonium sulfate at 2.0 to 2.5 lb/A or a 28 to 32% nitrogen solution at 1 to 2 qt/A) may be added to the spray mixture along with a crop oil concentrate or non-ionic surfactant to enhance weed control. The addition of a nitrogen source does not replace the need for crop oil concentrate or non-ionic surfactant.

### MANDATORY SPRAY DRIFT

#### Aerial Application

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

#### Ground Boom Applications

- Apply with the nozzle height specified by the manufacturer, but no more than 3 feet above the ground or crop canopy. For all other ground applications, the nozzle must be no more than 3 feet from the target vegetation.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

### SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

## **IMPORTANCE OF DROPLET SIZE**

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

### **Controlling Droplet Size – Ground Boom**

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

### **Controlling Droplet Size – Aircraft**

- Adjust Nozzles – Follow nozzle manufacturer's directions for setting up nozzles. To reduce fine droplets, orient nozzles parallel with the airflow in flight.

### **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom must remain level with the crop and have minimal bounce.

### **RELEASE HEIGHT – Aircraft**

Higher release heights increase the potential for spray drift.

### **SHIELDED SPRAYERS**

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

### **TEMPERATURE AND HUMIDITY**

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

### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

### **WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

**Boom-less Ground Applications:** Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

**Handheld Technology Applications:** Take precautions to minimize spray drift.

**NON-TARGET ORGANISM ADVISORY**

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

**Adjuvants and Drift Control Additives:** Refer to tank mix partner's label for adjuvant specifications. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

**BUFFER RESTRICTIONS**

- Do not apply this product by air within 40 ft of non-target plants including non-target crops.
- Do not apply this product by air within 100 ft of emerged cotton crops.
- Do not apply this product by air within 40 ft of streams, wetlands, marshes, ponds, lakes and reservoirs.

**Table 2. Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide**

Common Name	Scientific Name	C = Control S = Suppression
<b>BROADLEAF WEED SPECIES</b>		
Bristly Starbur	<i>Acanthospermum hispidum</i>	S
Carpetweed	<i>Mollugo verticillata</i>	C
Chickweeds		
Common	<i>Stellaria media</i>	C
Mouseear	<i>Cerastium vulgatum</i>	C
Coffee Senna	<i>Cassia occidentalis</i>	C
Common Ragweed	<i>Ambrosia artemisiifolia</i>	C
Copperleaf, Hophornbeam	<i>Acalypha ostryifolia</i>	S
Dandelion	<i>Taraxacum officinale</i>	C
Eclipta	<i>Eclipta prostrata</i>	C
Evening-primrose, Cutleaf	<i>Oenothera laciniata</i>	C
False Chamomile	<i>Tripleurospermum maritima</i>	C
Fleabane, Hairy	<i>Conyza bonariensis</i>	C
Flixweed	<i>Descurainia Sophia</i>	S
Florida Beggarweed	<i>Desmodium tortuosum</i>	C
Florida Pusley	<i>Richardia scabra</i>	C
Golden Crownbeard	<i>Verbesina encelioides</i>	C
Groundsel, Common	<i>Senecio vulgaris</i>	C
Hairy Indigo	<i>Indigofera hirsute</i>	C
Hemp Sesbania	<i>Sesbania exaltata</i>	C
Henbit	<i>Lamium amplexicaule</i>	C
Jimsonweed	<i>Datura stramonium</i>	C
Kochia	<i>Kochia scoparia</i>	C
Lambsquarters, Common	<i>Chenopodium album</i>	C
Little Mallow	<i>Malva parviflora</i>	C
Marestail/Horseweed	<i>Conyza canadensis</i>	C
Morningglories		
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>	C
Ivyleaf	<i>Ipomoea hederacea</i>	C
Red/Scarlet	<i>Ipomoea coccinea</i>	C
Smallflower	<i>Jacquemontia tamnifolia</i>	C
Tall	<i>Ipomoea purpurea</i>	C
Mustard		
Tansy	<i>Descurainia pinnata</i>	C
Tumble	<i>Sisymbrium altissimum</i>	C
Wild	<i>Brassica kaber</i>	C
Nightshades		
Black	<i>Solanum nigrum</i>	C
Eastern Black	<i>Solanum ptycanthum</i>	C
Hairy	<i>Solanum sarrachoides</i>	C
Palmer Amaranth	<i>Amaranthus palmeri</i>	C

continued

**Table 2. Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide**

Common Name	Scientific Name	C = Control S = Suppression
<b>BROADLEAF WEED SPECIES</b>		
Pigweeds		
Redroot	<i>Amaranthus retroflexus</i>	C
Smooth	<i>Amaranthus hybridus</i>	C
Spiny Amaranth	<i>Amaranthus spinosus</i>	C
Tumble	<i>Amaranthus albus</i>	C
Prickly Lettuce	<i>Lactuca serriola</i>	C
Prickly Sida (Teaweed)	<i>Sida spinosa</i>	C
Puncturevine	<i>Tribulus terrestris</i>	C
Purslane		
Common	<i>Portulaca oleracea</i>	C
Horse	<i>Trianthema portulacastrum</i>	C
Radish, Wild	<i>Raphanus raphanistrum</i>	C
Ragweed		
Common	<i>Ambrosia arteminifolia</i>	C
Giant	<i>Ambrosia trifida</i>	S
Redmaid	<i>Calandrinia ciliata var menziessii</i>	C
Russian Thistle	<i>Salsola iberica</i>	C
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	C
Smartweeds		
Ladysthumb	<i>Polygonum persicaria</i>	S
Pennsylvania	<i>Polygonum pennsylvanicum</i>	S
Spotted Spurge	<i>Euphorbia maculata</i>	C
Spurred Anoda	<i>Anoda cristata</i>	C
Tropic Croton	<i>Croton glandulosus</i>	C
Velvetleaf	<i>Abutilon theophrasti</i>	C
Venice Mallow	<i>Hibiscus trionum</i>	C
Waterhemp		
Common	<i>Amaranthus rudis</i>	C
Tall	<i>Amaranthus tuberculatus</i>	C
Wild Buckwheat	<i>Polygonum convolvulus</i>	S
Wild Poinsettia	<i>Euphorbia heterophylla</i>	C
Wormwood, Biennial	<i>Artemisia biennis</i>	S
<b>GRASS WEED SPECIES</b>		
Barnyardgrass	<i>Echinochloa crus-galli</i>	C
Bluegrass, Annual	<i>Poa annua</i>	C
Cheat	<i>Bromus secalinus</i>	C
Crabgrass		
Large	<i>Digitaria sanguinalis</i>	C
Smooth	<i>Digitaria ischaemum</i>	C
Cupgrass, Southwestern	<i>Eriochloa gracilis</i>	C
Downy Brome	<i>Bromus tectorum</i>	C

continued



**Table 2. Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide**

Common Name	Scientific Name	C = Control S = Suppression
<b>GRASS WEED SPECIES</b>		
Foxtails		
Giant	<i>Setaria faberi</i>	C
Green	<i>Setaria viridis</i>	C
Yellow	<i>Setaria glauca</i>	C
Goosegrass	<i>Eleusine indica</i>	C
Johnsongrass (seedling)	<i>Sorghum halepense</i>	C
Lovegrass, California	<i>Eragrostis diffusa</i>	C
Panicums		
Fall	<i>Panicum dichotomiflorum</i>	C
Texas	<i>Panicum texanum</i>	C
Red Rice	<i>Oryza sativa</i>	C
Ryegrass		
Italian	<i>Lolium multiflorum</i>	C
Rigid	<i>Lolium rigidum</i>	C
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>	C
Sprangletop	<i>Leptochloa</i> spp.	C

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**DIRECTIONS FOR USE TO MAINTAIN BARE GROUND IN NON-CROP AREAS**

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V-10452 3.04 SC Herbicide, when used as directed, can be used for non-selective vegetation control to maintain bare ground in non-crop areas that must be kept weed-free. Apply V-10452 3.04 SC Herbicide only to:

- Bare ground under guardrails, pipelines, railroad beds, railroad yards and surrounding areas.
- Bare ground in parking and storage areas, plant sites, substations, pumping stations, and tank farms.
- Bare ground areas of airports, brickyards, industrial plant sites, lumber yards and military installations, and storage areas.
- Bare ground around farm buildings and along ungrazed fencerows, wind breaks, and shelter belts.
- Road surfaces, improved roadside areas and gravel shoulders.

V-10452 3.04 SC Herbicide offers residual and postemergence control of susceptible broadleaf and grass weeds as well as an additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds listed in Table 2, Weeds Controlled or Suppressed by Residual Activity of V-10452 3.04 SC Herbicide. V-10452 3.04 SC Herbicide can be tank mixed with the herbicides listed in Table 3, Tank Mix Combinations for Non-Selective Vegetation Control for increased residual or postemergence control. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase.

### PREEMERGENCE APPLICATION

Apply V-10452 3.04 SC Herbicide 16 to 20 fl oz/A by ground or 9 fl oz/A by air as a preemergence application on all soil types (up to 5% organic matter). Make the preemergence (to weed emergence) applications of V-10452 3.04 SC Herbicide to a weed-free soil surface. Preemergence applications of V-10452 3.04 SC Herbicide must be completed prior to weed emergence. Moisture is necessary to activate V-10452 3.04 SC Herbicide on soil for residual weed control. Dry weather following application of V-10452 3.04 SC Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, V-10452 3.04 SC Herbicide will control susceptible germinating weeds.

### POSTEMERGENCE APPLICATION

Apply V-10452 3.04 SC Herbicide at 16 to 20 fl oz/A by ground or 9 fl oz/A by air plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt/A crop oil concentrate). The addition of an adjuvant enhances V-10452 3.04 SC Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of V-10452 3.04 SC Herbicide. Small emerged weeds are controlled or suppressed with V-10452 3.04 SC Herbicide, however, translocation of V-10452 3.04 SC Herbicide within a weed is limited, and optimal control requires thorough spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with V-10452 3.04 SC Herbicide occurs when applied in combination with a surfactant to weeds less than 2 inches in height. Use a tank mix partner in combination with V-10452 3.04 SC Herbicide for the postemergence control of weeds larger than 2 inches. Specified tank mix partners are listed in Table 3, Tank Mix Combinations For Non-Selective Vegetation Control.

V-10452 3.04 SC Herbicide is rainfast one hour after application. Postemergent activity may be reduced if rainfall occurs within one hour after application.

**IMPORTANT:** Completely read and follow the label of any potential tank mix partner with V-10452 3.04 SC Herbicide. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label.

**Table 3. Tank Mix Combinations For Non-Selective Vegetation Control**

2,4-D	hexazinone	prodiamine
aminocyclopyrachlor	imazapic	rimsulfuron
aminopyralid	imazapyr	saflufenacil
bromacil	metsulfuron methyl	simazine
chlorsulfuron	norfurazon	sulfentrazone
chlorpyralid	oryzalin	sulfometuron methyl
dicamba	pendimethalin	tebuthiuron
diuron	picloram	topramezone
glyphosate	pramitol	triclopyr

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## DIRECTIONS FOR USE ON BAHIAGRASS AND BERMUDAGRASS IN NON-CROP AREAS

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V-10452 3.04 SC Herbicide may be used to promote the growth of (release of) bermudagrass and bahiagrass in non-crop sites where V-10452 3.04 SC Herbicide is labeled for bare ground weed control and low maintenance vegetation and erosion control is desired. These sites include roadsides, utility rights-of-way, railroad crossings, airports and other non-crop sites. Application of V-10452 3.04 SC Herbicide may result in unacceptable injury to other grasses. **DO NOT** apply V-10452 3.04 SC Herbicide in residential and commercial landscapes, golf courses or sod farms.

### **APPLICATION TIMING**

Apply V-10452 3.04 SC Herbicide during the fall, winter or spring when bahiagrass and bermudagrass are dormant or semi dormant (not actively growing). Optimal application timing is before germination of target weeds, but V-10452 3.04 SC Herbicide will also provide early postemergent control of small emerged weeds. Application of V-10452 3.04 SC Herbicide to actively growing bahiagrass and bermudagrass may injure foliage and temporarily suppress growth, but V-10452 3.04 SC Herbicide has limited systemic activity and bahiagrass and bermudagrass will typically outgrow injury.

### **PREEMERGENCE APPLICATION**

Apply V-10452 3.04 SC Herbicide at 12 to 20 fl oz/A as a preemergence application. Moisture is necessary to activate V-10452 3.04 SC Herbicide on soil for residual weed control. Dry weather following application of V-10452 3.04 SC Herbicide may reduce effectiveness.

### **POSTEMERGENCE APPLICATION**

Apply V-10452 3.04 SC Herbicide at 12 to 20 fl oz/A plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt/A crop oil concentrate). The addition of an adjuvant enhances V-10452 3.04 SC Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of V-10452 3.04 SC Herbicide. Small emerged weeds are suppressed or controlled with V-10452 3.04 SC Herbicide; however, translocation of V-10452 3.04 SC Herbicide within a weed is limited, and optimal control requires thorough spray coverage and the addition of an adjuvant. The most effective postemergence weed control with V-10452 3.04 SC Herbicide occurs when applied in combination with a surfactant to weeds less than 2 inches in height. Use a tank mix partner in combination with V-10452 3.04 SC Herbicide for the postemergence control of weeds larger than 2 inches. Tank mixing V-10452 3.04 SC Herbicide with other herbicides may increase the potential for bahiagrass and bermudagrass injury or growth suppression.

**IMPORTANT:** Read and follow label directions for all tank mix products before using. Confirm that the tank mix partners are registered for use on bahiagrass and bermudagrass. Always follow the most restrictive labeling of any tank mix product.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

### STORAGE

Keep pesticide in original container.

Store in a cool, dry, secure place.

Do not put formulation or dilute spray solution into food or drink containers.

Do not contaminate food or foodstuffs.

Do not store or transport near feed or food.

Not for use or storage in or around the home.

For help with any spill, leak, fire or exposure involving this material, call day or night (800) 892-0099.

### PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

### CONTAINER HANDLING

#### ***[Use the following statement for containers equal to or less than 5 gallons]***

[Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. 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 if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.]

#### ***[Use the following statement for rigid nonrefillable containers greater than 5 gallons]***

[Nonrefillable container. Do not reuse or refill this container. Clean container 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.]

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Valent Tank Cleaner is a product of Valent U.S.A. LLC

Manufactured for:  
Valent U.S.A. LLC  
P.O. Box 8025  
Walnut Creek, CA 94596-8025

Made in U.S.A.

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