



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 20, 2023

Alison Suffill  
Label Facilitator  
Avalaire, LLC  
1204 Village Market Place, #173  
Morrisville, NC 27560

Subject: Registration Review Label Amendments Incorporating Mitigation from the National Marine Fisheries Services' (NMFS) Biological Opinion on the Effects of S-Metolachlor on Pacific Salmonids  
*Product Name:* Avalaire S-Metolachlor + Metribuzin + Imazethapyr  
*EPA Registration Number:* 93930-54  
*Application Date:* 8/6/21  
*Decision Number:* 589312

Dear Alison Suffill:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the NMFS' Biological Opinion on the effects of S-Metolachlor on Pacific salmonids. The Agency has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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.

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 12 months from the date of this letter. After 12 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.

If you have any questions about this letter, please contact Ben Tweed at [tweed.benjamin@epa.gov](mailto:tweed.benjamin@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a stylized flourish at the end.

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

[Note to reviewer: [Text] in brackets denotes optional or explanatory language  
 [Note to reviewer: {Text} in braces denotes where in the final label text will appear  
 {BOOKLET FRONT PANEL LANGUAGE}]

S-METOLACHLOR	GROUP	15	HERBICIDE
METRIBUZIN	GROUP	5	HERBICIDE
IMAZETHAPYR	GROUP	2	HERBICIDE

# AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR<sup>TM</sup>

[Alternate Brand Name: Stridero]

[Herbicide for pre-emergent control of certain grasses and broadleaf weeds in soybeans.]

**ACTIVE INGREDIENTS:** (by weight)

S-Metolachlor\* ..... 37.08%

Metribuzin\*\* ..... 8.23%

Imazethapyr\*\*\* ..... 1.83%

**OTHER INGREDIENTS:** ..... 52.86%

**TOTAL** ..... 100.0%

\*contains 3.38 lb of S-metolachlor per gallon.

\*\*contains 0.75 lb of metribuzin per gallon.

\*\*\*contains 0.17 lb of imazethapyr acid per gallon.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

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

See [below] [inside label booklet] for [additional] [First Aid,] [Precautionary Statements] and [Directions for Use].

FIRST AID	
<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>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
HOT LINE NUMBER	

**ACCEPTED**

Jan 20, 2023

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 93930-54

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at **1-844-685-9173** for emergency medical treatment information.

**For Chemical Emergency:  
Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night**

**Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

**EPA Reg. No.: 93930-54**

**EPA Est. No.:**

**Net Weight:  
20210428a**

Manufactured for:  
**Avalaire, LLC**  
1204 Village Market Place, #173  
Morrisville, NC 27560

## {LANGUAGE INSIDE BOOKLET}

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

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

#### **Personal Protective Equipment (PPE)**

**Mixers, loaders, applicators, flaggers and other handlers must wear:**

- Protective eyewear,
- Coveralls worn over short-sleeved shirt and short pants,
- Chemical-resistant gloves made out of butyl rubber > 14 mils or barrier laminate,
- Chemical-resistant footwear plus socks, and
- Chemical-resistant apron when cleaning equipment, spills, mixing and loading and when otherwise exposed to this product's concentrate.

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 Standard (WPS) for agricultural pesticides, the handler PPE requirements may be reduced or modified as specified in the WPS (40 CFR 170.607(d-f)).

#### **USER SAFETY RECOMMENDATIONS**

##### **Users should:**

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

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

#### **ENVIRONMENTAL HAZARDS**

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

#### **Surface Water Advisory**

S-Metolachlor and Imazethapyr may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks or months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of S-metolachlor and/or Imazethapyr from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

**Ground Water Advisory**

Metribuzin is a chemical which can travel (seep or leach) through soil and can contaminate ground water which may be used as drinking water. Metribuzin has been found in ground water as a result of agricultural use. Users are advised not to apply metribuzin where the water table (ground water) is close to the surface, and where the soils are very permeable, i.e., well-drained soils such as loamy sands. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

Imazethapyr 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.

S-metolachlor is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow

**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 site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

**Reporting Ecological Incidents:**

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 984-465-4800.

**Mixing/Loading/Application Instructions**

Product must be used in a manner which will prevent back-siphoning in wells, spills or improper disposal of excess pesticide spray mixture.

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be mixed/loaded or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times.

The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

## **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**In New York State - not for sale or use in Nassau and Suffolk Counties.**

Observe all restrictions, precautions and limitations on this label and on the labels of products used in combination with this product.

**Endangered Species Protection Requirements:**

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

**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 protections of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.**

**Exception:** If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. PPE required for early entry to treated areas that is permitted under the Worker Protections Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Protective Eyewear,
- Coveralls over short-sleeve shirt and short pants,
- Chemical-resistant gloves, such as butyl rubber > 14 mils or barrier laminate,
- Chemical-resistant footwear plus socks.

**PRODUCT INFORMATION**

**AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** is an emulsifiable concentrate that kills weeds by root and/or foliage uptake and rapid translocation to the growing points. Adequate soil moisture is important for optimum activity of this product. When adequate soil moisture is present, this product will provide residual control of susceptible germinating weeds; activity on established weeds will depend on the weed species and the location of its root system in the soil.

Occasionally, internode shortening and/or temporary yellowing of crop plants may occur following applications of this product. These effects occur infrequently and are temporary. Normal growth and appearance should resume within 1 to 2 weeks.

When organophosphate (such as Lorsban®) or carbamate insecticides are tank mixed with this product, temporary injury may result to the treated crops.

Use of this product in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product. Therefore, rotational crop injury is always possible.

Under some conditions (such as heavy texture soil, high organic matter, low pH or low rainfall), this product may cause injury to subsequent planted crops. Vegetable crops (particularly sugar beets) are sensitive to residues of this product in the soil.

Naturally occurring biotypes\* of some of the weeds listed on this label may not be effectively controlled by this and/or other products with either the ALS/AHAS enzyme inhibiting mode of action. Other herbicides with the ALS/AHAS enzyme inhibiting mode of action include the sulfonylureas (e.g., Accent®, Basis®, Classic®, Harmony® GT, Spirit®, Permit® or Promote™, etc.), the sulfonamides (e.g., FirstRate® or FrontRunner™, etc.) and the pyrimidyl benzoates (e.g. Staple®, etc.).

\* A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct, genetic makeup from other plants.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et al. v. EPA, C01-0132C, (W.D. WA). For further information, please refer to <http://www.epa.gov/espp/litstatus/wtc>.

### **MANDATORY SPRAY DRIFT MANAGEMENT**

#### **Aerial Applications:**

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to select the nozzles and pressure that deliver medium or coarser droplets (ASABE S572.1)
- Do not apply when wind speeds exceed 10 mph at the application site. The boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

#### **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy. unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a coarse or coarser droplet size (ASABE S572).
- For all other applications, applicators are required to select the nozzles and pressure that deliver medium or coarser droplets (ASABE S572.1)
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

#### **Boomless Ground Applications:**

- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplet size (ASABE S572) for all applications.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

Where states have more stringent regulations, they must be observed.

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



### **Spray Drift Advisories**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.  
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS

### **IMPORTANCE OF DROPLET SIZE**

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

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

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

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

- **Adjust Nozzles** - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

### **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom should remain level with the 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.

### **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.

### **Boomless 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

## WEED RESISTANCE MANAGEMENT

For resistance management, please note that **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** contains a Group 15, Group 5, and a Group 2 herbicide. Any weed population may contain plants naturally resistant to Group 15, Group 5, and/or a Group 2 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** or other Group 15, Group 5, and/or Group 2 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 from a different group if such use is permitted; where information on resistance in target weeds 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.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.
- 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 such as 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 recommendations for specific crops and weed biotypes.
- Report any incidence of non-performance of this product against a particular weed species to your Avalaire, LLC retailer, representative or call 984-465-4754.

## APPLICATION WITH HERBICIDE SPRAY EQUIPMENT

Use a standard low-pressure (20 to 40 psi) herbicide boom sprayer equipped with suitable nozzles and screens no finer than 50-mesh in nozzle and in-line strainers. Agitate thoroughly before and during application with bypass agitation. Low pressure and high volume hand wand equipment is prohibited.

### Ground Application

Apply the proper rate of this product in a minimum of 10.0 to 40.0 gallons of spray mixture per acre broadcast.

### Aerial Application

Where permitted, apply specified rate in a minimum of 5.0 gallons of spray mixture per acre. Do not apply aerially when wind speed is greater than 10 mph.

### **For All Applications**

Sprayer must be accurately calibrated before applying this product. Check sprayer during application to be sure it is working properly and delivering a uniform spray pattern. As the volume of spray mixture decreases per acre, the importance of accurate calibration and uniform application increases.

Avoid overapplication, misapplication, and boom and spray swath overlapping that will increase spray dosage. (Crop injury may occur as a result.) Avoid spray skips and gaps which allow weeds to grow in untreated soil. Do not apply when weather conditions favor spray drift and/or when sensitive or cool season crops (such as cole crops, onions, peas, or strawberries) are present in adjacent fields or in areas where wheat is growing in coarse textured soils.

### **Sprayer Cleanup**

Spray equipment must be thoroughly cleaned to remove remaining traces of herbicide that might injure other crops to be sprayed. Drain any remaining spray solution of this product from the spray tank and dispose of according to label disposal instructions. Rinse the spray tank and refill with water, adding a heavy-duty detergent at the rate of 1 cup per 20.0 gallons of water. Recycle this mixture through the equipment for 5 minutes and spray out. Repeat this procedure twice. Fill the spray tank with clean water, recycle for 5 minutes, and spray out. Clean pump and nozzle screens thoroughly. Wash away any spray mixture from the outside of spray tank, nozzles or spray rig. All rinse water must be disposed of in compliance with local, state, and Federal guidelines.

## **MIXING INSTRUCTIONS**

### **Incorporation and Combination Uses**

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in the tank mixture. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. When using this product, make sure the sprayer is completely clean, free of rust or corrosion which occurs from winter storage.

Examine strainers and screens to be sure the sprayer is clean from previously used pesticides.

Any tank mix containing this product must be kept agitated and sprayed out immediately. Do not allow tank mixes to stand for prolonged periods of time.

The proper mixing procedure for this product alone or in tank-mix combinations with other herbicides is:

1. Fill the spray tank 1/4 to 1/3 full with clean water.
2. Add specified rate of this product while recirculating and with agitator running.
3. Mix thoroughly and add clean water to fill spray tank to desired level.
4. Add the other herbicide to tank last and agitate thoroughly.
5. Continue agitation during application and until sprayer tank is empty.

### **Application of AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR in Fluid Fertilizers**

This product may be applied in fluid fertilizer solutions by following the appropriate mixing procedures and compatibility check. When using tank mix combinations, be sure all components are compatible.

### **Tank Mixing Guidelines for Fluid Fertilizer Mixtures**

1. Add the required amount of water and compatibility agent (if required) to the tank. Start agitation system while adding this product and follow by adding the fluid fertilizer and agitate.
2. If a second herbicide is also to be used, follow as above in Step 1, but use twice the amount of water. Start agitation, add **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**. Follow by adding the second herbicide, then continue filling the tank with fluid fertilizer.
3. Maintain continuous agitation to assure uniform spray mixture until the tank is emptied.

Make compatibility checks of this product plus fluid fertilizers and tank-mix combinations plus fluid fertilizers which include this product for each batch because of the variability of fluid fertilizers.

**The following compatibility check should only be used when mixing with fluid fertilizers.**

1. Pre-mix 8.0 teaspoons of water with 2.0 teaspoons of this product (4:1 ratio) in a quart jar by adding the water first and following with this product. Mix thoroughly. If a second herbicide is to be used, double the amount of water (8:1 ratio), mix in this product, and follow with the second herbicide.
2. Then pour 1.0 pint of fluid fertilizer into the quart jar and shake well.
3. Allow to stand for 5 minutes.

#### **Interpretation of Results**

If the solution in the jar appears to be uniform, without signs of agglomeration, or without a separation of an oily film on top of the fertilizer, the mixture may be used. If not, repeat the compatibility check using twice the amount of water or add a compatibility agent to the water. If separation occurs, but the mixture can be resuspended by shaking, then application is possible with good agitation in the spray tank.

### **SOYBEAN APPLICATION DIRECTIONS**

**(Except California)**

This product may be applied preplant incorporated, preplant surface or pre-emergent surface, or as a sequential pre-emergent application. This product may also be used as an overlay application following a preplant incorporated application of a grass herbicide registered for this same use and in tank mix combinations for burndown weed control. All applications may be applied with ground equipment, and some may be applied with aerial spray equipment.

#### **Restrictions**

- Do not apply more than 3.0 pints of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** per acre per use season.
- In North Dakota, and in Minnesota north of Highway #210, do not apply more than 2.2 pints of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** per acre per use season.
- Do not harvest within 85 days of the last application of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**.
- Do not graze or feed treated soybean forage, hay or straw to livestock.
- Do not rotate any crop not listed on this label for 40 months following application See **CROP ROTATION INTERVALS** section.
- Do not rotate to food or feed crops other than those listed on this label See **CROP ROTATION INTERVALS** section.
- Do not apply **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** preemergence to soybeans in California.
- Do not incorporate into soil or apply more than once per season except where permitted as part of a sequential application.
- Do not allow sprays to drift onto adjacent desirable plants.
- Do not apply this product through any type of irrigation system
- Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas.
- To prevent off-site movement due to run-off or wind erosion:
- The soil surface must first be settled by rainfall or irrigation if treating powdery dry or light sand soils where conditions are favorable for wind erosion.
- Do not apply to impervious substrates such as paved or highly compacted surfaces.
- Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 1/2 inch of rainfall
- has occurred between application and the first irrigation.
- Do not apply using low-pressure and high-volume hand-wand equipment.

#### **Soil Texture and Rate Ranges**

As used on this label, “Coarse soils” are loamy sand or sandy loam soils. “Medium soils” are loam, silt loam, silt, sandy clay, or sandy clay loam. “Fine soils” are silty clay, silty clay loam, clay, or clay loam. Silty clay loam soils are transitional soils and may be classified as medium-textured soils in some regions of the U.S. Where a rate range is shown, use a lower rate on soils that are coarse-textured or low in organic matter. Use a higher rate on soils that are relatively fine-textured or high in organic matter.

### Precautions

Injury to soybeans may occur when this product is used under the following conditions:

1. When soils have a calcareous surface area or a pH of 7.5 or higher.
2. When applied in conjunction with soil-applied organic phosphate pesticides.
3. With over-application or boom overlapping, which may result in stand loss and soil residues.
4. With uneven application or improper incorporation, which can decrease the level of weed control and/or increase the level of injury.
5. When applied to any soil with less than 0.5% organic matter.
6. When soil incorporation is deeper than is listed.
7. When sprayers are not calibrated accurately.
8. When heavy rains occur soon after application, especially in poorly drained areas where water may stand for several days.
9. When soybeans are planted less than 1-1/2 inches deep, particularly in preemergence application.
10. Where high soil levels of atrazine are present.
11. When using poor quality soybean seed.

Certain soybean varieties are sensitive to Metribuzin. Prior to use of this product, consult your soybean seed supplier for more information on the tolerance of soybean varieties to **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**.

### Activation

A minimum amount of soil moisture is required to activate this product. In areas of low rainfall, follow preemergence applications to dry soil with light irrigation of 1/4 acre-inch of water. Do not apply heavy irrigation immediately after application. As with many surface-applied herbicides, weed control and crop tolerance may vary with rainfall and/or soil texture.

### Replanting

If replanting is necessary in fields treated with this product as directed on this label, the field may be replanted to soybeans. Rework the soil no deeper than the treated zone. Do not apply more than once per season except where permitted as part of a sequential application as injury to soybeans may occur. Maximum application rate is 3.0 pints of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** per acre per use season. Do not exceed this amount in any use pattern: single application, preplant or sequential application.

**TABLE 1: ANNUAL BROADLEAF WEEDS CONTROLLED BY AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**

C = Control      S = Suppression or Erratic Control      P = Poor or No Control      U = Unknown	
Weed Controlled	Level of Control
Bristly starbur ( <i>Acanthospermum hispidum</i> )	C
Buffalobur ( <i>Solanum rostratum</i> )	C
Carpetweed ( <i>Mollugo verticillata</i> )	C
Cocklebur ( <i>Xanthium pensylvanicum</i> )	S
Common chickweed ( <i>Stellaria media</i> )	C

Copperleaf, Hophornbeam ( <i>Acalypha ostryifolia</i> )	C
Field pennycress ( <i>Thlaspi arvense</i> )	C
Florida beggarweed ( <i>Desmodium tortuosum</i> )	C
Florida pusley ( <i>Richardia scabra</i> )	C
Galinsoga ( <i>Galinsoga</i> spp.)	C
Henbit ( <i>Lamium amplexicaule</i> )	C
Horseweed (Marestail) ( <i>Conyza canadensis</i> )	U
Jimsonweed ( <i>Datura stramonium</i> )	C
Knotweed ( <i>Polygonum</i> spp.)	C
Kochia ( <i>Kochia scoparia</i> )	C
Lambsquarters ( <i>Chenopodium</i> spp.)	C
Marshelder ( <i>Iva Annua</i> )	C
Morningglory	
Entireleaf ( <i>Ipomoea hederacea</i> var. <i>integriuscula</i> )	S
Ivyleaf ( <i>Ipomoea hederacea</i> )	S
Pitted ( <i>Ipomoea lacunosa</i> )	S
Smallflower ( <i>Jacquemontia tamnifolia</i> )	C
Tall ( <i>Ipomoea purpurea</i> )	S
Mustard spp.	C
Nightshade	
Black ( <i>Solanum nigrum</i> )	C
Eastern black ( <i>Solanum ptycanthum</i> )	C
Hairy ( <i>Solanum villosum</i> )	C
Pigweed	
Redroot ( <i>Amaranthus retroflexus</i> )	C
Smooth ( <i>Amaranthus hybridus</i> )	C
Spiny ( <i>Amaranthus spinosus</i> )	C
Poinsettia, wild ( <i>Euphorbia cyathophora</i> )	C
Prickly lettuce ( <i>Lactuca serriola</i> )	C
Prickly sida/Teaweed ( <i>Sida spinosa</i> )	C
Puncturevine ( <i>Tribulus terrestris</i> )	C
Purslane ( <i>Portulaca oleracea</i> )	C
Ragweed	
Common ( <i>Ambrosia artemisiifolia</i> )	C
Giant ( <i>Ambrosia trifida</i> )	S
Redweed	C
Russian thistle ( <i>Salsola kali</i> )	C
Sage, barnyard	S
Sesbania ( <i>Sesbania</i> spp.)	C
Shepherd's-purse ( <i>Capsella bursa-pastoris</i> )	C
Sicklepod ( <i>Cassia obtusifolia</i> ) <sup>1</sup>	C
Smartweeds ( <i>Polygonum</i> spp.)	
Ladysthumb ( <i>Polygonum persicaria</i> )	C
Pennsylvania ( <i>Polygonum pennsylvanicum</i> )	C
Spurge	
Prostrate ( <i>Euphorbia humistrata</i> )	C
Spotted ( <i>Euphorbia maculata</i> )	C
Spurred anoda ( <i>Anoda cristata</i> )	C
Sunflower ( <i>Helianthus</i> spp.)	C
Velvetleaf ( <i>Abutilon theophrasti</i> )	C
Venice mallow ( <i>Hibiscus trionum</i> )	C

Virginia pepperweed ( <i>Lepidium virginicum</i> )	C
Waterhemp ( <i>Amaranthus rudis</i> )	C
Wild mustards ( <i>Brassica</i> spp.)	C

<sup>1</sup>For maximum control of sicklepod, use a preemergence application.

**TABLE 2: ANNUAL GRASSES AND SEDGES CONTROLLED BY AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**

C = Control	S = Suppression or Erratic Control	P = Poor or No Control	U = Unknown
Weed Controlled			Level of Control
Barnyardgrass ( <i>Echinochloa crus-galli</i> )			C
Bluegrass ( <i>Poa annua</i> )			C
Broadleaf signalgrass ( <i>Brachiaria platyphylla</i> )			C
Browntop millet ( <i>Panicum ramosa</i> )			C
Crabgrass ( <i>Digitaria</i> spp.)			C
Crowfootgrass ( <i>Dactyloctenium aegyptium</i> )			C
Cupgrass ( <i>Eriochloa gracilis</i> )			C
Foxtails ( <i>Setaria</i> spp.)			C
Goosegrass ( <i>Eleusine indica</i> )			C
Johnsongrass, Seedling ( <i>Sorghum halepense</i> )			C
Junglerice ( <i>Echinochloa colona</i> )			C
Millet, wild-proso ( <i>Panicum miliaceum</i> )			S
Nutsedge			
Yellow ( <i>Cyperus esculentus</i> )			S
Purple ( <i>Cyperus rotundus</i> )			S
Panicum, fall ( <i>Panicum dichotomiflorum</i> )			C
Panicum, Texas ( <i>Panicum, texanum</i> )			S
Red rice ( <i>Oryza sativa</i> )			C
Sandbur ( <i>Cenchrus</i> spp.)			S
Shattercane ( <i>Sorghum bicolor</i> )			S
Sorghum, volunteer ( <i>Sorghum</i> spp.)			S
Sprangletop ( <i>Leptochloa</i> spp.)			P
Stinkgrass ( <i>Eragrostis</i> spp.)			P
Wheat, volunteer ( <i>Triticum</i> spp.)			S
Witchgrass ( <i>panicum capillare</i> )			C

## **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR USE RATES FOR COVENTIONAL TILLAGE SYSTEMS**

### **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR used alone in Preplant Incorporated Application**

Incorporate **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** uniformly into the top 2 inches of soil within 14 days before planting using a disk, field cultivator, rolling cultivator or similar equipment. Use incorporated application if furrow irrigation is used or when a period of dry weather after application is expected.

### **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR used alone in Preemergence Application**

When used alone, **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** can be applied broadcast by ground or aerially. This application may be made during planting or as a separate operation after planting but must be made

before crop emergence. If dry weather follows preemergence application, cultivate uniformly with shallow tilling equipment that will not damage soybeans.

#### Restrictions

Do not apply to sand soils, or to sandy loam or loamy sand soils containing less than 2% organic matter.

**TABLE 3: AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR RATES WHEN USED ALONE IN PREPLANT OR PREEMERGENCE APPLICATION**

\*(In North Dakota, and in Minnesota north of Highway #210, do not apply more than 2.2 pints of AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR per acre per use season.)

Soil Texture		Organic Matter		
		0.5 to 2.0%	2.0 to 3.0%	Over 3.0% <sup>3</sup>
		Pints of AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR Per Acre		
Coarse Soils <sup>1</sup>	Sandy Loam	1.9 to 2.4*	1.9 to 2.4*	2.4 to 2.9*
	Loamy Sand	n/a <sup>1</sup>	1.9 to 2.4*	2.4 to 2.9*
Medium Soils (Loam, silt loam, silt, sandy clay, sandy clay loam)		3.0*		
Fine Soils (Silty clay, silty clay loam <sup>2</sup> , clay, clay loam)				

<sup>1</sup> Do not use on sand soils. On coarse-textured soils, do not use on loamy sand with less than 2% organic matter.

<sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium-textured soils in some regions of the U.S.

<sup>3</sup> For preplant incorporated application, use the lower rate.

<sup>4</sup> For Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, see section below **In Coarse (Light) Soils**.

#### In Coarse (Light) Soils

(Only in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia)

This product can be used at the rates specified in Table 4 as a preplant incorporated or preemergence application in coarse-textured, low organic matter soils in the states listed above. Refer to Table 4 and to the appropriate sections of this label for specific directions on use and restrictions.

**TABLE 4: AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR RATES WHEN USED ALONE IN PREPLANT OR PREEMERGENCE APPLICATIONS ON COARSE SOILS (Only in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia)**

Soil Texture	Organic Matter	
	0.5 to 1.0%	1.0% or above
	Pints of AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR Per Acre <sup>2</sup>	



<b>Coarse Soils</b>	Sandy	n/a <sup>1</sup>	1.9 to 3.0
	Sandy loam, loamy sand	1.9 to 3.0	1.9 to 3.0

<sup>1</sup> Do not use on sand with less than 1% organic matter.

<sup>2</sup> Use the higher rate under heavy weed pressure and/or soils higher in organic matter.

#### **HERBICIDES THAT MAY BE APPLIED POSTEMERGENCE FOLLOWING AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**

If required, application of this product alone or in tank mixture may be followed by an application of a postemergence herbicide to provide additional control of certain weeds. The following postemergence herbicides may be applied:

Aim® (carfentrazone-ethyl, 279-3241)  
 Arrow® (clethodim, 66222-60)  
 Assure® II (quizalofop-p-ethyl, 5481-646)  
 Basagran® or Biscayne™ (sodium salt of bentazon, 66330-413, 91234-102)  
 Classic® (chlorimuron, 352-436)  
 Cobra® or Mamba™ (lactofen, 74530-92, 91234 - 169)  
 FirstRate® or FrontRunner™ (cloransulam-methyl, 62719-275, 91234-84)  
 Flexstar® (sodium salt of fomesafen, 100-1101)  
 Fusilade® DX (fluazifop-p-butyl, 100-1070)  
 Frontrow® (cloransulam-methyl, 62719-299)  
 Fusion® (fluazifop-p-butyl plus fenoxaprop-p-ethyl, 100-1059)

glyphosate herbicides<sup>1</sup> (such as Makaze (34704-890) or Mad Dog (34704-889))  
 Harmony® GT XP (thifensulfuron, 279-9577)  
 Intensity® (clethodim, 34704-864)  
 Poast® (sethoxydim, 7969-58)  
 Poast Plus® (sethoxydim, 7969-88)  
 Reflex® (sodium salt of fomesafen, 100-993)  
 Resource® (flumiclorac, EPA Reg. No. 59539-82)  
 Rezult® B (sodium bentazon, 7969-112)  
 Storm® or Derecho™ BSC (sodium salt of bentazon plus sodium salt of acifluorfen, 70506-59, 91234-192)  
 Synchrony® XP<sup>2</sup> (chlorimuron-ethyl plus thifensulfuron-methyl, 352-648)  
 Ultra Blazer® or Derecho™ (sodium salt of acifluorfen, 70506-60, 91234-108)

<sup>1</sup> Use on Roundup Ready® or glyphosate tolerant soybean varieties only.

<sup>2</sup> Use on STS™ soybean varieties only.

Refer to the **Directions for Use** on this label and the individual product labels for use directions, use rates, and special precautions and/or restrictions.

#### **BURNDOWN WEED CONTROL**

This product can be used as part of a burndown herbicide program for control of existing vegetation prior to soybean emergence in conservation tillage (reduced-tillage/no-till) systems. This product may be tank mixed with a 2,4-D low volatile ester (LVE) (such as Whiteout®, 2-ethylhexyl ester of 2,4-dichlorophenoxyacetic acid, EPA Reg. No. 34704-1032) and/or glyphosate herbicides (such as Mad Dog® and Makaze® brands) for control of emerged weeds prior to crop emergence. Burndown tank mixes with **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** can be applied before planting or prior to crop emergence.

**DO NOT** tank mix **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** with clomazone containing herbicides (Command®, 279-3158).

#### **Application**

This product may be applied up to 30 days before planting or preemergence. Apply only by ground equipment when this product is used for burndown of existing vegetation in conservation tillage systems. Use the high end of the rate range for applications of this product made 14 to 30 days before planting. Refer to Tables 3 and 4 for rates of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** alone and to Table 5 for rates of tank mix partners.

**TABLE 5: RATES OF TANK MIX PARTNERS TO BE USED IN COMBINATION WITH AVALAIRE S-METOLACHLOR +**

## METRIBUZIN + IMAZETHAPYR FOR BURNDOWN APPLICATIONS

Product	Rate of Tank Mix Partner	Directions and Remarks
2,4-D LVE (Whiteout 2,4-D)	Refer to product label for use rates.	Refer to product label for use rates and directions.
Glyphosate (Mad Dog, or Makaze brands)	Refer to product label for use rates.	Must be applied prior to crop emergence. Use the higher rates within the specified range as weeds approach the maximum weed heights listed in Table 6. Apply in 10.0 to 20.0 gal of water/A. Refer to the Mad Dog or Makaze label for spray adjuvant instructions. Any glyphosate formulation registered and labeled for use in soybeans may be tank mixed with this product.
Glyphosate (Mad Dog or, Makaze brands) + 2,4-D LVE (Whiteout 2,4-D)	Refer to the individual product labels for use rates	Follow the Directions and Remarks section above for Whiteout 2,4-D and Mad Dog/Makaze, paying special attention to planting restrictions with Whiteout. Refer to the Mad Dog or Makaze label for spray adjuvant instructions. Do not use crop oil concentrate (COC).

### Restrictions

Do not apply these treatments after crop emergence. Observe all restrictions, precautions and limitations on the labeling of all products used in tank mixtures.

- Apply only 2,4-D LVE formulations (such as Whiteout 2,4-D ) that are registered and specified for preplant or burndown use.
- Do not apply tank mixtures containing 2,4-D LVE (Whiteout 2,4-D ) if wind is blowing toward desired susceptible plants (i.e., cotton, tobacco, tomato, etc.) or when wind speeds exceed 6 miles per hour.

### Weeds Controlled

**AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** in tank mixtures with the herbicides listed in Table 6 will provide burndown control of the weeds listed below.

**TABLE 6: WEEDS CONTROLLED WITH TANK MIXES OF AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR IN BURNDOWN APPLICATION**

Weeds Controlled	Whiteout 2,4-D	Mad Dog/Makaze	Mad Dog/Makaze + Whiteout 2,4-D
<b>Annual Grasses</b>	<b>Maximum Burndown Height (Inches)</b>		
Barley	Does not	8	
Barnyardgrass		6	
Crabgrass spp.		6	
Foxtail spp.		8	

Johnsongrass, seedling	improve control of these  species	8	
Panicum, fall		6	
Sandbur, field		8	
Wheat, volunteer		6	
Witchgrass		6	
<b>Broadleaves</b>	<b>Maximum Burndown Height (Inches)</b>		
Buffalobur	-	6	6
Chickweed, common	6	6	6
Cocklebur, common	6	6	8
Dandelion, common	6 dia <sup>1</sup>	2 dia <sup>2</sup>	6 dia <sup>1</sup>
Henbit	4	4	4
Horseweed (Marestail)	6 <sup>1</sup>	4 <sup>2</sup>	6
Jimsonweed	6	6	6
Kochia	4 <sup>1</sup>	4	4
Ladysthumb	6	6	8
Lambsquarters, common	6	6	8
Lettuce, prickly	6	4	6
Mallow, Venice	6	6	6
Morningglory spp.	6	2	4
Mustard spp.	6	6	8
Pennycress, field	6	6	6
Pigweed spp. (annual)	6	6	8
Ragweed, common	6	6 <sup>2</sup>	8
Ragweed, giant	6 <sup>1</sup>	4 <sup>2</sup>	6
Shepherd's-purse	6	6	6
Sida, prickly	6	4	4
Smartweed, Pennsylvania	6	6	8
Sunflower, common	6	6	6
Thistle, Russian	4 <sup>1</sup>	2 to 4 <sup>2</sup>	4
Velvetleaf	6	6	8
Waterhemp spp.	6	6	8

<sup>1</sup>Refer Whiteout 2,4-D label for use rate.

<sup>2</sup>Refer to Mad Dog or Makaze labels for use rates.

## AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR USE RATES FOR REDUCED- AND NO-TILL SYSTEMS

### Preplant Surface Application

**AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** may also be used in reduced-till and no-till systems. Applications may be made up to 30 days before planting or after planting, but before soybean emergence. Residual herbicides such as Canopy®, FirstRate or FrontRunner™, Command, Python® or JaRaka™ WDG, and Stealth® may be tank mixed for additional weed control. If weeds are present at time of application, burndown herbicides may be added to the tank mixes (see **Burndown Weed Control** section). Refer to the tank mix partner product labels for specific rates and use directions.

**TABLE 7: AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR RATES FOR REDUCED AND NO-TILL SYSTEMS**

\*(In North Dakota, and in Minnesota north of Highway #210, do not apply more than 2.2 pints of AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR per acre per use season.)

Soil Texture		Organic Matter		
		Up to 2.0%	2.0 to 3.0%	3.0% or above
		Pints of AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR Per Acre		
<b>Coarse</b> <sup>1</sup>	Sand, loamy sand	n/a <sup>1</sup>	1.9	3.0*
	Sandy loam	1.9	1.9	3.0*
<b>Medium</b> (Loam, silt loam, silt, sandy clay, sandy clay loam)		3.0*		
<b>Fine</b> (Silty clay, silty clay loam <sup>2</sup> , clay, clay loam)		3.0*		

<sup>1</sup> Do not use on sand soils. On coarse-textured soils, do not use on loamy sand soils with less than 2% organic matter.

<sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium-textured soils in some regions of the U.S. When using **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**, treat this soil as fine-textured.

### **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR SEQUENTIAL APPLICATION**

More consistent control of broadleaf and grass weeds may be obtained by an early preplant (surface-applied or shallow incorporated) application of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**, followed by a second preemergence application after planting but before soybean emergence. A sequential application will decrease the need for tillage and/or burndown herbicides for the control of existing vegetation before planting, while providing residual control of weeds after planting.

#### **Application**

An early preplant application may be made 15 to 30 days before planting soybeans. Follow this application with a preemergence overlay application of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** after planting but before crop emergence. Follow directions on this label for sequential applications from 0 to 14 days before planting.

Where a rate range is listed, use the higher rates:

- In fields with a history of severe weed pressure.
- When the time between early preplant and preemergence overlay applications approaches the maximum 30 days.
- When the organic matter content of the soil is over 3%.
- When heavy crop residues are present on the soil surface.

When weeds exceed 1.0 to 1.5 inches in height or diameter at application, use a burndown herbicide, such as Mad Dog, Makaze, Gramoxone Inteon or Purgatory™, or Whiteout.

#### **Weeds Controlled**

In addition to weeds controlled by **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** alone, the sequential application improves control of the following annual broadleaf weeds: buffalobur, cocklebur, common ragweed, velvetleaf, and sunflower.

**TABLE 8: AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR SEQUENTIAL USE RATES FOR REDUCED-TILL AND NO-TILL SYSTEMS (BROADCAST RATES)**

\*(In North Dakota, and in Minnesota north of Highway #210, do not apply more than 2.2 pints of AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR per acre per use season.)

<sup>1</sup> On coarse-textured soils, do not use on sandy soils with less than 1% organic matter. On coarse-textured soils with a calcareous surface area or a pH of 7.5 or higher, do not use on sand soils with less than 2% organic matter, or on loamy sand or sandy loam soils with less than 1% organic matter.

<sup>2</sup> Total not to exceed 3.0 pints of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** per acre per use season. For coarse soils do not exceed total rates in Table 3.

<sup>3</sup> Silty clay loam soils are transitional soils and may be classified as medium-textured soils in some regions of the U.S. When using **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**, treat this soil as “fine-textured.”

Soil Texture <sup>1</sup>		Early Preplant Application AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR (Pt/A)	- Followed By -	Preemergence Overlay Application AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR (Pt/A) <sup>2</sup>
Coarse <sup>1</sup> (Sand, loamy sand, sandy loam)	Organic Matter 0.5 to 3.0%	-- 1.2 to 1.8	-- - followed by -	-- 1.2 to 0.6*
	Over 3.0%	1.5 to 2.0	- followed by -	1.5 to 0.9*
Medium (Loam, silt loam, sandy clay loam, silt, sandy clay)		1.5 to 2.0	- followed by -	1.5 to 1.0*
Fine (Silty clay loam <sup>3</sup> , clay loam, silty clay, clay)		1.5 to 2.0	- followed by -	1.5 to 1.0*

### CROP ROTATION INTERVALS

Full-rate application of products containing chlorimuron-ethyl (Classic Herbicide, etc.), chloransulam-methyl (FirstRate or FrontRunner), flumetsulam (Hornet®), or imazaquin (Scepter® 70 DG Herbicide) the same year as **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** may increase the risk of injury to sensitive followcrops. Consult the product labels for listed uses of these products in combinations.

Only rotational crops harvested at maturity may be used for feed or food.

**TABLE 9: CROP ROTATION INTERVALS**

Crop	Crop Rotation Crop Intervals (Months)	Crop	Crop Rotation Crop Intervals (Months)
Alfalfa	4.5	Popcorn <sup>5</sup>	18
Asparagus	40	Potatoes <sup>6</sup>	26
Bahiagrass <sup>6</sup>	40	Rice	40
Barley, spring (except North Dakota) <sup>2</sup>	9.5	Root crops	40
Barley, winter (except North Dakota) <sup>2</sup>	9.5	Rye (except in North Dakota, and in Minnesota north of Highway #210)	12
Cabbage <sup>6</sup>	40	Rye in North Dakota, and in Minnesota north of Highway #210	18
Canola <sup>7</sup>	40	Sainfoin	40
Cantaloupe <sup>6</sup>	40	Safflower	18
Clearfield® Corn	8	Southern peas	12
Clover	12	Sorghum	18
Cotton	18	Soybeans	0
Cucumber <sup>6</sup>	40	Sugarcane	40

Edible beans	12	Sunflower	18
Field corn <sup>3,4</sup>	8.5	Sweet corn <sup>5</sup>	18
Field corn (seed) <sup>3,4</sup>	8.5	Sweet pepper transplants <sup>6</sup>	40
Flax	26	Sweet potato transplants <sup>6</sup>	40
Forage grasses	40	Tobacco	12
Lentils	40	Tomatoes	40
Lettuce	18	Tomato transplants <sup>6</sup>	40
Lima	12	Watermelon <sup>6</sup>	40
Oats	18	Wheat, spring	8
Onion <sup>6</sup>	40	Wheat, winter <sup>1</sup>	4.5
Peanuts	12	Other crops not listed	40
Peas	8		

<sup>1</sup> If soybeans are furrow irrigated, till the soil prior to planting winter wheat. The beds should be broken up and the soil mixed with tillage equipment set to cut 4 to 6 inches deep.

<sup>2</sup> **Delaware, Indiana, Kentucky, Maryland, New Jersey, Ohio, Pennsylvania, and Virginia only:** Barley may be planted 4 months following a **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** application in these states.

**North Dakota only:** Barley may be planted 18 months following a **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** application.

<sup>3</sup> **Corn inbred lines:** Corn inbred seed lines may be planted the year following an application of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**. Several seed companies have tested a wide range of inbreds for sensitivity to **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** soil residues and have reported good crop safety. However, due to the proprietary nature of seed production, Avalaire, LLC. has not been given access to the inbred data. Growers are directed to contact the seed company for information and directions regarding the planting of corn grown for seed in fields treated with **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** the previous year. **Since growing conditions, environmental conditions and grower practices are beyond the control of Avalaire, LLC. all risks and consequences associated with planting seed corn inbreds into fields treated previously with AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR shall be assumed by the user.**

<sup>4</sup> **Arizona, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming only:** Field corn and field corn grown for seed

may be planted 9-1/2 months after **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** application.

<sup>5</sup> **Illinois, Indiana, Iowa, Minnesota, Ohio, Tennessee, and Wisconsin only:** Sweet corn and popcorn varieties may be planted the year following an application of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**. Some sweet corn and popcorn varieties may be injured when planted at less than 18 months following an application of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**. Before planting sweet corn for processing, contact the processor company for information and directions regarding the tolerance of sweet corn varieties planned for fields treated with **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** the previous year. **DO NOT** plant fresh market sweet corn varieties prior to 18 months after **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** use. Before planting popcorn, contact the popcorn company for information and directions regarding the tolerance of popcorn varieties planned for fields treated with **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** the previous year.

<sup>6</sup> **Alabama, Delaware, Florida, Georgia, Indiana, Kentucky, Maryland, New Jersey, North Carolina, Pennsylvania, South Carolina, and Virginia only:** This crop may be planted 18 months following the last application of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR**.

<sup>7</sup> **Clearfield Canola:** Clearfield varieties of canola may be planted as a rotational crop the 12 months after an application of **AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR** at specified rates on soybeans.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a cool dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully dam up material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed below. In spill or leak incidents, keep unauthorized people away. Maintaining a spill kit and fire extinguisher on hand and having emergency phone numbers posted will allow you to be prepared for emergencies.

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

### CONTAINER HANDLING:

**[For plastic containers ≤ 5 gallons: Nonrefillable Container:** Do not reuse or refill this container. 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 ¼ 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.]

**[For plastic containers > 5 gallons: Nonrefillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap 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.]

## LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT: READ BEFORE USE.** Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability. **CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of AVALAIRE, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, AVALAIRE, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither AVALAIRE, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

[AVALAIRE S-METOLACHLOR + METRIBUZIN + IMAZETHAPYR] is a trademark of Avalaire, LLC.

Accent, Assure, Basis, Canopy, Classic, Harmony, Staple, and Synchrony are registered trademarks of E.I. DuPont de Nemours and Company.  
Aim and Command are registered trademarks of FMC Corporation.  
Arrow is a registered trademark of Makhteshim Agan of North America, Inc.

Basagran, Clearfield, Poast, Poast Plus, Pursuit, Rezult, and Scepter are registered trademarks of BASF.  
Cobra and Resource are registered trademarks of Valent U.S.A. Corporation.  
FirstRate, Frontrow, Hornet, Lorsban, and Python are registered trademarks of Dow AgroSciences LLC.  
Flexstar, Fusilade, Fusion, Gramoxone Inteon, Reflex, Spirit, and Touchdown are registered trademarks of a Syngenta Group Company.

Intensity Post-emergence Grass Herbicide, Mad Dog, Makaze, Matador, Stealth and Whiteout are registered trademarks Loveland Products, Inc.  
Permit is a registered trademark of Nissan Chemical Industries, Ltd.  
Roundup and Roundup Ready are registered trademarks of Monsanto Technology LLC.  
Storm and Ultra Blazer are registered trademarks of United Phosphorus, Inc.



{LANGUAGE ON LABEL AFFIXED TO CONTAINER}

S-METOLACHLOR	GROUP	15	HERBICIDE
METRIBUZIN	GROUP	5	HERBICIDE
IMAZETHAPYR	GROUP	2	HERBICIDE

AVALAIRE S-METOLACHLOR +  
METRIBUZIN + IMAZETHAPYR<sup>TM</sup>

[Alternate Brand Name: Stridero]

[Herbicide for pre-emergent control of certain grasses and broadleaf weeds in soybeans.]

ACTIVE INGREDIENTS:	(% by weight)
S-Metolachlor*	37.08%
Metribuzin**	8.23%
Imazethapyr***	1.83%
OTHER INGREDIENTS:	52.86%
TOTAL	100.0%
*contains 3.38 lb of S-metolachlor per gallon.	
**contains 0.75 lb of metribuzin per gallon.	
***contains 0.17 lb of imazethapyr acid per gallon.	

KEEP OUT OF REACH OF CHILDREN  
CAUTION

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

FIRST AID	
If on skin or clothing:	<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>
If swallowed:	<ul style="list-style-type: none"><li>Call a poison control center or doctor immediately for treatment advice.</li><li>Have person sip a glass of water if able to swallow.</li><li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>Do not give anything by mouth to an unconscious person.</li></ul>
If in eyes:	<ul style="list-style-type: none"><li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>Call a poison control center or doctor for treatment advice.</li></ul>
If inhaled:	<ul style="list-style-type: none"><li>Move person to fresh air.</li><li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li><li>Call a poison control center or doctor for further treatment advice.</li></ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment information.	

For Chemical Emergency:  
Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION

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

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

Surface Water Advisory S-Metolachlor and Imazethapyr may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks or months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of S-metolachlor and/or Imazethapyr from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Ground Water Advisory Metribuzin is a chemical which can travel (seep or leach) through soil and can contaminate ground water which may be used as drinking water. Metribuzin has been found in ground water as a result of agricultural use. Users are advised not to apply metribuzin where the water table (ground water) is close to the surface, and where the soils are very permeable, i.e., well-drained soils such as loamy sands. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

Imazethapyr has properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination. S-Metolachlor has the potential to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

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 site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

STORAGE AND DISPOSAL

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See inside label booklet for additional Precautionary Statements and Directions for Use.

**20210428a**

Manufactured for:

**Avalaire, LLC**

1204 Village Market Place, #173

Morrisville, NC 27560

**EPA Reg. No.: 93930-54**

**EPA Est. No.:** \_\_\_\_\_

**NET WEIGHT:** \_\_\_\_\_