

FLUTHIACET-METHYL	GROUP	14	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE

SOLSTICE®



HERBICIDE

EPA Reg. No. 279-3461

EPA Est. No. 100-NE-001

Active Ingredient:	By Wt.
Fluthiacet methyl	2.20%
Mesotrione	38.52%
Other Ingredients	59.28%
TOTAL:	100.0%

Contains a total of 4.0 lb/gal which include 0.216 lb ai fluthiacet-methyl and 3.784 lb ai mesotrione per gallon.

Nonrefillable Container
Net: _____

OR

Refillable Container
Net: _____

KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

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

FIRST AID

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

Sold By



FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
Net Contents: 1 Gallon

See other panels for additional precautionary information.

ATTENTION

- Although this label may appear similar to the label on a product you may have used, there may be important label differences. Users must read, understand and strictly follow all label directions, precautions and restrictions.
- It is the user's responsibility to be sure the product is approved for sale or use on the intended crop and for use in the specific geographic area.
- It is the user's responsibility to be aware of and to follow all State or local precautions or restrictions not appearing on this product label.
- Prior to purchase or use of this product, read the Conditions of Sale and Limitation of Warranty and Liability. If the terms and conditions are unacceptable, return the product immediately in the original and unopened container.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators and other handlers must wear:

Coveralls worn over long-sleeved shirt and long pants.

Protective eyewear (goggles or face shield)

Chemical-resistant gloves including natural rubber, barrier laminate, butyl rubber \geq 14 mils, or viton \geq 14 mil.

Shoes plus socks

USER SAFETY RECCOMENDATIONS

USERS MUST:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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.

When mixing and loading wear a chemical-resistant apron. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exists, use detergent and hot water. Keep and wash PPE separately from other laundry.

IMPORTANT

When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

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 [40 CFR part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)]. When using the closed system, the mixers' and loaders' PPE requirements may be reduced or modified as specified in the WPS.

ENVIRONMENTAL HAZARDS

Solstice Herbicide is very toxic to algae and moderately toxic to fish. **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the high water mark. **DO NOT** contaminate water when disposing of equipment wash waters or rinsate.

Groundwater Advisory

This chemical and its degradation products have 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 Advisory

This product may impact surface water quality due to spray drift and 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 months 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 the potential loading of Solstice Herbicide from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

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 minimizing spray drift.

Physical/Chemical Hazards

DO NOT use or store near heat or open flame.

MIXING AND LOADING INSTRUCTIONS

This product must not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

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 wash water, 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 specific 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.

This product must be used in a manner which will prevent back siphoning into wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

1. The spray equipment must be clean before using this product. If it is contaminated with other materials, mixing problems and/or clogging may occur or crop injury may occur.
2. Prepare no more spray mixture than is needed for the immediate application, and **DO NOT** let the spray mixture stand in the spray tank overnight.
3. Maintain maximum agitation throughout the spraying operation.
4. Flush the spray equipment thoroughly after each use and apply rinsate to an appropriate area.

AGRICULTURAL USE REQUIREMENTS

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

Personal Protective Equipment (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 over long-sleeved shirt and long pants
- Wear goggles, face shield or safety glasses
- Chemical-resistant gloves made of any waterproof material including polyethylene or polyvinyl chloride
- Socks and chemical-resistant footwear.

PESTICIDE STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

Pesticide Storage

Store product in original container only. **DO NOT** contaminate water, food, or feed by storage or disposal. Store in a cool dry place and avoid excess heat. **DO NOT** store below 32°F degrees.

In Case of Spill

Avoid contact. Isolate areas and keep out animals and unprotected persons

Call CHEMTREC (Transportation and spills): (800) 424-9300.

To Confine Spills.

Dike surrounding area, sweep up spillage, Dispose of in accordance with information given under Pesticide Disposal. Wash spill area with water, absorb with sand, cat litter or commercial clay, sweep up and dispose of in an approved manner. Place damaged container in a large holding container. Identify contents per required hazardous waste labeling regulations.

Pesticide Disposal

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

CONTAINER DISPOSAL

Metal or Plastic Containers - Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows:

For containers greater than 5 gallons: 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. 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 reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

For containers 5 gallons or less: 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 reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **DO NOT** cut or weld metal containers.

Refillable Container - Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and, to the extent consistent with applicable law, Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT.** Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and, to the extent consistent with applicable law, buyer assumes the risk of any such use.

To the extent consistent with applicable law, FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND 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 THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

This Condition of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

PRODUCT INFORMATION

Solstice Herbicide contains two active ingredients possessing both contact and systemic activity that can be applied Post emergence for selective control of broadleaf weeds in field corn, seed corn, yellow pop-corn, sweet corn. **DO NOT** apply to White Popcorn or ornamental (Indian) corn. When applied as POST application it may take 2 to 15 days to kill the weeds on the list. The product is absorbed through the soil and /or by the weed foliage.

For effective control of grasses, Solstice Herbicide can be tank mixed with other POST grass herbicides to provide broader spectrum weed control in corn. 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 direction 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

Solstice Herbicide contains both a Group 14 (fluthiacet-methyl) and a Group 27 (mesotrione) herbicide based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices.

Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of Solstice Herbicide for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your FMC representative, local retailer, or county extension agent.
- Contact your FMC representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective sites of actions for each target weed.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 14 and Group 27 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
 - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
 - A spreading patch of non-controlled plants of a particular weed species; and
 - Surviving plants mixed with controlled individuals of the same species.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 14/Group 27 herbicides.
- Incorporate non-chemical weed control practices, including mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

DIRECTIONS FOR USE

Misuse Statement

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

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

Utilize a sprayer equipped with the appropriate nozzles providing optimum spray distribution and coverage at the appropriate operating pressures. Utilize nozzles that produce minimal amounts of fine spray droplets to avoid spray drift. Apply a minimum of 10 gallons of finished spray solution per acre by ground. If a dense crop and or weed canopy is present use a minimum of 15 gallons per acre of finished spray volume by ground application. For best results apply Solstice Herbicide with medium spray droplets. The sprayer must be properly calibrated to deliver the appropriate volume of herbicide solution. Be aware that overlaps and slower ground speeds while starting, stopping or turning while spraying may result in excessive application and subsequent crop response. Mix the amount which will be used for spraying on that day.

Restrictions

- **DO NOT** exceed 3.15 fl oz of Solstice Herbicide/A (0.0053 lb ai/A fluthiacet methyl + 0.0931 lb ai/A mesotrione) in a single postemergence application.
- **DO NOT** apply more than a total of 5.25 fl. oz. of Solstice Herbicide/A (0.0089 lb ai/A fluthiacet methyl + 0.155 lb ai/A mesotrione) per year including labeled postemergence applications to corn.
- **DO NOT** exceed 2 applications of Solstice Herbicide per year.
- **DO NOT** apply more than 0.0089 lb ai/A of fluthiacet-methyl or 0.24 lb ai/A of mesotrione per year including all preplant or postemergence herbicides containing these active ingredients.
- **DO NOT** make the second application of Solstice Herbicide within 14 days of the first application.
- **DO NOT** harvest or feed forage within 45 days after application.
- **DO NOT** harvest or feed grain or stover (fodder) within 70 days after application.
- **DO NOT** harvest or feed sweet corn forage or ears within 40 days after application.
- **DO NOT** include nitrogen based adjuvants (UAN or AMS) when making postemergence applications of Solstice Herbicide to yellow popcorn or sweet corn.
- **DO NOT** apply Solstice Herbicide to white popcorn or ornamental (Indian) corn.
- **DO NOT** apply to corn that is more than 12 inches in height if atrazine is mixed with Solstice Herbicide
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** use aerial application to apply Solstice Herbicide.
- **DO NOT** harvest or feed field corn forage until 30 days after the last application.
- **DO NOT** apply this product with suspension fertilizers as the carrier.
- **DO NOT** apply product postemergence in a tank mix with emulsifiable concentrate grass herbicides, unless specifically addressed under one of the tank mix sections of this label, or injury may occur.

Precautions

1. Avoid drift onto adjacent crops.
2. Severe corn injury may occur if Solstice Herbicide is applied postemergence to corn that was treated with Counter® (EPA Reg. No. 5481-562, Terbufos) or Lorsban® (Lorsban® 15G Granular Insecticide (62719-34), Lorsban 50W in Water Soluble Packets Insecticide (62719-221), Lorsban® Advanced Insecticide (62719-591), Lorsban®-4E insecticide (62719-220), Chlorpyrifos) in-furrow at planting, which may result in corn crop yield loss.
3. Severe corn injury may occur if Solstice Herbicide is applied foliar postemergence in a tank mix with any organophosphate or carbamate insecticide which may result in corn crop yield loss.
4. Severe corn injury may occur if any organophosphate or carbamate insecticide is applied foliar postemergence within 7 days before or 7 days after Solstice Herbicide application, which may result in corn crop yield loss.
5. **DO NOT** cultivate corn within 7 days before or after a Solstice Herbicide application as weed control from the Solstice Herbicide application may be reduced.

Rainfastness

Solstice Herbicide requires a minimum of 1 hour rain-free period after application for best results when applied postemergence.

Cultivation

DO NOT cultivate immediately prior to post-emergence application.

Cultivation may put weeds under stress, reducing weed control. Timely cultivation 1-3 weeks after applying Solstice Herbicide may assist weed control.

POSTEMERGENCE GROUND APPLICATION

Spray nozzles must be uniformly spaced, the same size and type, and must provide accurate and uniform application. Use spray nozzles that provide medium to coarse droplet size to provide good coverage and avoid drift. Good coverage of foliage is essential for optimum weed control. Boom height for broadcast over-the-top applications must be based on the height of the crop - at least 18 inches above the crop canopy.

Apply in a spray volume of 10-30 gals./A. Use a pump that can maintain a pressure of at least 35-40 psi at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles. When weed foliage is dense, use a minimum of 15 gals.

Flat fan nozzles of 80° or 110° are advised for optimum postemergence coverage.

DO NOT use floodjet nozzles, extremely coarse droplet nozzles, or controlled droplet application equipment for postemergence applications.

Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser.

Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying.

Adjuvant Requirements

An adjuvant or a product containing an adjuvant is required with Solstice Herbicide for maximum consistent performance. Only spray additives cleared for use on growing crops under 40 CFR 180.1001 may be used in spray mixture.

Postemergence Applications to Field Corn and Seed Corn

Add crop oil concentrate (COC) to the Postemergence application at the rate of 0.5 to 1.0 gal./100 gals. of water (0.5% to 1.0% v/v). The use of a nonionic surfactant (NIS) at 1 qt./100 gallons of water (0.25% v/v) instead of COC is allowed, but the weed control achieved with COC is consistently better than NIS. The use of methylated seed oil (MSO) adjuvants or MSO blend adjuvants for postemergence applications of Solstice Herbicide may cause severe crop injury. In addition to COC, always add spray grade UAN (e.g., 28-0-0) to the spray solution at a rate of 2.5% (v/v) or AMS at 8.5 lb./100 gals. of spray solution, except if precluded elsewhere on this label. If Solstice Herbicide is being tank mixed with another registered herbicide in this situation, refer to the tank mix partner label for adjuvant precautions and restrictions and follow the most restrictive requirements.

DO NOT use liquid fertilizer as the total carrier solution.

Postemergence Applications to Sweet Corn and Yellow Popcorn

DO NOT add UAN or AMS when making postemergence applications of Solstice Herbicide to yellow popcorn or sweet corn, or severe crop injury may occur.

For postemergence applications to yellow popcorn and sweet corn, use nonionic surfactant (NIS) at 1 qt./100 gallons of water (0.25% v/v) to minimize the risk of crop injury. A COC may be used, and will increase the level of weed control achieved, especially under dry growing conditions, but the risk of crop injury is increased. For optimum control, the addition of atrazine is advised wherever rotational or local atrazine restrictions allow.

Mixing Solstice Herbicide Alone

1. Add 1/4-1/2 of the required amount of clean water to the spray or mixing tank.
2. With the agitator running, add the required amount of Solstice Herbicide to the spray tank. Continue agitation in the spray tank and allow product to fully and uniformly disperse.
3. Add the spray adjuvant and continue agitation while adding the rest of the water.
4. Maintain agitation until all of the mixture has been applied.

Mixing Solstice Herbicide in Tank Mixtures with Other Pesticides

Solstice Herbicide is compatible with most commonly used herbicides, insecticides, fungicides, and spray adjuvants. Follow WALE (Wettable/dry, Agitate, Liquids, and Emulsifiable Concentrates) mixing guidelines. 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. If the instructions on the tank mix partner label conflicts with this Solstice Herbicide label, **DO NOT** use in a tank mixture with Solstice Herbicide.

Tank Mixing Steps

1. Add 1/4 -1/2 of the required amount of clean water to the spray or mixing tank.
2. While maintaining agitation, continue filling the spray tank. When the tank is 3/4 full, add any dry formulation tank mix partners and allow them to completely and uniformly disperse.
3. Add the required amount of Solstice Herbicide to the spray tank while maintaining agitation. After the product has completely and uniformly dispersed into the tank mix, add any other liquid tank mix partners and allow them to completely and uniformly disperse.
4. Add the proper amount of spray adjuvant and continue agitation while adding the remaining water.
5. Complete filling the tank with clean water and maintain sufficient agitation at all times to insure surface action until the mixture is uniform.
6. After use, thoroughly clean the sprayer according to this label (see Cleaning Spray Equipment) and any tank mix partner labels.

Compatibility Test

A jar test is advised before mixing to ensure Solstice Herbicide compatibility with tank mix partners and adjuvants. The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredient rates.

1. Add 1.0 pt. of water to each of 2 one-quart jars.

Note: Use the same source of water and the other components in the compatibility test that will actually be tank mixed and applied. It is important that all components are mixed at a temperature similar to the temperature of those used for the actual application.

2. To one of the jars, add 1/4 tsp. or 1.2 milliliters of a compatibility agent approved for this use (1/4 tsp. is equivalent to 2 pt/100 gallons spray). Shake or stir gently to mix.

3. To both jars, add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. Finally, add the appropriate amount of any adjuvants that will be used. After each addition, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

Dry Herbicides and Adjuvants: For each pound to be applied per acre, add 1.4 tsp. to each jar.

Liquid Herbicides and Adjuvants: For each pint to be applied per acre, add 0.5 tsp. or 2.5 milliliters to each jar.

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix. Let the mixtures stand 15-30 minutes and look for separation, large flakes, precipitates, gels, heavy oil film on the jar, or other signs of incompatibility. Determine if a compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility.

a. Slurry the dry pesticide(s) in water before addition, or

b. Add 1/2 the compatibility agent to the water and the other 1/2 to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, **DO NOT** use the mixture.

After compatibility testing is complete, dispose of any pesticide wastes according to the Storage and Disposal section of this label.

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- 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 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 MANAGEMENT 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.

BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom must remain level with the crop and have minimal bounce.

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.

HANDHELD TECHNOLOGY APPLICATIONS

Take precautions to minimize spray drift

DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution.

Preferred drift control additives have been certified by the Council of Producers & Distributors of Agrotechnology (CPDA).

CROP ROTATION RESTRICTIONS

Immediate: Corn (field, seed, sweet corn and pop)

Following harvest of corn the following crops may be planted immediately: Asparagus, cranberry, flex, millet(pearl), grasses grown for seed (Kentucky bluegrass, perennial ryegrass, and tall fescue), oats, rhubarb, sorghum (grain and sweet), and sugarcane.

Following harvest of corn and not less than 4 months after application of Solstice Herbicide, the following crops may be planted: Small grains including wheat, barley, and rye.

Following harvest of corn and not less than 10 months after application of Solstice Herbicide, the following crops may be planted: Alfalfa, blueberry, canola, cotton, lingonberry, peanuts, potatoes, soybeans, sunflowers, tobacco, okra and rice can be planted back the following season. If Solstice Herbicide is applied postemergence following a mesotrione-containing preemergence herbicide, only corn (field, seed and pop) or grain sorghum may be replanted the year following application or severe crop injury may occur.

Following harvest of corn and not less than 18 months after application of Solstice Herbicide, the following crops may be planted: Sugar beets, dry beans, snap beans, cucurbits, red clover, and all other rotational crops may be replanted 18 months after application of Solstice Herbicide.

REPLANTING INSTRUCTIONS

If replanting is necessary in fields previously treated with Solstice Herbicide, the field may be replanted to Corn (field, seed and pop). If tank-mix combinations were used, refer to product labels for any additional replanting instructions.

SPRAYER EQUIPMENT CLEAN-OUT

Many pesticides are very active at low rates, especially to sensitive crops. Residues left in mixing equipment, spray tanks, hoses, spray booms and nozzles can cause crop effects if they are not properly cleaned. As soon as possible after spraying Solstice Herbicide and before using the sprayer equipment for any other applications, the sprayer equipment must be thoroughly cleaned using the following procedure. In addition, users must take appropriate steps to ensure proper equipment clean-out for any other products mixed with Solstice Herbicide as required on the other product labels. More complete cleaning can be achieved if the spray system is cleaned immediately following the application.

1. Drain sprayer tank, hoses, spray boom and spray nozzles. Use a high-pressure detergent wash to remove physical sediment and residues from the inside of the sprayer tank and thoroughly rinse. Then, thoroughly flush sprayer hoses, spray boom and spray nozzles with a clean water rinse. Remove and clean spray tips and all filters and screens (tank, spray hose and spray tips) separately in the ammonia solution of Step 2.
2. Next, prepare a sprayer cleaning solution by adding three gallons of ammonia (containing at least 3% active) per 100 gallons of clean water. Prepare sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom and spray nozzles.
3. Convenient and thorough cleaning of the sprayer can be achieved if the ammonia solution or fresh water is left in the spray tank, hoses, spray booms and spray nozzles overnight or during storage.
4. Before using the sprayer, completely drain the sprayer system. Rinse the tank with clean water and flush through the hoses, spray boom, and spray nozzles with clean water. Remove and clean spray tips and all filters and screens (tank, spray hose and spray tip) separately in an ammonia solution.
5. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State, and local regulations and guidelines.
6. **DO NOT** apply sprayer cleaning solutions or rinsate to sensitive crops.
7. If the sprayer sets overnight or for any extended period of time with Solstice Herbicide spray solution, the spray tank needs to be agitated and purge the spray boom and nozzles before beginning any application.
8. Small quantities of Solstice Herbicide remaining in inadequately cleaned mixing, loading and/or spray equipment, could be released during subsequent applications potentially causing effects to certain crops and other vegetation. FMC accepts no liability for any effects due to inadequately cleaned equipment.
9. When Solstice Herbicide has been tank mixed refer to the label of the product used previously or tank mixed with Solstice Herbicide for cleaning instructions.
10. **DO NOT** drain or flush equipment on or near desirable trees or plants.
11. **DO NOT** contaminate any body of water including irrigation water that may be used on other crops.

WEEDS CONTROLLED

Solstice Herbicide Application Alone

At the rates and weed size listed, Solstice Herbicide controls or suppresses the weeds listed in Table 1 when the product is applied alone. Weeds larger than the size indicated in Table 1 may only be partially controlled. For best postemergence results, apply Solstice Herbicide to actively growing weeds. Dry weather following application of Solstice Herbicide may reduce residual weed control effectiveness. Solstice Herbicide applied alone or in mixture with atrazine will not provide consistent or effective control of weeds identified as resistant to postemergence group 27 herbicides.

Table 1: Weeds controlled or partially controlled by postemergence activity of Solstice Herbicide.

Common Name	Scientific Name	*Solstice Herbicide 2.5 to 3.15 fl oz/A	*Solstice Herbicide 2.5-3.15 fl oz/A + Atrazine ¹
		Apply to Weeds <5 Inches Tall ²	
Amaranth, palmer	Amaranthus palmeri	PC	C ³
Amaranth, powell	Amaranthus powellii	C	C
Amaranth, spiny	Amaranthus spinosus	C	C
Atriplex	Chenopodium orach	C	C
Broadleaf signalgrass	Urochloa platyphylla	C ³	C ³
Buckwheat, wild	Polygonum convolvulus	PC	C ³
Buffalobur	Solanum rostratum	C	C
Burcucumber	Sicyos angulatus	C ³	C ³
Carpetweed	Mollugo verticillata	C	C
Carrot, wild	Daucus carota	PC	C
Chickweed, common	Stellaria media	C	C
Cocklebur, common	Xanthium strumarium	C	C
Crabgrass, large	Digitaria sanguinalis	C ³	C ³
Dandelion	Taraxacum officinale	PC	PC
Dock, curly	Rumex crispus	PC	PC
Galinsoga	Galinsoga parviflora	C	C
Hemp	Cannabis sativa	C	C
Horsenettle	Solanum carolinense	PC	C
Horseweed (maretail)	Conyza Canadensis	PC	C ³
Jimsonweed	Datura stramonium	C	C
Knotweed, prostrate	Polygonum aviculare	PC	PC
Kochia	Kochia scoparia	PC	C ³
Lambsquarters, common	Chenopodium album	C	C
Mallow, Venice	Hibiscus trionum	C	C
Morningglory, entireleaf	Ipomoea hederacea	C ³	C
Morningglory, ivyleaf	Ipomoea hederacea	C ³	C
Morningglory, pitted	Ipomoea lacunose	C ³	C
Mustard, wild	Brassica kaber	C	C
Nightshade, black	Solanum nigrum	C	C
Nightshade, Eastern black	Solanum ptycanthum	C	C
Nightshade, hairy	Solanum sarrachoides	C	C
Nutsedge, yellow	Cyperus esculentus	PC	PC
Pigweed, redroot	Amaranthus retroflexus	C	C
Pigweed, smooth	Amaranthus hybridus	C	C
Pigweed, tumble	Amaranthus albus	C	C
Pokeweed, common	Phytolacca americana	PC	PC
Potatoes, volunteer	Solanum spp.	C	C
Pusley, Florida	Richardia scabra	C ³	C ³
Ragweed, common	Ambrosia artemisiifolia	PC	C
Ragweed, giant	Ambrosia trifida	C ³	C
Sesbania, hemp	Sesbania. Exaltata	C	C
Sida, prickly (teaweed)	Sida spinosa	NC	C ³
Smartweed, lady's thumb	Polygonum persicaria	C ³	C
Smartweed, pale	Polygonum lapathifolium	C	C
Smartweed, Pennsylvania	Polygonum pensylvanicum	C ³	C
Sunflower, common	Helianthus annuus	C	C
Thistle, Canada	Cirsium arvense	NC	PC
Thistle, Russian	Salsola kali	C	C
Velvetleaf	Abutilon theophrasti	C	C
Waterhemp, common	Amaranthus rudis	C ³	C
Waterhemp, tall	Amaranthus tuberculatus	C ³	C

¹Solstice Herbicide tank mixture with atrazine at a minimum rate of 0.5lb ai/A.

²Under certain situations weeds can be controlled at larger than listed sizes, however to protect crop yield, manage weed resistance and provide consistent control, treat weeds before they exceed 5 inches in height.

³Apply before weed exceeds 3 inches in height. Solstice Herbicide will not provide control of weed biotypes known to be resistant to herbicide MOA group 14 and 27.

C = Control PC = Partial Control NC = Not Controlled

*Solstice Herbicide 2.5 to 3.15 fl oz/A (0.0042 – 0.0053 lb ai/A fluthiacet methyl + 0.074 – 0.0931 lb ai/A mesotrione)

CROP USE DIRECTIONS

CORN

(Includes field corn, seed corn, sweet corn and yellow popcorn)

Timing and Method of Application:

Postemergence Application

Use Rate: Apply Solstice Herbicide at 2.5 to 3.15 fl oz/A (0.0042 – 0.0053 lb ai/A fluthiacet methyl + 0.074 – 0.0931 lb ai/A mesotrione) Refer to weed table 1 for specific use rate requirements.

Solstice Herbicide may be applied broadcast postemergence up to the V8 growth stage (or 30 inches tall). The spray boom must be maintained at a minimum of 18 inches above the crop canopy to ensure uniform spray delivery and avoid concentrating spray in corn whorls. For optimum performance, make application to actively growing weeds <5 inches tall and rosettes less than 3 inches across. Application after weeds have reached the listed maximum height for control could result in commercially unacceptable weed control. Solstice Herbicide may be tank mixed with other herbicides registered for use in corn to improve weed spectrum or general weed control unless restricted under the corn crop section.

Refer to seed company requirements for use on field corn inbred lines. Special adjuvant restrictions must be followed for postemergence applications of Solstice Herbicide in yellow popcorn or sweet corn (see the spray adjuvant recommendation in the **Directions For Use** Section).

Postemergence applications (after crop emergence) of Solstice Herbicide may cause crop bleaching, leaf speckling in field corn, yellow popcorn and sweet corn hybrids. Crop bleaching, leaf speckling is typically transitory and has no effect on final yield or quality. However, herbicide sensitivity in yellow popcorn and sweet corn varies widely, and all yellow popcorn and sweet corn hybrids have not been tested. Contact your popcorn or sweet corn company, Field man, or University Specialist about hybrid requirements before making a postemergence application of Solstice Herbicide to yellow popcorn or sweet corn.

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