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

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	**Date of Issuance:**
279-9676	7/10/24

Term of Issuance:
Unconditional

Name of Pesticide Product:
W4H98 Herbicide

Name and Address of Registrant (include ZIP Code):

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104

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

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

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

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

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Continues page 2

Signature of Approving Official:

Emily Schmid

Emily Schmid, Product Manager 25
Herbicide Branch, Registration Division (7505P)

Date:
7/10/24

EPA Form 8570-6

2. Make the following label changes before you release the product for shipment:

    - Revise the EPA Registration Number to read, “EPA Reg. No. 279-9676.”

3. Submit one copy of the final printed label for the record before you release the product for shipment.

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

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

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

- Basic CSF dated 5/18/2023
- Alternate CSF 1 dated 5/18/2022

If you have any questions, please contact Sarah Meadows at 202-566-2828 or at meadows.sarah@epa.gov.

Enclosure

NOTE to EPA Product Manager: Text in brackets [ ] is optional.

QUINCLORAC	GROUP	4	HERBICDE
SULFENTRAZONE	GROUP	14	HERBICIDE
CARFENTRAZONE	GROUP	14	HERBICIDE

W4H98 HERBICIDE

ABN: Solitare® NXT herbicide

For postemergence control of annual grasses, broadleaf weeds, and perennial sedges including Crabgrass, Yellow Nutsedge, Green Kyllinga, Dandelion, Clover, Plantains, Spurge, Yellow Woodsorell, Dollarweed, Japanese Stiltgrass, Goosegrass, Torpedograss and many other weeds commonly found in turfgrass. Use sites include:

- Residential, Commercial and Institutional Lawns, Athletic Fields, Commercial Sod Farms
- Golf Course Fairways and Roughs

ACCEPTED
7/10/2024
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 279-9676

EPA Reg. No. 279-OATA **EPA Est. XXX**

Active Ingredients:	**By Wt.**
Sulfentrazone*	6.3%
Quinclorac*	25.0%
Carfentrazone-ethyl	0.50%
Other Ingredients:	68.2%
Total:	100.0%

*W4H98 herbicide contains 3.05 lb of total active ingredient per gallon of product (0.60 lb ai sulfentrazone, 2.40 lb ai quinclorac and 0.05 lb ai carfentrazone).

KEEP OUT OF REACH OF CHILDREN

CAUTION

See [other][additional][[side][front][back]panels] [[inside] booklet] for additional precautionary information.

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104

Net Contents:

[PEEL BACK BOOK HERE]

FIRST AID	
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
MEDICAL 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.	

For Technical Support or information regarding the use of this product, call 1-800-321-1FMC(1362)

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
CAUTION
Avoid contact with skin, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Prolonged or frequently skin contact may cause allergic reactions to some individuals.

Personal Protective Equipment (PPE)
Applicators, mixers, loaders, and other pesticide handlers must wear:
- Long sleeves and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils
- Shoes plus socks.

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, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:

- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- 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.

Environmental Hazards
This pesticide is toxic to marine/estuarine invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to plants in adjacent areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

Groundwater advisory: The active ingredients in this product are known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Do not use on coarse soils classified as sand which have less than 1% organic matter.

Surface water advisory: W4H98 herbicide can contaminate surface water through spray drift. Under some conditions, this product may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

Fish Advisory Statement: This product may be hazardous to aquatic organisms, particularly in clear, shallow water bodies that are adjacent to treated areas. Transport to water by runoff or spray drift of this product in areas where surface water is present, or intertidal areas below the mean high water mark, should be avoided. Do not contaminate water when disposing of equipment wash water or rinsate.

Non-target Organism Advisory Statement: 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.

Endangered Species: It is a Federal offense to use any pesticide in a manner that results in the death of an endangered species. Use of this product may pose a hazard to endangered or threatened species. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county in which you are applying the product. To obtain Bulletins, no more than six months before using this product, consult http://www.epa.gov/espp/ or call 1-800-447-3813. You must use the Bulletin valid for the month in which you will apply the product.

DIRECTIONS FOR USE

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

Always read the entire label, including the Limitation of Warranty and Liability.

This product may only be used in accordance with the Application Rates listed on this label. W4H98 herbicide may only be used for postemergence control of annual grasses, broadleaf weeds, and perennial sedges:

- Residential, Commercial and Institutional Lawns, Athletic Fields, Commercial Sod Farms
- Golf Course Fairways and Roughs

Refer to Tables 2 and 3 for a complete listing of the weeds/sedges controlled by this product.

Observe all precautions and limitations on this label. Any use of W4H98 herbicide inconsistent with this label may result in plant injury.

USE RESTRICTIONS

Only use for sites, pests, and application methods specified on this labeling.

Do not apply this product through any type of irrigation system.

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.

{Note to Reviewer: California language to be added when registered in state – use of Box is optional}

CALIFORNIA ONLY SPECIFIC RESTRICTIONS ON APPLICATIONS OF W4H98 HERBICIDE

Runoff Ground Water Protection Areas. Do not use in areas identified by the California Department of Pesticide Regulation as a runoff ground water protection areas* unless one of the following management practices can be met:

a) Incorporation of the pesticide. Within 48 hours after the day this product is applied, the pesticide shall be incorporated on at least 90 percent of the area treated; using a disc, harrow, rotary tiller, or other mechanical method, or by sprinkler or low flow irrigation, including chemigation where allowed by the label, using a minimum of ¼ inch of irrigation water and a maximum of one inch as described under Product Application Instructions, at application rates that do not cause surface water runoff from the treated property or to wells on the treated property; or

b) Retention of runoff on field. For six months following the application, the field shall be designed, by berms, levees, or nondraining circulation systems, to retain all irrigation runoff and all precipitation on, and drainage through, the field. The retention area on the field shall not have a percolation rate of more than 0.2 inches per hour (5 inches per 24 hours); or

c) Retention of runoff in a holding area off the field. For six months following the application, all runoff shall be channeled to a holding area off the application site, under the control of the property operator, that is designed to retain all irrigation runoff and all precipitation on, and drainage through, the treated field and all other areas draining into that holding area. The holding area shall not have a percolation rate of more than 0.2 inches per hour (5 inches per 24 hours); or

d) Runoff onto a fallow field. For six months following application, runoff shall be managed so that it runs off onto an adjacent unenclosed fallow field at least 300 feet long that is not irrigated for six months after application with the exception of the addition of adequate moisture that is required for herbicidal activation following application as described under Product Application Instructions, with full consideration of any plant back restrictions.

Leaching Ground Water Protection Areas. Do not use in areas designated by the California Department of Pesticide Regulation as leaching ground water protection areas* unless either (a) the user does not apply any irrigation water for six months following application of this product or (b) the user applies this product to the planting bed or the berm above the level of irrigation water in the furrow or basin and the water level shall remain at or below that level for six months following application of the pesticide with the exception of the addition of adequate moisture that is required for herbicidal activation following application as described under Product Application Instructions, or (c) irrigation is managed so that the ratio of the amount of irrigation water applied divided by the net irrigation requirement is 1.25 or less for six months following application of this product.

* Consult with your County Agricultural Commissioner to determine whether the application will be within an area designated by the California Department of Pesticide Regulation as either a Runoff Ground Water Protection Area or a Leaching Ground Water Protection Area. Details regarding the locations of these Areas are also available via the internet at www.cdpr.ca.gov/docs/emon/grndwtr/gwp_regs.htm

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), notification to workers, and restricted-entry interval. The requirements in this box apply to uses of this product that are covered by the Worker Protection Standard.

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

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

- Coveralls over long-sleeves and long pants
- Chemical-resistant gloves.
- Shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

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

Re-entry Statement: Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment area until spray has dried.

PRODUCT INFORMATION

W4H98 herbicide is a concentrated liquid formula containing 3.05 lb of active ingredient per gallon of product (0.60 lb ai sulfentrazone, 2.40 lb ai quinclorac and 0.05 lb ai carfentrazone). The liquid formula is absorbed by shoots, foliage and roots.

W4H98 herbicide is a selective post-emergence herbicide which controls annual grasses, broadleaf weeds and sedges in established turf areas including residential, commercial, and institutional lawns, athletic fields, commercial sod farms, golf course fairways and golf course roughs.

WEED RESISTANCE MANAGEMENT

For resistance management, please note that W4H98 herbicide contains both a Group 4/[quinclorac] and a Group 14/[sulfentrazone/carfentrazone] herbicide. Any weed population may contain plants naturally resistant to Group 4

and/or Group 14 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same area. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of this product or other Group 4 and/or Group 14 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or pest control advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and that considers mechanical control methods, cultural (e.g., timing to favor the turf and not the weeds), biological (weed-competitive varieties) and other management practices.
- Scout area before herbicide application for weed identification and growth stage.
- 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. Prevent movement of resistant weed seeds to other areas by cleaning equipment.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.

Contact your local extension specialist or pest control advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific types of turf and weed biotypes.

Mixing and Application Instructions

Handling Instructions

This product may 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.

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

Keep container closed to avoid spills and contamination.

Spray Tank Preparation

Spray equipment must be clean and free of existing pesticide deposits before using this product. Follow the spray tank clean out procedures specified on the label of product previously applied before adding W4H98 herbicide to the tank. Mix W4H98 herbicide thoroughly and continue agitation during application. If W4H98 herbicide is left standing for extended period of time in spray tank, re-agitate to assure uniform suspension of product in spray mixture. Use W4H98 herbicide spray mixture immediately after mixing. Do not store the mixture.

Mixing With Water

For best results, fill spray tank with one fourth of the volume of clean water needed for the area to be treated. Start the agitation system and add W4H98 herbicide to the tank. Make sure W4H98 herbicide is thoroughly mixed before application or before adding another product to the spray tank.

Tank Mixtures Compatibility
W4H98 herbicide is a water soluble liquid formulation and has been found to be compatible with most herbicides, fungicides, insecticides and growth regulators commonly used in turf and ornamental plant management. However, when preparing a new tank mix conduct an appropriate compatibility test by mixing proportional amounts of all spray ingredients in a test vessel (jar) prior to tank mixing with other products. **Shake the mixture vigorously and allow it to stand for five to ten minutes.** Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied. Provided the jar test indicates the mixture to be compatible, prepare the tank mixture as follows: Fill the tank 1/4 full with water. With the agitator operating, add the specified amounts of ingredients using the following order: dry granules first, then liquid suspensions (flowables) second. As the agitation continues and the tank is filled with water add EC products third followed by the addition of water soluble products.

Read and observe mixing instructions of all tank mix partners. Also read each product label for Directions for Use, Precautionary Statements and Restrictions and Limitations. The most restrictive labeling applies in all tank mixtures. No label dosage rate may be exceeded. Tank mixture recommendations are for use only in states where the companion products and application site are registered. In addition, certain states or geographical regions may have established dosage rate limitations. Consult your state Pesticide Control Agency for additional information regarding the maximum use rates.

Use W4H98 herbicide spray mixture immediately after mixing. Do not store the mixture.

Ground Equipment
Spray Volume: Apply this product in a sufficient volume of carrier solution to provide a uniform spray distribution. Use spray volumes of 20 – 175 gallons per acre (0.5 to 4.0 gal/1,000 sq ft). Best results are achieved when using 1 to 2 gal/1,000 sq ft. Apply the higher spray volumes for dense weed populations. When sulfentrazone is tank mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre.

Power sprayers: Uniform and accurate spray coverage requires proper calibration, agitation and operation of spray equipment. Do not release spray at a height greater than 30 inches above the ground. The use of marker dyes or foams can improve application accuracy. Boom sprayers equipped with appropriate flat fan nozzles, tips and screens are ideal for broadcast applications. Power sprayers fitted with spray wand/gun may also be used for broadcast application after careful calibration by the applicator. Power sprayers fitted with spray wand/gun are suitable for spot treatments. Spray pressures adjusted to 20 – 40 psi are appropriate.

Hand operated sprayers: Backpack and compression sprayers are appropriate for small turfgrass areas and spot treatments. Wands fitted with a flat fan nozzle tip should be held stationary at the proper height during application. A side to side or swinging arm motion can result in uneven coverage.

Sprayer Equipment Clean-Out
After spraying W4H98 herbicide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned using the following procedure:

1. Drain sprayer tank, hoses, and spray boom and thoroughly rinse the inside of the sprayer tank with clean water to remove sediment and residues. In addition, thoroughly flush sprayer hoses, boom, and nozzles with clean water.
2. Fill the tank 1/2 full with clean water, and add appropriate detergent or ammonia (follow manufacturer's directions for use). Fill the tank to capacity and operate the sprayer for 15 minutes to flush hoses, boom, and nozzles.
3. Drain the sprayer system. Rinse the tank with clean water and flush through the hoses, boom, and nozzles. Remove and clean spray tips and screens separately.
4. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State and local regulations and guidelines.

Do not drain or flush equipment on or near desirable trees or plants. Do not contaminate any body of water including irrigation water that may be used on other plants.

NOTE to EPA Product Manager: Text in brackets [ ] is optional.

SPRAY DRIFT

Ground Applications:

- Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE Standard S-572.
- Do not apply as spray droplets smaller than medium to course (defined by the ASABE).
- Select medium to very coarse droplet size when sulfentrazone is used post emergence with a contact burndown herbicide.
- Do not release spray at a height greater than 30 inches above the ground.
- Applicator may spray only when wind speed is between 3 and 10 mph. Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- When sulfentrazone is tank mixed with a contact burndown herbicide, ground applicator must use a minimum spray volume of 15 gallons per acre.

SPRAY DRIFT MANAGEMENT:

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER.

This product contains a contact herbicide. Avoid any drift conditions that would allow the product to contact desirable vegetation. The product is not volatile; however, mist from spray drift may cause injury to sensitive plants.

The interaction of equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications of dry materials. Where states have more stringent regulations, they must be observed.

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The optimum drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift when applications are made improperly, or under unfavorable environmental conditions. (See information on Wind, Temperature and Humidity, and Temperature Inversions).

- All ground application equipment must be properly maintained and calibrated using appropriate carriers.
- For all non-aerial applications, wind speed must be measured adjacent to the application site, on the upwind side, immediately prior to application.

Controlling Spray Droplet Size

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows usually produce larger droplets.
- **Pressure** - Do not use pressures greater than that specified by the nozzle manufacturer. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles.
- **Application Height –** Making applications at the lowest height that is safe reduces exposure of spray droplets to evaporation and wind movement.
- **Swath Adjustment -** Swath adjustment distance must increase, with increasing drift potential (higher wind, smaller drops, etc.).

Drift Reduction Technology (DRT) - The EPA Drift Reduction Technology (DRT) Program was developed to encourage the manufacture, marketing, and use of spray technologies scientifically verified to significantly reduce pesticide drift. The use of DRTs should result in significantly less pesticide from spray applications drifting and being deposited in areas not targeted by those applications, compared to spray technologies that do not meet the minimum DRT standard. EPA-verified drift reduction technologies (DRTs) and their ratings will be added to the following webpage as they become available: https://www.epa.gov/reducing-pesticide-drift/epa-verified-and-rated-riftreduction-technologies

Wind – Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. Do not apply when wind speeds are greater than 10 mph at the application site. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they potentially affect spray drift.

Temperature and Humidity – When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

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

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

Sensitive Areas – W4H98 herbicide shall only be applied when the wind is blowing away from adjacent sensitive areas (e.g. residential areas, bodies of water, known habitats for threatened or endangered species and non-target crops).

Off-Target Movement of W4H98 Herbicide
Drift of dilute spray mixtures containing W4H98 herbicide must be prevented. Observation of the preceding environmental conditions, correct application equipment design, calibration and application practices will significantly diminish the risk of off-target spray drift. W4H98 herbicide can cause significant symptomology by drift on to sensitive plants. This symptomology may manifest initially as discreet, localized spots where contacted by W4H98 herbicide drift mixtures. Depending on concentration of the spray solution and droplets size (effectively determining the dosage of sulfentrazone) and also depending on the inherent sensitivity of the plants involved, these spots or lesions may or may not coalesce. These effects will usually not have lasting effects on plant growth but will likely reduce the value of affected fruit or foliage where grade or quality is associated with appearance. In severe drift instances with particularly sensitive plants, defoliation of affected foliage could result. Failure to follow these guidelines and environmental prohibitions that then result in off-target movement or drift of W4H98 herbicide on to unintended plants, irrespective of severity, constitutes misapplication of this product. To the extent consistent with applicable law, FMC accepts no responsibility or liability for potential turf effects that may result from such misapplication of W4H98 herbicide.

NOTE to EPA Product Manager: Text in brackets [ ] is optional.

WEED CONTROL IN TURGFRASS

Turfgrass Safety

W4H98 herbicide may be used on seeded, sodded or sprigged turfgrasses that are well established. First application of this product can be made following the second mowing, provided the turfgrass has developed into a uniform stand with a good root system. Turfgrass injury could result from application of this product on turfgrass that is not well established or has been weakened by stresses such as unfavorable weather conditions, disease, chemical or mechanical influences.

Treated turfgrass will recover with new growth. Discolored leaf tissue will be removed with mowing. To reduce potential for discoloration, do not apply W4H98 herbicide on turfgrass that is weakened by weather, mechanical, chemical, disease or other related stress. Maintain proper cultural practices such as adequate moisture and fertility levels to promote healthy turf growth.

A post-emergent application of W4H98 herbicide is improved when adequate soil moisture is present at application. Best weed control results will be obtained when no rainfall or irrigation occurs within 24 hours after application. If no rainfall or irrigation occurs within 7 days after application of W4H98 herbicide in the amount of 0.5 inches, then irrigation of at least 0.5 inches is recommended.

Restrictions:

- Do not apply aerially.
- Do not apply to golf course putting greens, collars or tees.
- Do not use on turfgrasses other than those listed on this label.
- Do not apply to turfgrasses under stress.
- Do not apply with surfactants unless previous experience has demonstrated combinations with surfactant to be physically compatible and non-injurious to the grass type in question.
- Do not treat pastures, rangeland, or other areas grazed or harvested for livestock forage or hay.
- Do not apply directly to landscape ornamentals or ornamental beds.
- Do not allow spray drift to contact landscape ornamentals, shrubs and trees.
- Do not use clippings as mulch or compost around flowers, ornamentals, trees or in vegetable gardens.
- Do not graze or feed livestock forage cut from areas treated with product.
- The maximum quinclorac single application rate is 0.75 lb ai/acre per year.
- The maximum sulfentrazone application rate is 0.375 lb ai/acre per calendar year.

Use Precautions

- W4H98 herbicide has demonstrated tolerance on both cool and warm season turfgrasses. However, not all varieties have been evaluated. To test for turf safety, apply W4H98 herbicide in a small area and in accordance with label instructions.
- Temporary discoloration of some turf types may result from use of surfactants or adjuvants with W4H98 herbicide. High temperatures and high relative humidity may increase the risk of temporary discoloration. Use of surfactants is not recommended. Do not apply with surfactants unless previous experience has demonstrated combinations with surfactant to be physically compatible and non-injurious to the grass type in question.
- Temporary turfgrass discoloration has been observed when trinexapac-ethyl products have been either tank-mixed or applied within 7 days of a W4H98 herbicide application. It is recommended that trinexapac-ethyl applications be made 7 days prior to, or after W4H98 herbicide application to reduce risk of turfgrass discoloration.

SPECIFC INSTRUCTIONS FOR TURFGRASS

Use Rate Conversion					
fl oz product/ 1000 sq ft	**lb sulfentrazone/ acre**	**lb quinclorac/ acre**	**lb carfentrazone/ acre**	**lb total ai/ acre**	**fl oz product/ acre**
0.55	0.113	0.45	0.009	0.572	24
0.73	0.159	0.630	0.013	0.801	32
0.9	0.182	0.731	0.015	0.928	39

When applied as directed under the conditions described, single use application rates range from a minimum of 24 fl oz product/acre (0.55 fl oz product/1000 sq ft) to a maximum of 39 fl oz product/acre (0.9 fl oz product/1000 sq ft).

Table 1. Application Rate for Tolerant Grasses

Grass Type	Single Application Use Rate Refer to the "per species" maximum single application use rates. This product may be applied twice per year as long as the total sulfentrazone applied does not exceed the maximum calendar year application rate.	
	fl oz product / 1000 sq ft	**fl oz product / acre**
Cool Season Grasses		
Bentgrass, creeping	0.55	24
Bluegrass, Kentucky *(Poa pratensis)* Bluegrass, Rough *(Poa trivialis)* Fescue, tall *(Festuca arundinacea)* Fescue, fine (*Festuca* sp.) Ryegrass, perennial *(Lolium perenne)*	0.55-0.73	24-32
Warm Season Grasses		
Centipedegrass *(Eremochloa ophuiroides)* Seashore Paspalum *(Paspalum vaginaum)* Zoysiagrass* *(Zoysia japonica)*	0.55-0.73	24-32
Bermudagrass* *(Cynodon dactylon)* & hybrids Buffalograss *(Buchloe dactyloides)*	0.73-0.9	32-39
* Tifsport bermudagrass and Zeon zoysiagrass are more susceptible to temporary turf discoloration than other bermudagrass and zoysiagrass varieties. It is recommended to treat a small area prior to treatment of larger areas.		

Application to Reseeded, Overseeded or Sprigged areas:
Reseeding, overseeding or sprigging of treated areas within one (1) month after application of this product could inhibit the establishment of desirable turfgrasses. Overseeding of bermudagrass with perennial ryegrass at two (2) to four (4) weeks after an application can be done if slight injury to perennial ryegrass can be tolerated.

Best results are obtained for reseeding or overseeding when mechanical or power seeding equipment (slit seeders) are used to give good seed to soil contact and proper soil cultivation, irrigation and fertilization practices are followed.

Sod Production
This product may be applied to established sod. Allow sod to establish a good root system, a uniform stand and to fill in the exposed edges. It is recommended that sod be established for up to three (3) months before an application of W4H98 herbicide. Do not apply this product within three (3) months of harvest.

POSTEMERGENCE CONTROL OF GRASS AND BROADLEAF WEEDS
This product, when used alone, will control or suppress the [following] weeds listed in Table 2 when applied shortly after they have emerged. Do not exceed the application rates specified for the turfgrass species in Table 1.

Table 2. Weeds Controlled or Suppressed by W4H98 Herbicide

Common Name	Scientific Name	Controlled	Suppressed
Bittercress	*Cardamine spp.*		X
Barnyardgrass	*Echinochloa crusgalli*	1	
Black medic	*Medicago lupulina*	1	
Buttercups	*Ranunculus spp.*		X
Carolina geranium	*Geranium carolinianum*	1	
Carpetweed	*Mollugo verticillata*	1	
Chickweed, common	*Stellaria media*	1	
Chickweed, mouseear	*Cerastium vulgatum*		X
Cinquefoil	*Potentilla spp.*		X
Clover	*Trifolium spp.*	1	
Crabgrass (Large and Smooth)	*Digitaria spp.*	1	
Cudweed	*Gnaphalium spp.*		X

Deergrass	*Panicum cladestinum*	1	
Dandelion	*Taraxacum officinale*	1	
Dock, Curly	*Rumex crispus*	1	
Dollarweed	*Hydrocotyle spp.*	1	
Evening primrose	*Oenothera biennis*		X
Fiddleneck	*Amsinckia spp.*		X
Filaree	*Erodium spp.*		X
Foxtail spp.	*Setaria spp.*	1	
Goldenrod	*Solidago spp.*	1	
Goosegrass	*Eleusine indica*	2	
Ground ivy	*Glechema hederacea*	1	
Henbit	*Lamium amplexicaule*		X
Knotweed, prostrate	*Polygonum aviculare*		X
Kochia	*Kochia scoparia*	1	
Lambsquarters, common	*Chenopodium album*	1	
Lawn burweed	*Soliva pterosperma*		X
Lespedeza, common	*Lespedeza striata*		X
London Rocket	*Sisybrium irio*	1	
Mallow, common	*Malva neglecta*		X
Morningglory	*Ipomea spp.*	1	
Parsley piert	*Alchemilla arvensis*	1	
Pigweed, Redroot	*Amaranthus retroflexus*	1	
Pigweed, Tumble	*Amaranthus albus*	1	
Pineappleweed	*Matricaria matricarioides*		X
Plantain, broadleaf	*Plantago major*	1	
Plantain, buckhorn	*Plantago lanceolata*	1	
Punctureweed	*Tribulus terrestris*		X
Purslane, common	*Portulaca oleracea*	1	
Pusley, Florida	*Richardia scabra*	1	
Redweed	*Melochia corchorifolia*		X
Signalgrass, broadleaf	*Brachiaria platyphylla*	1	
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	1	
Sorrel, Red	*Rumex acetosella*	1	
Speedwell	*Veronica spp.*	1	
Spurge, (annuals)	*Euphorbia spp.*	1	
Spurge, prostrate	*Euphorbia humistrata*	1	
Spurge, spotted	*Euphorbia maculata*	1	
Star of Bethlehem	*Ornithogalum umbellatu*	1	
Stiltgrass, Japanese	*Microstegium vimineum*	2	
Torpedograss	*Panicum repens L.*	3	
Velvetleaf	*Abutilon theophrasti*	1	
Violet, wild	*Viola pratincola*	1	
Wild garlic	*Allium vineale*	1	
Wild onion	*Allium canadense*	1	
Woodsorrel, creeping	*Oxalis corniculata*		X
Woodsorrel, yellow	*Oxalis stricta*	1	

1 Weeds are suppressed at lower label rates, 24 fl oz product/acre (0.55 fl oz product/1000 sq ft). For optimum control apply rates of at least 32 fl oz product/acre (0.73 fl oz product/1000 sq ft) in a single application. Do not exceed the application rate specified for the turf species in Table 1.

2 W4H98 herbicide controls goosegrass and Japanese stiltgrass when applied to newly emerged plants in the 1-4 leaf stage of development. Larger plants require sequential applications applied 21 days apart.

3 For effective torpedograss control, sequential applications of at least 32 fl oz product/acre (0.73 fl oz product/1000 sq ft) are needed. Sequential applications must be applied at least 21 days after the initial application.

POSTEMERGENCE CONTROL OF ANNUAL AND PERENNIAL SEDGES

W4H98 herbicide will control or suppress the sedges listed in Table 3. Apply the highest rate consistent with the rate needed for turfgrass safety in Table 1.

- Rates lower than 32 fl oz product/acre (0.73 fl oz product/1000 sq ft) will generally control sedges for up to 60 days.
- A rate of 32 fl oz product/acre (0.73 fl oz product/1000 sq ft) will provide approximately 75% control for up to 60 days.
- Yellow nutsedge (*Cyperus esculentus*) is the most susceptible sedge species.
- Temporary discoloration of some turfgrass species may result from use of surfactant. Use of surfactants is not recommended.

Good spray coverage is needed for optimum control of sedges.

Table 3. Sedge species controlled or suppressed by W4H98 herbicide

Common Name	SCIENTIFIC NAME
Kyllinga, green	*Kyllinga brevifolia*
Kyllinga, false green	*Kyllinga gracillima*
Nutsedge, purple[1]	*Cyperus rotundus*
Nutsedge, yellow	*Cyperus esculentus*
Sedge, globe	*Cyperus globulosus*
Sedge, cylindric	*Cyperus retrorsus*
Sedge, Surinam	*Cyperus surinamensis*
Sedge, Texas	*Cyperus polystachyos*

1 Multiple applications may be required. Second application must occur no earlier than 28 to 35 days after the first application.

STORAGE AND DISPOSAL

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

Pesticide Storage

Store product in original container only, away from other pesticides, fertilizer, food or feed.

Store in a cool, dry place and avoid excess heat.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC: (800) 331-3148.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

Pesticide Disposal

If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

Container Handling

[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.
- **(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.

Returnable/Refillable Containers - 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.

NOTE to EPA Product Manager: Text in brackets [ ] is optional.

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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 or FMC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

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