

2217-921

2/21/2013

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

James L. Kuntsman, Ph.D.
PBI/Gordon Corporation
1217 W. 12th Street
P.O. Box 014090
Kansas City, Missouri 64101

FEB 21 2013

Subject: Notification; Per PR-Notice 98-10
EH-1467 Herbicide
EPA Reg. No. 2217-921
Date Submitted: February 8, 2013

Dear Dr. Kuntsman:


The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated February 8, 2013 for the product referenced above. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions regarding this letter, please contact me at (703) 306-0415 or davis.kable@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis".

Kable Bo Davis
Product Manager 25
Herbicide Branch
Registration Division (7505P)

 EPA	United States Environmental Protection Agency Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number
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Application for Pesticide - Section I

1. Company/Product Number <p style="text-align: center;">2217-921</p>	2. EPA Product Manager <p style="text-align: center;">Kathryn V. Montague</p>	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <p style="text-align: center;">EH-1467 Herbicide</p>	PM# <p style="text-align: center;">Product Manager—Team 23</p>	
5. Name and Address of Applicant (Include ZIP Code) PBI/Gordon Corporation Post Office Box 014090 Kansas City, Missouri 64101 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section - II

<input type="checkbox"/> Amendment - Explain below. <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input type="checkbox"/> Other - Explain below.
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NOTIFICATION

FEB 21 2013

Explanation: Use additional page(s) if necessary. (For section I and Section II.) e-mail to jkunstman@pbigordon.com FAX: 816-421-2731

Notification per Pesticide Registration Notice (PRN) 98-10: Section IV(C)

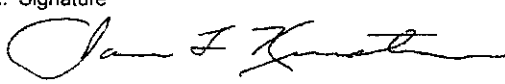
We ask to add a statement to comply with California Prop 65. Please refer to page 13 of the enclosed draft label.

*certification statement on cover letter

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per Container		
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1, 2, 5, 15, 30 and 275 Gallons		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Other _____ <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled					

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name James L. Kunstman, Ph.D.	Title Director of Regulatory Services	Telephone No. (include Area Code) 816-460-6292	
Certification <i>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.</i>			6. Date Application Received (Stamped)
2. Signature 	3. Title Director of Regulatory Services		
4. Typed Name James L. Kunstman, Ph.D.	5. Date February 8, 2013		



1217 W. 12th STREET · P.O. BOX 014090
KANSAS CITY, MISSOURI 64101-0090
816-421-4070 · 1-800-821-7925
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February 8, 2013

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
US Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

NOTIFICATION
FEB 21 2013

Attn: Kathryn V. Montague, PM(23)

Dear Ms. Montague:

Subject: Labeling notification per PRN 98-10: Notifications Non-notifications and Minor Formulation Amendments.

EH-1467 Herbicide (EPA Reg. No. 2217-921)

I. Labeling Notification per Pesticide Registration Notice (PRN) 98-10: Section IV (C)

We ask to add the following statement to comply with California Proposition 65:
"Attention: This product contains a chemical known to the state of California to cause cancer."
Please refer to page 13 of the enclosed draft labeling.

II. Certification statements:

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to the EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Section 12 and 14 of FIFRA.

III. Enclosures:

1. Application for Pesticide Amendment (EPA Form 8570-1)
2. One (1) copy the draft labeling with annotations.
3. One (1) copy the draft labeling without notations.

If you have any questions, please call me at 816-460-6292 or contact me at jkunstman@pbigordon.com.

Sincerely,

James L. Kunstman, Ph.D.
Director of Regulatory Services

Handwritten notations and marks on the right side of the page, including several sets of double and triple quotes.

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EH-1467 HERBICIDE

EPA Reg. No. 2217-921

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170.

ACTIVE INGREDIENT:

Triclopyr, triethylamine salt	7.28%
Sulfentrazone	0.63%
2,4-D, diethanolamine salt	30.84%
Dicamba, dimethylamine salt	2.48%
INERT INGREDIENTS:	<u>58.77%</u>
TOTAL	100.00%

THIS PRODUCT CONTAINS:

- 0.50 lb 3,5,6-trichloro-2-pyridinyloxyacetic acid per gallon or 5.22%.
 - 0.06 lb N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]phenyl]methanesulfonamide per gallon or 0.63%
 - 2.00 lb 2,4-dichlorophenoxyacetic acid equivalent per gallon or 20.90%.
 - 0.20 lb 3,6-dichloro-o-anisic acid equivalent per gallon or 2.06%.
- Isomer Specific by AOAC Methods.

NOTIFICATION

FEB 21 2013

KEEP OUT OF REACH OF CHILDREN

WARNING - AVISO

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

STOP! READ THE ENTIRE LABEL FIRST. OBSERVE ALL PRECAUTIONS AND FOLLOW DIRECTIONS CAREFULLY.

PRECAUTIONARY STATEMENTS

Hazards to Human and Domestic Animals

WARNING: Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear such as safety glasses. Harmful if swallowed. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are natural rubber. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators and other handlers must wear:

- protective eyewear,
- long-sleeved shirt and long pants,



- shoes and socks, plus
- chemical-resistant gloves (except for applicators using ground boom equipment) and
- chemical-resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

See engineering controls for additional requirements.

Engineering Control Statements

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Requirements

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

User Safety Recommendations

- Users should wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.
- 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.

First Aid

If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If on skin or on clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-877-800-5556 for emergency medical information.	

Environmental Hazards

This pesticide may be toxic to fish and aquatic 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 aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

These chemicals (triclopyr, 2,4-D and dicamba) have properties and characteristics associated with chemicals detected in groundwater. The use of these chemicals in areas where soils are permeable,

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particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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 (including sod 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 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 48 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,
- chemical-resistant gloves made of any water-proof material,
- shoes plus socks and
- protective eyewear.

Spray Drift Management

When this product is used in "commercial sod production," the following Best Management Practices for reducing spray drift apply.

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of ground application can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size

When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

Equipment

All ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates. Additional requirements for ground boom application: Do not apply with a nozzle height greater than 4 feet above the crop canopy.

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.

Reentry Statement: Do not enter or allow people (or pets) to enter the treated area until sprays have dried.

PRODUCT DESCRIPTION:

Designed for [turfgrass applications] [non-crop] [and IVM (Industrial Vegetation Management)] applications, this product contains four active ingredients.

- (1) Triclopyr provides broad-spectrum weed control for some of the tough broadleaf weeds such as wild violet, ground ivy, oxalis and wild blackberry.
- (2) Sulfentrazone causes desiccation and yellowing of plant tissue on emerged, susceptible weeds. Sulfentrazone is in the aryl triazolinone family and inhibits protoporphyrinogen oxidase (Protox), a pivotal enzyme in chlorophyll production. Without this key enzyme, a build-up of peroxide-like compounds occurs, thus causing the plant cell membranes of weeds to rupture. Sulfentrazone provides post emergent weed control for common weed species in turfgrass such as spurge and thistles and suppression of yellow nutsedge.
- (3) 2,4-D is an auxin-type herbicide, which is a class of plant growth regulators. It is absorbed through the leaves and is translocated to the growing points of the plant, causing weed stems curl and twist, leaf cupping and withering, and eventual plant death.
- (4) Dicamba is absorbed through the leaves and roots and has multiples modes of actions for hard-to-kill broadleaf weeds.

Combining these herbicides provides a very wide spectrum of weed control for tough and susceptible weeds. EH-1467 Herbicide controls weeds by affecting multiple sites within the broadleaf weeds. The symptoms of susceptible broadleaf weeds include leaf and stem curl or twisting, and weed yellowing.

These combined herbicides provide limited residual activity.

EH-1467 Herbicide offers these advantages:

- Excellent postemergent activity with proven performance.

- This product exhibits improved cool-weather performance compared to standard "3-way amines".
- High selectivity (turfgrass safety) in established cool-season turfgrass.
- Sulfentrazone combinations provide rapid and effective weed control for common and troublesome (tough) weed species in turfgrass, including: dandelion, spurge and white clover.
- The speed of action (rate of weed phytotoxicity) and the early weed symptoms are features of sulfentrazone combinations compared to standard "3-way amines". Often, the weed injury symptoms can be noticed within hours of the application and plant death can occur within 10 to 14 days.
- Triclopyr combinations broaden the weed control spectrum to include many woody and hard-to-control species.
- This product is generally rainfast in as little as 6 hours.

SPRAY PREPARATION AND TANK MIXTURES:

In certain applications, liquid fertilizer may replace part of the water.

Mixing with water:

Add one-half the required amount of water to the spray tank, then add EH-1467 Broadleaf Herbicide slowly with agitation, and complete filling the tank with water. Mix thoroughly and continue agitation while spraying.

When this product is left standing for extended periods of time, re-agitate to assure uniformity of the spray mixture.

Do not use tank additives that alter the pH of the spray solution below pH 5 or above pH 8. Buffer the spray solution to alter the pH range as appropriate.

Mixing with liquid fertilizers:

Use suitable sources and rates of fertilizer based upon recommendations of your fertilizer supplier or State Extension Service Specialist.

Verify physical compatibility with a jar test: Always perform a jar test for compatibility before large scale mixing. The jar test can be conducted by mixing all components in a small container in proportionate quantities. If the mixture separates after standing and can be mixed readily by shaking, then the mixture can be used and applied with spray equipment providing continuous agitation. If large flakes, sludge, gels or other precipitates form, or if a separate oily layer or oil globules appear, then the herbicide and the liquid fertilizer must not be prepared as a tank mixture.

Liquid fertilizers are either solutions (true fluids) or suspensions. Mixing this product with suspensions or N-P-K solutions may not be satisfactory (may be marginal) without pre-mixing this product with water. Premixing this product with 2 parts water will ensure that the emulsifiers are activated enabling the herbicide to be suspended in the fertilizer.

Adjuvants and spray additives:

Adjuvants (such as surfactants, spreaders, spreader-stickers, spray thickeners, foaming agents, activators, detergents, and drift reducing agents) combined with this product can damage the leaf tissue of turfgrass. If any discoloration or cosmetic effects are objectionable or would be unacceptable, then adjuvant(s) combined with EH-1467 Broadleaf Herbicide would not be recommended. Do not use adjuvants and spray additive tank-mix combinations, unless your experience indicates that the tank mixture will not result in turf injury. When an adjuvant is used with this product, [name of registrant] recommends the use of Chemical Producers and Distributors Association (CPDA) certified adjuvant.

GROUND EQUIPMENT:

Spray distribution: The accuracy and uniformity of the herbicide distribution is the sole responsibility of the applicator. Power sprayers fitted with a boom or spray wand/gun may be used for broadcast applications and spot treatments. Boom sprayers equipped with appropriate nozzles, tips, and screens

are suitable for broadcast applications. For best spray distribution and coverage, select a spray volume and delivery system that will ensure accurate and uniform coverage.

Spray volumes of 10 to 220 gallons per acre with spray pressures adjusted to between 20 to 40 psi. Use higher spray volumes for dense weed populations (up to 220 gallons per acre or 5 gallons per 1,000 square feet).

- Calibration and proper application are essential when using this product.
- Over-application or rates above those specified on this label can cause turf injury.
- Hand-held technique: Wands fitted with flat fan nozzle tips may be used with the appropriate technique. Flat fan nozzles should not be waved in a back-and-forth motion, or in a side-to-side motion, or in a swinging arm motion. Instead, the nozzle should be held stationary at the proper height. Side-to-side motion results in uneven coverage.

Hand operated sprayers including backpack sprayers, compression sprayers are appropriate for small turfgrass areas.

After using this product, clean sprayer with soap or detergent and water, or an approved spray tank cleaner and rinse thoroughly before applying other pesticides.

WHERE TO USE:

This product provides broadleaf control in the following sites.

- **Ornamental Turfgrass sites:**
 - **Residential/domestic sites** are defined as areas associated with the household or home life including, but not limited to apartment complexes, condominiums, and patient care areas of nursing homes, mental institutions, hospitals, or convalescent homes.
 - **Ornamental turf sites** include turfgrass established around residences, parks, streets, retail outlets, cemeteries, industrial and institutional buildings, recreation areas, fairgrounds, areas adjacent to athletic fields and paved areas.
 - **Institutional sites** are defined as turf areas around properties or facilities providing a service to public or private organizations including, but not limited to hospitals, nursing homes, schools, museums, libraries, sport facilities, golf courses (fairways and roughs), and office buildings.
- **Non-cropland sites:** including farmyards, fencerows or fence lines, highway rights-of-way (principal, interstate, county, private, and unpaved roads); Roadsides, roadside ditches, road shoulders, road embankments, dividers, and medians; Industrial sites: Lumberyards, tank farms, fuel or equipment storage areas; Municipal, state, and federal lands: Airports and military installations; railroad rights-of-ways, railroad yards, railroad crossings and railroad bridge abutments; Utility rights-of-way: telephone, pipeline, electrical powerlines, and communication transmission lines.
- **Agricultural site:** Commercial sod production

Prohibitions of Sites:

- Do not apply to any body of water such as lakes, streams, rivers, ponds, reservoirs, or estuaries (salt water bays). Do not apply to any shorelines (non-cropland sites adjacent to the edges of a body of water) for lakes, streams, rivers, ponds, reservoirs, or estuaries (salt water bays).
- Do not apply to wetlands (swamps, bogs, potholes, or marshes).
- Do not apply to agricultural irrigation water or on agricultural irrigation ditchbanks and canals.
- Do not apply to agricultural drainage water or on agricultural ditchbanks.
- Do not apply to sites being used for commercial timber or seed production, or to other non-turf plants being grown for sale or other commercial use.
- Do not apply or allow this product to come into direct contact with cotton, grapes, tobacco, vegetable crops, flowers, fruit or ornamental trees, or other desirable broadleaf plants; small amounts of spray drift may injure susceptible plants, including ornamental trees or shrubs.

Turfgrass tolerance:

- The turfgrass tolerance to this product may vary and temporary turfgrass yellowing may occur. Adverse environmental conditions may reduce the selectivity on the turfgrass. Do not apply this product to stressed turf.
- Certain spray tank additives (adjuvants, wetting agents, surfactants), liquid fertilizers, and tank mixtures containing emulsifiable concentrates may reduce the selectivity on the turfgrass. Do not use adjuvants and spray additive tank-mix combinations, unless your experience indicates that the tank mixture will not result in turf injury. When an adjuvant is used with this product, [name of registrant] recommends the use of Chemical Producers and Distributors Association (CPDA) certified adjuvant.

Prohibitions:

- Do not apply this product to St. Augustinegrass, bentgrass, greens or tees, carpetgrass, dichondra, legumes, and lawns where desirable clovers are present.
- Do not broadcast apply this product when temperatures are above 90°F, some injury may be expected with spot treatments when air temperatures exceed 90°F. Where state, county or local governments have more stringent temperature regulations, these regulations must be observed.
- To avoid turf injury, use only on turfgrass that is reasonably free of stress from diseases, insects, excess heat or cold, drought or excess rainfall/irrigation, shaded areas, nematodes, improper mowing or improper applications of fertilizer and pesticides. Injury can occur if this product is applied under any of these or other stress conditions. Under any of these stress conditions, any turf damage caused by the use of this product is beyond the control of the registrant and all risk is assumed by the buyer and/or user.
- Do not apply product to bare ground.
- For ground application only; aerial applications are not permitted.

STATE RESTRICTIONS:

- **California:** Make broadcast applications only between March 1 and September 1. If troublesome weeds appear during other times of the year, a spot application can be made. While irrigation is necessary and important for plant growth, apply irrigation water efficiently so that no more than 125% of the net irrigation requirement is applied for any irrigation event. Apply efficient irrigations for six months following application of sulfentrazone containing products.
- **Arizona:** The state of Arizona has not approved this product for use on sod farms.

APPLICATION SCHEDULES:

Apply this product to broadleaf weeds that are young and actively growing for the best results. Fall applications can provide improved control for emerged-winter annuals and perennials such as henbit, chickweed, clover and ground ivy.

For the Listed Residential/domestic sites, Ornamental Turf sites, Institutional sites and Agricultural sites:

Do not apply more than two (2) broadcast treatments of this product per site per year. A second broadcast application or a follow-up application as a spot treatment is recommended for more mature weeds, for dense infestations, and for adverse environmental conditions.

Spot treatments during the summer may be appropriate for sparse infestations, or as a follow-up treatment, or any time broadleaf weeds are actively growing.

For the Listed Non-cropland sites:

Use only one (a single) broadcast treatment of this product per site per year for woody plant infestations, or two broadcast treatments for annual and perennial weeds. It is required to wait 30 days between treatments and a spot treatment may be substituted for the second broadcast treatment if necessary.

Extremes in environmental conditions e.g. temperature and moisture, soil conditions, and cultural practices may affect the activity of this product. Under warm moist conditions, herbicide symptoms may be accelerated. While under very dry conditions, the expression of herbicide symptoms is delayed, and weeds hardened off by drought are less susceptible to this product.

For newly seeded areas:

Delay application of this product to grass seedlings until after the second mowing.

For newly sodded, sprigged, or plugged areas:

The application of this product to newly sodded, sprigged, or plugged grasses should be delayed until 3 to 4 weeks after the sodding, sprigging, or plugging operations.

Reseeding interval:

Treated areas may be reseeded 3 weeks after application.

HOW MUCH TO USE:

USE RATES AND SPRAY VOLUMES:

Generally, the lower application rates within the specified range will provide satisfactory control of sensitive weed species. The higher application rates within the specified range will be required for dense infestations of perennial weeds, for adverse/extreme environmental conditions, or for weeds hardened off or more mature.

Species	Rate	Recommended Spray Volume
Cool-season Turf		
Kentucky bluegrass, annual bluegrass, annual ryegrass, perennial ryegrass, tall fescue, red or fine leaf fescues	3.25 to 4 Pints/Acre (1.2 to 1.5 fl.oz./1,000 sq.ft.)	10 to 220 Gallons/Acre (0.25 to 5.0 Gallons/1,000 sq.ft.)
Warm-season Turf (OPTIONAL)		
(OPTIONAL) Hybrid Bermudagrass, common Bermudagrass, zoysiagrass, and bahiagrass	2 to 2.25 Pints/Acre (0.75 to 0.83 fl.oz./1,000 sq.ft.)	10 to 220 Gallons/Acre (0.25 to 5.0 Gallons/1,000 sq.ft.)
(OPTIONAL) Note: Do not apply to above listed warm-season turfgrass unless turf injury can be tolerated. It is impossible to test all environmental conditions for the listed warm-season turfgrass. We suggest testing this product on a small area and observe the treated area for 30 days (during normal growing conditions) to determine the acceptability of turf discoloration.		
Do not apply this product to warm-season turfgrass during spring green-up or in the fall during the transition period between active growth and dormancy.		
Dormant turf: This product may be applied to fully dormant bermudagrass, fully dormant zoysiagrass and fully dormant bahiagrass.		

Use Site	Maximum Rate per Application	Maximum Number of Applications per Year	Minimum Interval Between Applications	Maximum seasonal rate
Ornamental turfgrass sites	4.0 pints/A (1.00 lb 2,4-D ae/A) (0.25 lb triclopyr ae/A) (0.10 lb dicamba ae/A)	2	NA	8.0 pints/A (2.00 lb 2,4-D ae/A) (0.50 lb triclopyr ae/A) (0.20 lb dicamba ae/A)
Sod farms	4.0 pints/A (1.00 lb 2,4-D ae/A) (0.25 lb triclopyr ae/A) (0.10 lb dicamba ae/A)	2	21 Days	8.0 pints/A (2.00 lb 2,4-D ae/A) (0.50 lb triclopyr ae/A) (0.20 lb dicamba ae/A)
Non-cropland	4.0 pints/A (1.00 lb 2,4-D ae/A) (0.25 lb triclopyr ae/A) (0.10 lb dicamba ae/A)	1 (woody plants)	NA	8.0 pints/A
		2 (annual and perennial weeds)	30 Days	(2.00 lb 2,4-D ae/A) (0.50 lb triclopyr ae/A) (0.20 lb dicamba ae/A)

**SPOT TREATMENT:
WITH HAND OPERATED SPRAYERS (INCLUDING BACKPACK SPRAYERS AND PUMP-UP TYPE SPRAYERS):**

- Apply any time the emerged broadleaf weeds are actively growing.
- Calibration and proper application are essential when using this product.
- Uniform applications are essential when using this product. Over application or rates above those specified on this label including excessive overlaps of this product can cause turf injury.
- Hand-held techniques: Wands fitted with flat fan nozzle tips may be used with the appropriate technique. Flat fan nozzles should not be waved in a back-and-forth motion, or in a side-to-side motion, or in a swinging arm motion. Instead, the nozzle should be held stationary at the proper height. Side-to-side motion results in uneven coverage.
- Follow-up applications as spot treatments at a 30 day interval are recommended for more mature weeds, for dense infestations, and for adverse environmental conditions.
- **For cool-season turfgrass listed in Table 1:** Mix 1.2 to 1.5 fl.oz. of this product per one (1.0) gallon of water for treatment of approximately 1,000 sq.ft of turfgrass. Apply any time the emerged broadleaf weeds are susceptible.
- **[For warm-season turfgrass listed in Table 1:** Mix 0.75 to 0.83 fl.oz. of this product per one (1.0) gallon of water for treatment of approximately 1,000 sq.ft of turfgrass. Apply any time the emerged broadleaf weeds are susceptible.]

CULTURAL TIPS:

Irrigation:

- Do not apply this product through any type of irrigation system.
- Rainfast in as little as 6 hours. Do not apply this product immediately before rainfall or irrigation.
- If possible, do not irrigate or water the turfgrass within 6 to 24 hours after application.
- If dry conditions exist, a scheduled irrigation or watering 24 hours before and 24 hours after application is recommended.

Mowing:

- For optimum results, delay mowing 2 days before and until 2 days after the application of this product.

BROADLEAF WEEDS CONTROLLED:

EH-1467 Herbicide will control or suppress the following broadleaf weeds. Apply any time the emerged broadleaf weeds are susceptible.

BROADLEAF WEEDS			
Aster, white heath & white prairie	False dandelion (*spotted catsear & common catsear)	Matchweed	Redweed
Bedstraw	Field bindweed	Mouseear chickweed	Red sorrel (*sheep sorrel)
Beggarweed, creeping	(*morningglory & creeping jenny)	Mustard	Russian Thistle
Bindweed	Field oxeye-daisy (*creeping oxeye)	Nettle	Shepherdspurse
Black medic	Filaree, whitestem & redstem	Nutsedge** (yellow)	Speedwell (Veronica)
Broadleaf plantain	Florida betony	Old world diamond flower	Spurge
Buckhorn plantain	Florida pusley	Oxalis (*yellow woodsorrel, creeping woodsorrel, and corniculata)	Thistle
Bull thistle	Ground ivy	Parsley-piert	Virginia buttonweed
Burdock, common	Groundsel	Pennsylvania smartweed	White clover (*Dutch clover, honeysuckle, clover, white trefoil, & purple vicia)
Buttercup, creeping	Hawkweed	Pepperweed	Wild carrot
Carpetweed	Healall	Pigweed	Wild garlic
Catnip	Henbit	Pineappleweed	Wild geranium
Chickweed	Innocence (Blue-eyed Mary)	Plantain	Wild lettuce
Chicory	Knotweed	Poison ivy	Wild mustard
Cinquefoil		Poison oak	Wild onion
Clover		Prickly lettuce (*compass plant)	Wild strawberry
Curly dock			Wild violet***
Dandelion			
Dayflower			

BROADLEAF WEEDS			
Deadnettle Dock Dogfennel English Daisy	Kochia Lambsquarters Lawn burweed Lespedeza, common Mallow, common	Puncturevine Purple cudweed Purslane Ragweed	Yarrow Yellow rocket and many more broadleaf weeds
* Synonyms ** Suppression only when nutsedge is young and actively growing. *** For best results, apply in the spring when wild violets are blooming or apply a late fall application followed by a spring application.			

FOR USE IN NON-CROPLAND: BRUSH AND WEED CONTROL

High volume foliar applications (100 to 400 gallons per acre):

Apply 0.5 to 2.0 gallons of product per acre with adequate water or apply a 0.5 to 2.0% vol/vol spray solution as a full cover spray with high volume equipment. Use the lower spray concentrations in the range for susceptible species and use the higher spray concentrations within the range for hard-to-control species, for mature plants during the late summer or under adverse environmental conditions (e.g. drought).

Spray broadleaf weeds, woody plants or mixed brush uniformly and thoroughly by wetting all leaves, stems, bark and root collars. The total volume of spray solution required for adequate coverage of solid stands of mixed brush can range from 100 to 400 gallons of spray solution per treated acre. The spray preparation chart for applications on a spray-to-wet basis is shown below in Table 3.

Table 3. Instructions for preparing 100 to 400 gallons of spray solution at 0.5 to 2.0% spray concentration with water for high volume foliar applications.

Spray solution per acre, Gallons	Amount of Product Needed for Spray Concentration of:			
	0.5%	0.67%	1.0%	2.0%
100	0.5 gal	0.67 gal	1.0 gal	2.0 gal
200	1.0 gal	1.34 gal	2.0 gal	----
300	1.5 gal	2.0 gal	----	----
400	2.0 gal	----	----	----

Equal measures: 1 gallon = 4 quarts = 8 pints = 128 fl.oz.

The maximum seasonal application rate for trees, brush and woody plant control is 2.0 gallons of product per acre per application per site.

For Backpack Sprayers and Hand Pump-up Sprayers.

Table 4. Instructions for preparing 1 to 3 gallons of spray solution at 0.5 to 2.0% spray concentration with water for high volume foliar applications.

Gallons of Water	Amount of Product Needed for Spray Concentration of:			
	0.5%	0.67%	1.0%	2.0%
1	4 teaspoons	5 teaspoons	2.5 tablespoons	5 tablespoons
2	2.5 tablepoons	3.5 tablespoons	5 tablespoons	10 tablepoons
3	2 fl.oz.	2.5 fl.oz.	4 fl.oz.	8 fl.oz.

Equal measures: 1 fl.oz. = 2 tablespoons (Tbs.) = 6 teaspoons (tsp.)

BRUSH CONTROLLED:

Ash Aspen Beech Birch Blackberry	Cedar Cherry (except Black Cherry) Cottonwood Dogwood	Honeylocust (suppression) Honeysuckle Kudzu Multiflora Rose Oak	Sumac Sycamore Trumpet Creeper Wild Grape Wild Plum
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BRUSH CONTROLLED:			
Black Locust	Elm	Poison Ivy	Willow
Brambles	Gooseberry	Poison Oak	And many more brush species
Buckbrush	Hawthorn	Sycamore	

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container in a locked storage area inaccessible to children or pets. Keep from freezing.

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

[For Plastic Containers – Nonrefillable with capacities equal to or less than 5 gallons:]

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse [or pressure rinse] container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank 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.

[Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.]

[For Plastic Containers – Nonrefillable with capacities greater than 5 gallons:]

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse [or pressure rinse] container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

[Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.]

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[For Refillable Containers:]

CONTAINER HANDLING: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Container cleaning: 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 from this container into application equipment or a mix tank. Fill the container about 10 percent 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.

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IMPORTANT: Read this LIMITED WARRANTY AND DISCLAIMER before buying or using this product. By opening and using this product, buyer and all users agree to accept the terms of this LIMITED WARRANTY AND DISCLAIMER in their entirety and without exception. If the terms are not acceptable, return this product unopened immediately to the point of purchase, and the purchase price will be refunded in full.

It is impossible to eliminate all risks inherently associated with use of this product. Damage to the treated article, ineffectiveness, or other unintended consequences can result from use of the product under abnormal conditions such as weather, presence of other materials, or the manner of use or application, etc. Such factors and conditions are beyond the control of the manufacturer, and **BY PURCHASING AND USING THIS PRODUCT THE BUYER AND ALL USERS OF THIS PRODUCT AGREE TO ACCEPT ALL SUCH RISKS.** Buyer and all users further agree to assume all risks of loss or damage from the use of the product in any manner that is not explicitly set forth in or that is inconsistent with label instructions, warnings and cautions.

The manufacturer warrants only that this product conforms to the chemical description given on the label, and that the product is reasonably suited for the labeled use when applied according to the Directions for Use, subject to the inherent risks described below. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE MANUFACTURER NEITHER MAKES NOR INTENDS ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY EXPRESSLY DISCLAIMED.**

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