



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

October 21, 2022

JP Stambaugh  
Manager of Regulatory Affairs  
PBI/Gordon Corporation  
P.O. Box 860350  
Shawnee, Kansas 66286

Subject: Registration Review Label Mitigation for Penoxsulam and Carfentrazone  
Product Name: EH 1542 HERBICIDE  
EPA Registration Number: 2217-988  
Application Dates: 5/1/2018 and 2/18/2020  
Decision Numbers: 560051 and 571549

Dear JP Stambaugh:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Penoxsulam and Carfentrazone Interim Decisions, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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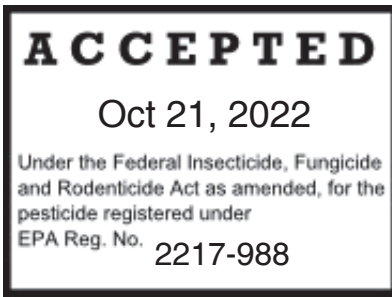
If you have any questions about this letter, please contact Quinn Gavin by phone at 202-566-2284, or via email at [gavin.quinn@epa.gov](mailto:gavin.quinn@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington".

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

Enclosure



PENOXsulAM	GROUP	2	HERBICIDE
2,4-D	GROUP	4	HERBICIDE
CARFENTRAZONE	GROUP	14	HERBICIDE

# EH-1542 HERBICIDE

## EPA Reg. No. 2217-988

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

**ACTIVE INGREDIENTS:**

Penoxsulam .....	0.71%
Carfentrazone-ethyl .....	0.47%
2,4-D, 2-ethylhexyl ester .....	0.18%
OTHER INGREDIENTS: .....	98.64%
TOTAL .....	100.00%


**THIS PRODUCT CONTAINS:**

- 0.06 lb Penoxsulam per gallon or 0.71%.
  - 0.04 lb Ethyl  $\alpha$ ,2-dichloro-5-[4(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]-4-fluorobenzenepropanoate per gallon or 0.47 %.
  - 0.01 lb 2,4-dichlorophenoxyacetic acid equivalent per gallon or 0.12%.
- Isomer specific by AOAC Methods.  
 [ISO common name], aqueous suspo-emulsion

### KEEP OUT OF REACH OF CHILDREN

### CAUTION

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

See [next panel][side panel] [back panel] for additional Precautionary Statements and First Aid.	
Net Contents: _____	
EPA Est. No. _____	
Company Name and Address: PBI/Gordon Corporation P.O. Box 860350 Shawnee, KS 66286	 <p><b>pbi/gordon</b>  <b>CORPORATION</b>  <i>An Employee-Owned Company</i></p>

# **PRECAUTIONARY STATEMENTS**

## **Hazards to Human and Domestic Animals**

**CAUTION:** Causes moderate eye irritation. 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. Wear long-sleeved shirt and long pants, socks, shoes and chemical resistant gloves.

## **Personal Protective Equipment**

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

- long-sleeved shirt and long pants,
- shoes and socks,
- chemical-resistant gloves made of any waterproof material when mixing, loading, or using any hand-held equipment, and
- chemical-resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

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

#### **If swallowed:**

- 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 by a poison control center or doctor.
- Do not give anything to an unconscious person.

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, aquatic invertebrates, and aquatic plants. 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.

**Groundwater Advisory Statement:** These chemicals (2,4-D and Penoxsulam) have properties and characteristics associated with chemicals detected in groundwater. The use of these chemicals in areas where soils are permeable, 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.

**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.

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

## **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.

**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.

### **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 and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

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

- coveralls,
- chemical-resistant gloves made of any water-proof material,
- shoes and 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.

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

## **1. Product Description**

Designed for turfgrass applications, EH-1542 contains three active ingredients:

- (1) Penoxsulam a post-emergent broadleaf herbicide in the sulfonamide family and when applied the acetolactate synthase (ALS) enzyme is inhibited causing the affected plants to slowly starve due to lack of amino acids. Penoxsulam is absorbed via leaves, shoots and roots and begins to work immediately by translocating throughout the entire plant to achieve control. Penoxsulam is effective in controlling annual and perennial broadleaf weeds including clover, ground ivy, Virginia buttonweed, dollarweed, Florida betony, yellow nutsedge, and English daisy.
- (2) Carfentrazone-ethyl causes rapid desiccation and yellowing of the plant tissue on emerged, susceptible weeds. Carfentrazone-ethyl 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. Carfentrazone-ethyl provides post emergent weed control for common weed species in turfgrass such as spurge and thistles.
- (3) 2,4-D is an auxin-type herbicide. 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.

Combining these herbicides provides a very wide spectrum of weed control for tough and susceptible weeds.

EH-1542 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.

### **EH-1542 Herbicide offers these advantages:**

- Excellent postemergent activity with proven performance for some of the toughest broadleaf weeds in turfgrass.
- This product exhibits improved cool-weather performance.
- High selectivity (turfgrass safety) in established warm-season turfgrass and cool-season turfgrass.
- Carfentrazone-ethyl 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 [yellowing]) and the early weed symptoms are features of carfentrazone-ethyl. Often, the weed injury symptoms can be noticed within hours of the application and plant death can occur within 10 to 14 days.
- The combination of these 3 active ingredients provides effective weed control for common and troublesome weed species in turfgrass, such as dollarweed (pennywort).
- This product is rainfast in as little as 3 hours.

## **2. Use Restrictions**

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

## **3. Weed Resistance Management**

For resistance management, this product contains Group 2, Group 4, and Group 14 herbicides. Any weed population may contain or develop plants naturally resistant to this product and other Group 2, Group 4,

or 14 herbicides. The resistant biotypes 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 2, 4, or 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 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 advisor for additional pesticide resistance-management and/or integrated weed-management recommendations for specific types of turf and weed biotypes.
- For further information or to report suspected resistance, call 877-800-5556.

#### **4. Spray Preparation And Tank Mixtures**

EH-1542 Herbicide is an aqueous suspo-emulsion (SE) that can be diluted with water or liquid fertilizer to form a stable emulsion.

##### **Mixing with water:**

Add one-half the required amount of water to the spray tank, then add EH-1542 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.

##### **Mixing with liquid fertilizers:**

Use suitable sources and rates of fertilizer based upon guidance 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. Physical compatibility of this product is adequate with liquid nitrogen solutions. 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-1542 Herbicide would not be advised. Do not use adjuvants and spray additive tank-mix combinations, unless your experience indicates that the tank mixture will not result in turf injury.

**5. 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. Wands fitted with 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 wand should be held stationary at the proper height. Side-to-side motion results in uneven coverage.
- Low Volume Application Equipment (including but not limited to Z-Spray or PermaGreen): EH-1542 may be applied using as little as 10 gallons of water per acre (32 fl.oz. per 1,000 sq.ft.). Only use application equipment that is properly calibrated and capable of applying a uniform droplet while wetting the leaf surface of each weed.

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.

**6. Spray Drift**

**Ground Boom Applications**

- For ground boom applications, user must only apply with the release height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For ground applications, select nozzle and pressure that produce medium to coarse spray droplets as indicated in nozzle manufacturer’s catalogues and in accordance with ASABE Standard 572.1
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

**Boomless Ground Applications:**

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.



## 7. Spray Drift Management

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

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

This product contains 2,4-D ester as an active ingredient. 2,4-D ester may volatilize during conditions of low humidity and high temperatures. Do not apply during conditions of low humidity and high temperatures. Mist from spray drift may cause injury to sensitive plants. Avoid any drift conditions that would allow the product to contact desirable vegetation.

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.

### 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.

### Importance on droplet size

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

### Controlling Spray Droplet Size – Ground Boom

**Volume:** Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

**Pressure:** Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

**Spray Nozzle:** Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### Boom Height – Ground Boom

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

### Boom-less Ground Applications:

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### Handheld Technology Applications:

Take precautions to minimize spray drift.

**Wind:** Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

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

**Temperature Inversions:** Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud

cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

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

**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.

## 8. Where To Use

This product provides broadleaf weed control in the following sites:

- **Ornamental Turfgrass sites:**

- **Residential/domestic sites** are defined as turfgrass established around 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, athletic fields, 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, 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; telephone rights-of-way, pipeline rights-of-way.
- **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 agricultural irrigation water or on agricultural irrigation ditchbanks or canals.

### Prohibitions:

- Do not apply this product to carpetgrass, dichondra, legumes, and lawns where desirable clovers are present.
- Do not broadcast apply this product when ambient temperatures are above [85°F] [90°F]. Some injury may be expected with spot treatments when air temperatures exceed [85°F] [90°F].
- For ground application only. Aerial applications are not permitted.
- Do not collect grass clippings for use as mulch or compost around flowers, trees ornamental plants or vegetable gardens.
- Chemigation: Do not apply this product through any type of irrigation.
- Do not allow livestock to graze on any areas treated with this product.

### STATE RESTRICTIONS:

- [Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in *Washington Toxics Coalition, et.al. v. EPA*, C01-0132C,

(W.D. WA). For further information, please refer to EPA Web Site:  
<http://www.epa.gov/espp/litstatus/wtc/index.htm> ]

## 9. Application Schedules

Apply this product to broadleaf weeds that are young and actively growing for the best results. Spring and fall treatments under adequate soil moisture conditions are preferred to the summer treatments. Generally, summer broadcast applications to older, drought stressed weeds are less effective. Fall applications 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 2 broadcast treatments of this product per site per year. A second broadcast application or a follow-up application as a spot treatment is suggested 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:**

**Annual and perennial weeds:** Use two broadcast treatments for annual and perennial weeds. 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 or third mowing.

### **For Newly Sodded, Sprigged, or Plugged Areas:**

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

### **Reseeding interval:**

Treated areas may be reseeded 4 weeks after application.

### **Turfgrass tolerance:**

- Turfgrass tolerance to this product may vary, and temporary turfgrass yellowing may occur on listed warm-season turfgrass (see Table 1).
- Tolerant turf species listed on this label may exhibit temporary turf injury. The best tolerance occurs under optimal conditions for the turfgrass. Adverse environmental conditions may reduce the selectivity on the turfgrass. Injury may occur under marginal conditions (e.g. low temperatures and drought stress) or under extreme conditions (e.g. high temperatures and high humidity). 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, low soil pH, nematodes, improper mowing or improper applications of fertilizer and pesticides. Under any of these stress conditions, to the extent consistent with applicable law, any turf damage caused by the use of this product is beyond the control of PBI/Gordon Corporation and all risk is assumed by the buyer and/or user.
- Certain spray tank additives (adjuvants, wetting agents, and surfactants), liquid fertilizers, and tank mixtures containing emulsifiable concentrates may reduce the selectivity on the turfgrass. Use adjuvants and spray additives or tank-mix combinations only when your experience indicates that the tank mixture will not result in objectionable turf injury

- Do not broadcast apply this product when temperatures are above [85°F] [90°F]; some injury can also be expected with spot treatments when air temperatures exceed [85°F] [90°F].
- Caution should be used during transition as temporary injury may occur.
- Use caution when applying to golf greens.
- Use caution when applying to golf tees.

## 10. 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.

<b>TABLE 1. USE RATES FOR ORNAMENTAL TURFGRASS, SOD FARMS, AND NON-CROPLAND.</b>		
<b>Species</b>	<b>Rate</b>	<b>Spray Volume</b>
<b>Cool-season Turf</b>		
Kentucky bluegrass, annual bluegrass, and annual ryegrass	2.0 to 4 Pints/Acre (0.75 to 1.5 fl.oz./1,000 sq.ft.)	10 to 220 Gallons/Acre (0.25 to 5.0 Gallons/1,000 sq.ft.)
Perennial ryegrass, tall fescue, red or fine leaf fescues, bentgrass	2 Pints/Acre (0.75 fl.oz./1,000 sq.ft.)	10 to 220 Gallons/Acre (0.25 to 5.0 Gallons/1,000 sq.ft.)
<b>Warm-season Turf</b>		
St. Augustinegrass – Common	2 to 4.0 Pints/Acre (0.75 to 1.5 fl.oz./1,000 sq.ft.)	10 to 220 Gallons/Acre (0.25 to 5.0 Gallons/1,000 sq.ft.)
St. Augustinegrass – improved varieties including, but not limited to: Floratam, bitterblue, palmetto, Raleigh	2 to 4.0 Pints/Acre (0.75 to 1.5 fl.oz./1,000 sq.ft.)	10 to 220 Gallons/Acre (0.25 to 5.0 Gallons/1,000 sq.ft.)
Hybrid Bermudagrass, common Bermudagrass, buffalograss, centipedegrass, seashore paspalum, kikuyugrass, zoysiagrass, and bahiagrass	2 to 4.0 Pints/Acre (0.75 to 1.5 fl.oz./1,000 sq.ft.)	10 to 220 Gallons/Acre (0.25 to 5.0 Gallons/1,000 sq.ft.)
<b>Dormant turf:</b> This product may be applied to fully dormant St. Augustinegrass, fully dormant bermudagrass, fully dormant zoysiagrass and fully dormant bahiagrass.		
<b>Note:</b> Use caution when applying this product to above listed warm-season turfgrass as injury may occur. It is impossible to test all environmental conditions for the listed warm-season turfgrass. It is suggested that this product be used on a small area and observed for 30 days to determine the acceptability of possible turf discoloration or injury.		
Use caution if applying this product to warm-season turfgrass during spring green-up or in the fall during the transition period between active growth and dormancy as temporary injury may occur.		
If treating Kentucky bluegrass or annual bluegrass in a mixed stand with perennial ryegrass, tall fescue, or red/fine leaf fescues, use 2 pints/acre unless some injury to the sensitive species can be tolerated.		
Users who wish to use EH-1542 Herbicide on turfgrass species not listed on this label may determine the suitability for use by treating a small area at a rate specified for other turfgrass species. Prior to treatment of larger areas, the treated area should be observed for any sign of herbicidal injury during 30 days of normal growing conditions to determine if the target turfgrass species is tolerant. The user assumes responsibility for any plant damage or other liability resulting from use of EH-1542 Herbicide on turfgrass species not listed on this label.		

### Limitations on broadcast treatments for ornamental turfgrass, sod farms, and non-cropland:

The maximum application rate is 4 pints of product per acre per application [0.005 lb 2,4-D ae, 0.02 lb carfentrazone-ethyl, and 0.03 lb penoxsulam per acre]. The maximum number of broadcast applications

is limited to 2 per year with a minimum of 30 days between applications. The maximum seasonal rate is 8 pints of product per acre [0.01 lb 2,4-D ae, 0.04 lb carfentrazone-ethyl, and 0.06 lb penoxsulam per acre].

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

- Apply any time the emerged broadleaf weeds are actively growing. Spot treatments can be applied at the dosage rates equal to the specific dosage rates for broadcast treatments.
- 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 suggested for more mature weeds, for dense infestations, and for adverse environmental conditions.
- **For cool-season turfgrass listed in Table 1:** Mix 0.75 to 1.5 fl.oz. of this product per 1 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 1.5 fl.oz. of this product per 1 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:**

- Chemigation: Do not apply this product through any type of irrigation system.
- Rainfast in as little as 3 hours. Do not apply this product immediately before rainfall or irrigation.

**Mowing:**

- Delay mowing 2 days before and until 2 days after the application of this product.
- Do not collect grass clippings for use as mulch or compost around flowers, trees ornamental plants or vegetable gardens.

**11. Broadleaf Weeds Controlled**

EH-1542 Herbicide will control or suppress the following broadleaf. Apply any time the emerged broadleaf weeds are susceptible.

<b>Broadleaf Weeds</b>			
Aster, white heath & white prairie	Dollarweed (*pennywort)	Mallow, common	Sedge, purple nutsedge (suppression)
Bedstraw	Doveweed	Matchweed	Sedge, kyllinga (suppression)
Beggarweed, creeping	English Daisy	Mouseear chickweed	Sedge, globe sedge (suppression)
Bindweed	False dandelion (*spotted catsear & common catsear)	Mustard	Sedge, globe sedge (suppression)
Black medic	Field bindweed	Nettle	Shepherd's purse
Broadleaf plantain	(*morningglory & creeping jenny)	Old world diamond flower	Speedwell (Veronica)
Buckhorn plantain	Field oxeye-daisy (*creeping oxeye)	Oxalis (*yellow woodsorrel & creeping woodsorrel)	Spurge
Bull thistle	Filaree, whitestem & redstem	Parsley-piert	Thistle
Burdock, common	Florida betony	Pennsylvania smartweed	Virginia buttonweed
Buttercup, creeping	Florida pusley	Pennycress, field	White clover (*Dutch clover, honeysuckle clover, white trefoil, & purplewort)
Carpetweed	Ground ivy	Pepperweed	Wild carrot
Catnip		Pigweed	Wild garlic
Chickweed		Pineappleweed	
Chicory		Plantain	
Cinquefoil		Poison ivy	

<b>Broadleaf Weeds</b>			
Clover	Groundsel	Poison oak	Wild geranium
Compassplant (*prickly lettuce)	Hawkweed	Prickly lettuce (*compass plant)	Wild lettuce
Cudweed	Healall	Puncturevine	Wild mustard
Curly dock	Henbit	Purple cudweed	Wild onion
Dandelion	Innocence (Blue-eyed Mary)	Purslane	Wild strawberry
Dayflower	Knotweed	Ragweed	Wild violet**
Deadnettle	Lambsquarters	Red sorrel (*sheep sorrel)	Yarrow
Dock	Lawn burweed	Sedge, yellow nutsedge (suppression)	Yellow rocket
Dogfennel	Lespedeza, common		
* Synonyms			
** For best results, apply in the spring when wild violets are blooming or apply a late fall application followed by a spring application.			

## 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. Triple rinse [or pressure rinse] container (or equivalent) promptly after emptying. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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. Triple rinse [or pressure rinse] container (or equivalent) promptly after emptying. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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.]

**[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.

## **LIMITED WARRANTY AND DISCLAIMER**

**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.**

**THE EXCLUSIVE REMEDY OF BUYER AND ALL USERS OF THIS PRODUCT, AND THE EXCLUSIVE LIABILITY OF THE MANUFACTURER, FOR ANY AND ALL LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF OR THE REPAYMENT OF THE PURCHASE PRICE FOR THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO CASE SHALL THE MANUFACTURER BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.** The Manufacturer must be promptly notified in writing of any claims, whether based in contract, tort, negligence, strict liability, or otherwise, to be eligible to receive either remedy stated above.



The terms of this LIMITED WARRANTY AND DISCLAIMER cannot be varied by any written or verbal statements or agreements at the point of sale or elsewhere. No employee or agent of the manufacturer or seller is authorized to vary or exceed the terms of this Limited Warranty and Disclaimer in any manner.

## **APPENDIX**

### **Advertising claims that may be presented on container labeling, advertisements, brochures, and other marketing/sales promotional materials:**

- Tough Weed Control
- Tough Weed LOGO
- Tough Weed Formulation
- Consistently fast control on tough weeds – wild violet, ground ivy, oxalis, thistles, dandelion, spurge, clover, plantain and [various other listed weeds].
- [weed name listed in the Directions for Use of this label] control in as little as one week
- Proven performance
- From the makers of Trimec® herbicides.
- Trimec® is a registered trademark of PBI/Gordon Corporation.
- For information call XXX-XXX-XXXX [contact [www.xxx-xxx.com](http://www.xxx-xxx.com)]
- For use on: Bluegrass, Fescues, Perennial and Annual Ryegrass, [Bermudagrass, Zoysiagrass] [and other turf species listed]
- Fast visual response
- Weed control — FAST!
- Tough Weeds Controlled -- Fast!
- Suitable for applications up to [85°F] [90°F]
- Foliar absorption
- Reduces call backs
- Low odor
- Low-odor formulation
- PROFORM® and TRIMEC® are registered trademarks of PBI/Gordon Corporation.
- ® Checkered Flag/Label Design is a registered trademark of PBI/Gordon Corporation.



## **DOCUMENT CONTROL INFORMATION**

1. **Unique Label Identifier:** 002217-00988.20220929.amend-proposed-clean.docx

2. **Reason for Issue:** EPA Comments on Registration Review – Penoxsulam (includes pending Carfentrazone-ethyl ID Label Mitigation) + Address Revision