

## **COOL SEASON TURF - SPOT TREATMENTS**

### General Information

#### PRODUCT DESCRIPTION:

PowerZone Broadleaf Herbicide For Turf contains four active ingredients including carfentrazone-ethyl that broaden the spectrum of weed control. Carfentrazone-ethyl is in the aryl triazolinone family and inhibits protoporphyrinogen oxidase (Protox), a pivotal enzyme in chlorophyll production.

PowerZone offers these advantages:

- Excellent postemergent activity with proven performance for broadleaf weed control in turfgrass.
- Superior cool weather performance.
- High selectivity (turfgrass safety) in established cool season turfgrass and warm season turfgrass.
- Carfentrazone-ethyl combinations provide rapid and effective weed control for common and troublesome weed species in turfgrass, e.g. spurge, pennywort (dollarweed), dandelion, and white clover.
- Fast acting with evidence of injury within hours. The speed of action (rate of phytotoxicity) and the early injury symptoms are unique features of carfentrazone-ethyl combinations. Generally, the injury symptoms can be noticed within hours of the application and plant death can occur within 7 to 14 days.

#### SPRAY PREPARATION AND TANK MIXTURES:

PowerZone is an emulsifiable concentrate intended for dilution with water. In certain applications, liquid fertilizer may replace part of the water as a diluent.

Water as diluent:

Add one-half the required amount of water to the spray tank, then add PowerZone slowly with agitation, and complete filling the tank with water. To prevent separation of the emulsion, mix thoroughly and continue agitation while spraying.

This product forms an emulsion and can separate upon extended or prolonged

standing. Re-agitate to assure uniformity of the spray mixture. Storage of the spray mixture beyond 72 hours is not recommended.

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.

Liquid fertilizers as diluents:

Use suitable sources and rates of fertilizer based upon local recommendations. Refer to the mixing directions on the labels of the liquid fertilizers (eg. UAN or urea solutions). Always perform a jar compatibility test before large scale mixing.

**GROUND EQUIPMENT:**

Power sprayers fitted with a boom or spray wand/gun may be used for broadcast applications and spot treatments. For best spray distribution and coverage, select a spray volume and delivery system that will ensure accurate and uniform coverage. Boom sprayers equipped with appropriate flat fan nozzles, tips, and screens are suitable for broadcast applications. Do not use flood nozzles, Raindrop, or nozzle tips larger than 8008. Spray droplets larger than 400 microns may reduce coverage and subsequent loss in weed control.

Spray volumes of 3 to 175 gallons per acre with spray pressures adjusted to 20 to 40 psi are appropriate. Use higher spray volumes for dense weed populations. Hand operated sprayers including backpack sprayers, compression sprayers, and knapsack sprayers are appropriate for small turfgrass areas when power equipment is unavailable, uneconomical, or impractical.

This product may cause injury to susceptible/nontarget plants at the use site by contacting the foliage, stems, or roots. To prevent injury to susceptible crops and other desirable broadleaf plants including but not limited to cotton, legumes, tobacco, tomatoes, garden/vegetable crops, and ornamentals (flowers, trees, and shrubs) avoid contact with the spray solution, spray droplets, and spray mist (fine droplets). Do not apply when conditions are conducive to spray drift from the use site to untreated 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.

Do not apply by air.

## WHERE TO USE:

PowerZone provides selective broadleaf control in warm season and cool season turfgrass in five (5) use sites.

- 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, aprons, and roughs), and office buildings.
- Ornamental sites include turfgrass established around residences, parks, streets, retail outlets, cemeteries, industrial and institutional buildings, recreation areas, fairgrounds, and areas adjacent to athletic fields.
- 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.
- Agricultural site: Commercial sod production
- Noncropland Sites: Highway rights-of-way (principal, interstate, county, private, and unpaved roads): Roadsides, roadside ditches, road shoulders, road embankments, dividers, and medians. Municipal, state, and federal lands: Airports and military installations.

## 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 (noncropland 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 this product to bentgrass greens, carpetgrass, dichondra, legumes,

and lawns where desirable clovers are present.

- Do not apply this product to St. Augustinegrass during spring green-up which is the transition period between dormancy and active growth.

- Cultivars of St. Augustinegrass vary in tolerance to this product. Do not apply to 'Floritam' St. Augustinegrass.

- Do not use this product on or near desirable plants, including contact of spray on exposed root systems or adventitious shoots within the drip line of desirable trees and shrubs, since injury may result.

- Do not apply by air.

Turfgrass tolerance:

The turfgrass tolerance to PowerZone may vary and temporary turfgrass yellowing may occur on certain varieties of hybrid bermudagrass. Environmental conditions and certain spray tank additives (eg. adjuvants, wetting agents, surfactants), liquid fertilizers, and tank mixtures containing other emulsifiable concentrates may reduce the selectivity on the turfgrass.

#### APPLICATION SCHEDULES:

Early postemergent applications of PowerZone are recommended for annual, biennial, and perennial weeds. Apply PowerZone to broadleaf weeds that are young and actively growing for the best results. PowerZone combines a contact herbicide with systemic herbicides and provides little or no residual activity at specified use rates.

PowerZone may be applied as a single broadcast application or as a split/sequential broadcast applications in the spring, summer, or fall. 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.

Apply sequential broadcast applications or followup applications as spot treatments at a minimum interval of 30 days.

Spot treatments during the summer may be appropriate for sparse infestations, or as a follow-up treatment, or any time broadleaf weeds are susceptible. Apply on a spray-to-wet basis for the best results.

Extremes in environmental conditions e.g. temperature and moisture, soil conditions, and cultural practices may affect the activity of PowerZone. 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 PowerZone.

For newly seeded areas:

The application of PowerZone to grass seedlings is recommended after the second mowing.

For newly sodded, sprigged, or plugged areas:

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

For dormant turf:

Applications to dormant bermudagrass, and dormant zoysiagrass are suggested.

Prohibitions for application schedules:

Do not broadcast apply when air temperatures exceed 90°F; some injury may be expected with spot treatments when air temperatures exceed 90°F.

#### CULTURAL TIPS FOR IMPROVED CONTROL:

Irrigation:

- Do not apply this product through any type of irrigation system.
- Do not apply this product immediately before rainfall or irrigation. Do not irrigate or water the turfgrass within 24 hours after application

Mowing:

- Delay mowing 1 to 2 days before and after the application of this product.

Reseeding interval:

- Treated areas may be reseeded 2 weeks after application.

Additional requirements for ground boom application:

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

#### BROADLEAF WEEDS CONTROLLED:

PowerZone will control or suppress the following broadleaf weeds and will control or suppress other broadleaf weeds that are susceptible to MCPA.

#### Limitations, Restrictions, and Exceptions

#### SPOT TREATMENTS WITH HAND OPERATED SPRAYERS (INCLUDING BACKPACK SPRAYERS, COMPRESSION SPRAYERS, AND KNAPSACK SPRAYERS):

- For cool season turfgrass, mix 1.5 to 2.2 fl. oz. of PowerZone 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. Spray the target weeds thoroughly and wet the entire leaf surface of the undesirable plants.

#### Limitations on spot treatments for turfgrass on all use sites:

Spot treatment is defined as a treatment area no greater than 1,000 sq. ft. per acre. The maximum application rate is 2.2 fl. oz. per 1,000 sq. ft. per application (0.33 lb. MCPP-p acid equivalent per acre). The maximum number of spot treatments is limited to 2 per year with a minimum of 30 days between applications.

#### Tank Mixtures:

PowerZone may be tank mixed with other herbicides EPA-registered for use on turfgrass to broaden the weed control spectrum compared to the products alone. These tank mixtures must be used according to the most restrictive label limitations and precautions. No label dosage rate should be exceeded. Follow the labeling of each companion product for precautionary statements, directions for use, dosage rates, and application schedules. Tank mixture recommendations are for use only in states where the companion products and application site are registered.

#### Method

[Spot treatment](#)

Rates

[field\\_rates 0](#)

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Restricted Entry Interval

48 hours

Timings

[Postemergence \(Weed\)](#)