

# ENDRUN.

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170.  
Controls Dandelion, Clover, Knotweed, Henbit, Chickweed, Plantain, Spurge and other broadleaf weeds.

**ACTIVE INGREDIENTS:**

Dimethylamine salt of 2,4-dichlorophenoxyacetic acid .....	30.56%
Dimethylamine salt of (+)-(R)-2-(2-methyl-4-chlorophenoxy) propionic acid .....	8.17%
Dimethylamine salt of dicamba: 3,6-dichloro-o-anisic acid .....	2.77%
<b>OTHER INGREDIENTS</b> .....	<b>58.50%</b>
<b>TOTAL</b> .....	<b>100.00%</b>

**THIS PRODUCT CONTAINS:**

- 2.38 lb 2,4-dichlorophenoxyacetic acid equivalent per gallon or 25.38%.
  - 0.63 lb (+)-(R)-2-(2-methyl-4-chlorophenoxy)propionic acid equivalent per gallon or 6.75%.
  - 0.21 lb 3,6-dichloro-o-anisic acid equivalent per gallon or 2.30%.
- Isomer Specific by AOAC Methods.

**KEEP OUT OF REACH OF CHILDREN  
DANGER – PELIGRO**

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.)  
- KEEP FROM FREEZING -

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

**FIRST AID**

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

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment advice.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

AD 030414  
EPA REG NO. 2217-656-5905  
EPA EST NO. 2217-KS-1

- NET CONTENTS:**
- 1 Gallon (3.785 Liters)
  - 2.5 Gallons (9.46 Liters)
  - 30 Gallons (113.55 Liters)
  - 55 Gallons (208.48 Liters)
  - 275 Gallons (1040.88 Liters)

MANUFACTURED FOR  
HELENA CHEMICAL COMPANY  
225 SCHILLING BOULEVARD, SUITE 300  
COLLIERVILLE, TN 38017

## **PRECAUTIONARY STATEMENTS**

### **Hazards to Humans and Domestic Animals**

**DANGER:** Corrosive. Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing. 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,
- chemical-resistant gloves and
- chemical-resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

\*Applicators may choose not to wear protective eyewear ONLY with dilutions rates greater (higher) than 5:1 or greater (higher) than 5 parts of water to 1 part of product.

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. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

### **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.

### **Environmental Hazards**

This pesticide is toxic to fish and aquatic invertebrates and may adversely affect non-target 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 washwaters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical 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.

## **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, 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 worn over short-sleeved shirt and short pants,
- chemical-resistant footwear plus socks,
- chemical-resistant gloves made of any water-proof material,
- chemical-resistant headgear for overhead exposure
- protective eyewear.

### **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.

## 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.

**Nonrefillable containers 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.

**Nonrefillable containers 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.

**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.

## Spray Drift Management

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 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 10 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, 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. Do not apply with a nozzle height greater than 4 feet above the

target site.

## Product Description

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

- (1) 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.
- (2) MCPP-p (mecoprop-p) 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.
- (3) 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 susceptible weeds. EndRun® 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.

EndRun® offers these advantages:

- Excellent postemergent activity with proven performance.
- The combinations of these active ingredients provide effective weed control for common and troublesome weed species in turfgrass, including: dandelion, spurge and white clover.
- Rainfast in as little as 8 hours
- Controls major turf weeds
- Often, the weed injury symptoms can be noticed within hours of the application and plant death can occur within 14 to 21 days.

## Spray Preparation and Tank Mixes

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 EndRun® 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 advice 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 to 4 parts water will ensure that the dispersants enable 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 EndRun® 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, the manufacturer 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 5 to 220 gallons per acre with spray pressures adjusted to between 20 to 40 psi. Note: For bentgrass (except golf greens) spray volumes, use 145 to 220 gallons per acre. 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.
- Overapplication 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 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-way, 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 (saltwater 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 (saltwater 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.
- Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.
- 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, the manufacturer recommends the use of Chemical Producers and Distributors Association (CPDA) certified adjuvant.

**Prohibitions:**

- Do not apply this product to St. Augustinegrass, bentgrass greens, 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.
- For ground application only; aerial applications are not permitted.
- Do not use this product on or near desirable plants, including contact of spray on exposed root systems or adventitious shoots within the dripline of desirable trees and shrubs, since injury may result.

### 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 advised 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.

TABLE 1. USE RATES FOR ORNAMENTAL TURF SITES, NON-CROPLAND AND SOD FARMS		
Species	Rate	Spray Volume
<b>Cool-Season Turf</b>		
Kentucky bluegrass, annual bluegrass, annual ryegrass, perennial ryegrass, tall fescue, red or fine leaf fescues	3.0 to 4 Pints/Acre  (1.1 to 1.5 fl. oz./1,000 sq. ft.)	5 to 220 Gallons/Acre  (0.125 to 5.0 Gallons/1,000 sq. ft.)

Creeping Bentgrass (excluding golf greens) Apply preferably in May or mid-August through September. Slight turf yellowing will disappear after about one (1) week. Note: Care should be taken to avoid overdosing bentgrass or injury may result.	1.8 Pints/Acre  (0.66 fl. oz./1,000 sq. ft.)	145 to 220 Gallons/Acre  (3.33 to 5.0 Gallons/1,000 sq. ft.)  High spray volumes will provide uniform coverage.
<b>Warm-Season Turf</b>		
Hybrid bermudagrass, common bermudagrass, zoysiagrass, buffalograss and bahiagrass Slight turf yellowing will disappear after about one (1) week.	3.0 to 4 Pints/Acre (1.1 to 1.5 fl. oz./1,000 sq. ft.)  Sod Farms: 2 to 2.25 Pints/Acre (0.75 to 0.83 fl. oz./1,000 sq. ft.)	5 to 220 Gallons/Acre  (0.125 to 5.0 Gallons/1,000 sq. ft.)
Note: Do not apply to above listed warm-season turfgrass unless some turf injury can be tolerated. It is impossible to test all environmental conditions for the listed warm-season turfgrass.  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, fully dormant buffalograss and fully dormant bahiagrass.		

#### 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 suitable for more mature weeds, for dense infestations, and for adverse environmental conditions.
- For cool-season turfgrass (except Bentgrass) listed in Table 1: Mix 1.1 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 Bentgrass (excluding golf greens): Mix 0.66 fl. oz. of this product per four (4.0) gallons of water for treatment of approximately 1,000 sq. ft. of turfgrass. This high spray volume will provide uniform coverage. 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.
- Limitations on spot treatments to residential turfgrass: Spot treatment is defined as a treatment area no greater than 1,000 sq. ft. per acre. The maximum application rate is 1.5 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.

#### CULTURAL TIPS:

##### Irrigation:

- Do not apply this product through any type of irrigation system.
- Rainfast in as little as 8 hours. Do not apply this product immediately before rainfall or irrigation.
- If possible, do not irrigate or water the turfgrass within 8 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

EndRun® will control the following broadleaf weeds. Apply any time the emerged broadleaf weeds are susceptible.

BROADLEAF WEEDS			
annual fleabane	false dandelion	mouseear chickweed	spurge
aster, white heath & white prairie	(*spotted catsear & common catsear)	mustard	sunflower
bedstraw	field bindweed	nettle	thistle
beggarticks	(*morningglory & creeping jenny)	old world diamond flower	velvetleaf
beggarweed, creeping	field madder	<i>Oxalis</i>	(*buttonweed)
bindweed	field oxeye-daisy	(*yellow woodsorrel)	Venice mallow
birdsfoot trefoil	(*creeping oxeye)	parsley-piert	<i>Veronica</i>
black medic	field pennycress	Pennsylvania smartweed	(*corn speedwell)
broadleaf plantain	filaree, whitestem & redstem	pennywort	Virginia buttonweed **
buckhorn plantain	Florida pusley	(*dollarweed)	Virginia-creeper
bull thistle	ground ivy	pepperweed	western salsify
burclover	groundsel	pigweed	white clover
burdock, common	hairy bittercress	pineappleweed	(*Dutch clover, honeysuckle clover,
Carolina geranium	hawkweed	plantain	white trefoil & purplewort)
carpetweed	healall	poison ivy	wild carrot
chickweed, common	henbit	poison oak	wild garlic
chicory	horsenettle	prostrate knotweed	wild geranium
cinquefoil	horseweed	(*knotweed)	wild lettuce
clover	innocence	puncturevine	wild mustard
cocklebur	(Blue-eyed Mary)	purple cudweed	wild onion
compassplant	jimsonweed	purslane	wild strawberry

curly dock dandelion dayflower deadnettle dock dogfennel dovefoot geranium	kochia knotweed lambsquarters lawn burweed lespedeza, common mallow, common matchweed	ragweed redweed red sorrel (*sheep sorrel) roundleaf greenbriar shepherdspurge spotted spurge	yarrow yellow rocket
*Synonyms **A repeat application may be required in 30 days			

### For Use in Non-Cropland: Brush and Weed Control

#### High volume foliar applications:

Apply up to 1.15 gallons of product per 100 gallons of water or apply a 1.0 to 1.15% 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 minimum total volume of spray solution required for adequate coverage of solid stands of mixed brush is 25 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.

Spray solution per acre, Gallons	Amount of Product Needed for Spray Concentration of:	
	1.0%	1.15%
25	2.0 pt	2.3 pt
75	6.0 pt	6.9 pt
100	1.0 gal	1.15 gal

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

#### For Backpack Sprayers and Hand Pump-up Sprayers

Gallons of Water	Amount of Product Needed for Spray Concentration of:	
	1.0%	1.15%
1	1.25 fl. oz. (2.5 Tablespoons)	1.5 fl. oz. (3 Tablespoons)
2	2.5 fl. oz.	3.0 fl. oz.
3	3.8 fl. oz.	4.5 fl. oz.

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

BRUSH			
Ash Aspen Birch Black cherry Brambles	Cedars Elms Gooseberry Honey locust Kudzu	Multiflora rose Oak Poison ivy Poison oak Shortleaf pine	Sumac Willow

Use Site	Maximum Rate per Application	Maximum Number of Applications per Year	Minimum Interval Between Applications	Maximum Seasonal Rate
Ornamental turfgrass sites and sod farms	4.0 pints/A  (1.19 lb 2,4-D ae/A) (0.33 lb MCP-P ae/A) (0.11 lb dicamba ae/A)	2	30 days	8.0 pints/A  (2.37 lb 2,4-D ae/A) (0.65 lb MCP-P ae/A) (0.22 lb dicamba ae/A)
Non-cropland	4.0 pints/A  (1.19 lb 2,4-D ae/A) (0.33 lb MCP-P ae/A) (0.11 lb dicamba ae/A)	2  (annual and perennial weeds)	30 days	8.0 pints/A  (2.37 lb 2,4-D ae/A) (0.65 lb MCP-P ae/A) (0.22 lb dicamba ae/A)

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/qs-as.htm>.

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