

70506-230

6/21/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

JUN 21 2012

Rebecca Clemmer
United Phosphorus, Inc
630 Freedom Business Center
Suite 402
King of Prussia, PA 19406

Subject Notification per PR Notice 98-10 – Add Alternate Brand Name and add Resistance Management Group Number
Pendi Hydrocap
EPA Reg No 70506-230
Application Dated – June 4, 2012

Proposed Alternate Name Up-End HydroCap Herbicide

Dear Ms Clemmer

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the subject product

The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been date-stamped "Notification" and will be placed in our records.

If you have any questions regarding this letter, please contact Maggie Rudick at (703) 347-0257 or rudick.maggie@epa.gov

Sincerely,


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

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

2024

Please read instructions on reverse before completing form

Form Approved OMB No 2070 0060 Approval expires 5 31 98

| | | |
|---|--|-----------------------|
|  United States Environmental Protection Agency Washington DC 20460 | <input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other | OPP Identifier Number |
|---|--|-----------------------|

Application for Pesticide - Section I

| | | |
|---|---|--|
| 1 Company/Product Number 70506 230 | 2 EPA Product Manager Bo Kable Davis | 3 Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4 Company/Product (Name) United Phosphorus Inc/UP End HydroCap herbicide | PM # 25 | |
| 5 Name and Address of Applicant (Include ZIP Code) United Phosphorus Inc 630 Freedom Business Center Suite 402 King of Prussia PA 19406 <input type="checkbox"/> Check if this is a new address | 6 Expedited Review In accordance with FIFRA Section 3(c)(3)(b)(i) my product is similar or identical in composition and labeling to EPA Reg No _____ Product Name _____ | |

Section - II

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

NOTIFICATION
JUN 21 2012


Explanation Use additional page(s) if necessary (For Section I and Section II)

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

Section III

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

Section IV

| | | | | |
|---|-------------------------------|--|---|--|
| 1 Contact Person (Complete items directly below for identification of individual to be contacted if necessary to process this application) | | | 6 Date Application Received | |
| Name Rebecca A Clemmer | Title Regulatory Manager | Telephone No (Include Area Code) 610 491 2828 | (Stamped) C | |
| Certification I certify that the statements I have made on this form and all attachments thereto are true accurate and complete I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law | | | | |
| 2 Signature  | 3 Title Regulatory Manager | | | |
| 4 Typed Name Rebecca A Clemmer | 5 Date June 4 2012 | | | |

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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS**

CAUTION

Causes moderate eye irritation Harmful if absorbed through skin Avoid contact with skin eyes or clothing

Personal Protective Equipment (PPE)

Some materials that are chemically resistant to these products are listed below For more options refer to Category A on an EPA chemical resistance category selection chart

Applicators and other handlers must wear

- Long sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as nitrile butyl neoprene and/or barrier laminate
- Shoes plus socks

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

ENGINEERING CONTROLS

When handlers use closed systems enclosed cabs or aircraft 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 RECOMMENDATIONS

Users should

- Wash hands before eating drinking chewing gum using tobacco or using the toilet
- Remove clothing immediately if pesticide gets inside Then wash thoroughly and put on clean clothing
- 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 product is toxic to fish 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 from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites Do not contaminate water when disposing of equipment washwaters or rinsate

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling This labeling must be in the possession of the user at time of herbicide application

Do not apply this product through any type of irrigation system

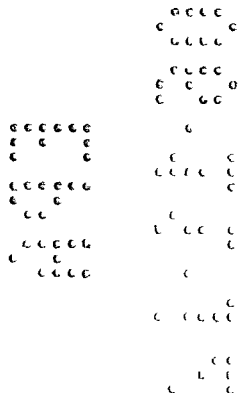
UPI does not authorize the use of this product in manufacturing processing or preparing custom blends with other products for application to turf or ornamentals

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 requirements specific to your state or tribe consult the state or tribal agency responsible for pesticide regulation

Do not apply ~~UP-END~~ ~~UP-END HYDROCAP herbicide~~ in greenhouses shadehouses or other enclosed structures

Not for use for commercial seed production



AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) 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 24 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 waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- Shoes plus socks

NON AGRICULTURAL USE REQUIREMENTS

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

Do not enter treated areas without protective clothing until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY

MODE OF ACTION

UP-End/UP-End HydroCap is a meristematic inhibitor that interferes with the plant cellular division or mitosis and cell elongation in the growing points of shoots and roots of susceptible weeds. When susceptible weeds germinate in the treated area, they contact the herbicide and both shoot and root growth stops. Translocation of the herbicide within the plant is limited. Affected weeds die shortly after growth is stopped, usually before emergence from the soil.

PRODUCT INFORMATION

APPLICATION USE SITES – for preemergence control of grasses and certain broadleaf weed species as they germinate

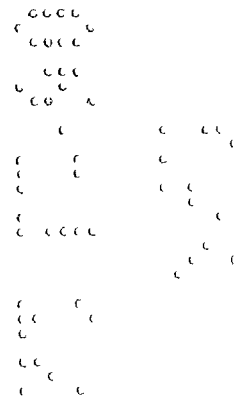
Turfgrass sites (golf course lawns, sod farms and other turf areas) and landscape ornamental maintenance areas such sites include, but are not limited to, grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas and sod farms.

Grounds maintenance in areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, and mulch beds. It may be used under asphalt or concrete treatments as part of a site preparation program.

Noncropland areas such as railroad, utility, highway, and pipeline rights of way, highway guardrails, delineators, and sign posts, bridge abutments and approaches, utility substations, petroleum tank farms, pumping installations, storage areas, fence rows, windbreaks and shelterbelts, paved or gravel surfaces, and established wildflower plantings where weed control is desired.

Bulb plantings, non bearing fruit and nut tree nurseries, conifer and hardwood seedling nurseries and tree plantations for site preparation and maintenance. Applications can be made on, but are not limited to, plant species listed on this label such as trees, shrubs, groundcovers, perennials, bulbs, ornamental grasses and bedding plants.

In and around field, liner and container ornamental production



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APPLICATION INSTRUCTIONS

~~UP-End~~**UP End HydroCap** will not control established weeds. Therefore areas to be treated should be free of established weeds at the time of treatment or use ~~UP-End~~**UP End HydroCap** together with herbicides registered for postemergence use in managed turf sites, landscape ornamentals and in other noncropland areas. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas. The efficacy of ~~UP-End~~**UP End HydroCap** will be best if the application is followed by one half inch of rainfall or its equivalent in sprinkler irrigation. If ~~UP-End~~**UP End HydroCap** is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

When applied according to label directions and under normal growing conditions, ~~UP-End~~**UP End HydroCap** or ~~UP-End~~**UP End HydroCap** tank mix combinations will not cause crop injury. Over application can cause crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants and increase the possibility of plant damage from ~~UP-End~~**UP End HydroCap**.

MIXING INSTRUCTIONS

~~UP-End~~**UP End HydroCap** may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to ~~UP-End~~**UP End HydroCap** alone.

When using tank mixtures or sequential applications with ~~UP-End~~**UP End HydroCap**, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

Mixing Instructions

1 Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing ~~UP-End~~**UP End HydroCap** or ~~UP-End~~**UP End HydroCap** tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

2 ~~UP-End~~**UP End HydroCap**

When using ~~UP-End~~**UP End HydroCap** alone, add ~~UP-End~~**UP End HydroCap** to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

3 ~~UP-End~~**UP End HydroCap** Tank Mixes

Add the tank mixture ingredients in the order listed below before adding ~~UP-End~~**UP End HydroCap**.

- (a) **Wettable Powder (WP) formulations** - make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- (b) **Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations** - add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- (c) **Flowable (F) formulations** - add the F formulation to the partially filled tank while agitating.
- (d) Add ~~UP-End~~**UP End HydroCap** to the partially filled tank while agitating.
- (e) **Water Soluble Concentrate (WSC) formulations** - add the WSC formulation to the partially filled tank while agitating.
- (f) **Emulsifiable Concentrate (EC) formulations** - add the EC formulation to the partially filled tank while agitating.

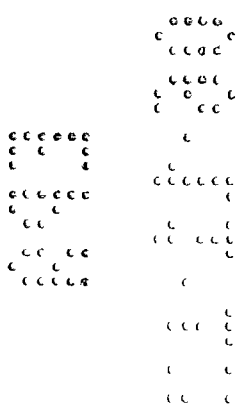
Fill the remainder of the tank with water or liquid fertilizer while agitating.

4 Maintain continuous agitation while adding herbicides and until spraying is completed. If the spray mixture is allowed to settle for any period of time, agitate thoroughly to resuspend the mixture before spraying is resumed.

5 BACKPACK SPRAYER

Begin with a clean spray tank. Fill the spray tank one half full with clean water and add the required amount of ~~UP-End~~**UP End HydroCap**. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate again. During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, agitate thoroughly before spraying is resumed.

6 LIQUID FERTILIZERS



Before mixing always test small quantities using a simple jar test Add the required amount of ~~UP-End~~ **UP End HydroCap** to a half filled spray tank while agitating then add the fertilizer product Complete filling spray tank to desired level

SPRAYING INSTRUCTIONS

GROUND APPLICATIONS

Apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area using a spray pressure of 25 to 50 psi Suggested spray volumes are 20 200 gpa for professional turfgrass landscape and ornamental applications and 10 200 gpa for all other noncrop applications such as roadsides utility rights of way or soft residual bareground applications Maintain continuous agitation during spraying with good mechanical or bypass agitation Avoid overlaps that will increase rates above those listed Do not apply when winds may cause drift

Avoid contact of spray solution with driveways stone wood or other porous surfaces If contact occurs rinse immediately with water to avoid staining Do not mechanically scrub until the surface area is thoroughly rinsed Allow treated turfgrass to dry before entering to avoid staining onto non treated surfaces

AERIAL APPLICATIONS

Apply uniformly in 5 or more gallons of water per acre Take care to minimize drift Do not apply during periods of gusty winds or when wind conditions favor drifting Spray drift can cause injury to sensitive crops To avoid overlapping and possible crop injury use a flagman or an automatic mechanical flagging unit on the aircraft

Avoiding spray drift at the application site is the responsibility of the applicator The interaction of many equipment and weather related factors determine the potential for spray drift The applicator and the grower are responsible for considering all these factors when making decisions The following drift management requirements must be followed to avoid off target drift movement from aerial applications to agricultural field crops

- 1 The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor
- 2 Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees

Observe more stringent state regulations The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below

INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **WIND TEMPERATURE AND HUMIDITY** and **TEMPERATURE INVERSIONS**)

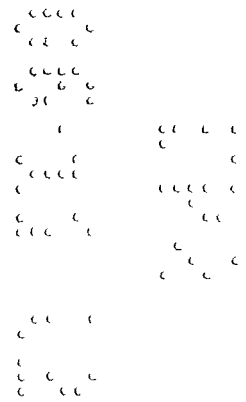
CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume Nozzles with higher rated flows produce larger droplets
- Pressure Do not exceed the nozzle manufacturer s recommended pressures For many nozzle types lower pressure produces larger droplets When higher flow rates are needed use higher flow rate nozzles instead of increasing pressure
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice Significant deflection from the horizontal will reduce droplet size and increase drift potential
- Nozzle Type Use a nozzle type that is designed for the intended application With most nozzle types narrower spray angles produce larger droplets Consider using lowdrift nozzles Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift

BOOM LENGTH

For some use patterns reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width

APPLICATION HEIGHT



Do not apply at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind

SWATH ADJUSTMENT

When applications are made with a crosswind the swath will be displaced downward Therefore on the upwind and downwind edges of the field the applicator must compensate for this displacement by adjusting the path of the aircraft upwind Increase swath adjustment distance with increasing drift potential (higher wind smaller droplets etc)

WIND

Drift potential is lowest between wind speeds of 2 10 mph However many factors including droplet size and equipment type determine drift potential at any given speed Do not apply when wind is below 2 mph due to variable wind direction and high inversion potential **NOTE** Local terrain can influence wind patterns Every applicator must be familiar with local wind patterns and how they affect spray drift

TEMPERATURE AND HUMIDITY

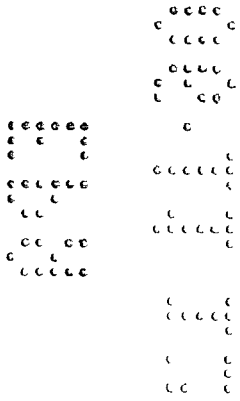
When making applications in low relative humidity set up equipment to produce larger droplets to compensate for evaporation Droplet evaporation is most severe when conditions are both hot and dry

TEMPERATURE INVERSIONS

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

SENSITIVE AREAS

Apply the pesticide only when the potential for drift to adjacent sensitive areas (e g residential areas bodies of water known habitat for threatened or endangered species or non target crops) is minimal (e g when wind is blowing away from the sensitive areas)



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| UP-End herbicide UP End HydroCap ¹ | | | | | |
|--|---|---|------------------|---|--|
| Turfgrass Species | Weeds | fl oz. | pints | Comments | |
| | | Product per 1 000 sq ft | Product per acre | | |
| WARM SEASON GRASSES | | | | | |
| Bahagrass Bermudagrass Buffalograss Centpedegrass Fescue Tall <i>Paspalum</i> seashore St Augustinegrass Zoysiagrass | Barnyardgrass Crabgrass Evening Primrose Fall Panicum Foxtail Hop Clover Knotweed <i>Poa annua</i> Oxalis Prostrate Spurge Purslane | Residential and Sod Farm Turf Uses Only | | Make a repeat application of 2.2 to 3.1 pints/Acre (0.86 to 1.1 oz/1000 sq ft) after 5-8 weeks if necessary | |
| | | 1.1 to 1.6 fl oz | 3.1 to 4.2 pints | | |
| | | Golf Course Commercial and Other Non Residential Turf Uses Only | | | |
| | | 1.1 to 2.3 fl oz | 3.1 to 6.3 pints | | |
| | Initial application before weed germination in spring | | | | |
| | Goosegrass | All Turf Uses (Non Greens and Tees) | | | An additional application of 3.1 pt/Acre (1.1 oz/1000 sq ft) may be made for extended goosegrass control 8 weeks after the second application |
| | | 1.1 fl oz | 3.1 pints | | |
| | | Apply before weed germination in spring Make a second application at 3.1 pints (1.1 oz/1000 sq ft) 5-8 weeks later | | | |
| | Chickweed Corn Speedwell Cudweed Henbit Lawn Burweed <i>Poa annua</i> | All Turf Uses | | | Apply in late summer or early fall before weed germination. Make a repeat application of 3.1 to 4.2 pints (1.1 to 1.6 oz/1000 sq ft) 5-8 weeks for extended <i>Poa annua</i> control |
| | | 1.1 to 1.6 fl oz | 3.1 to 4.2 pints | | |

- ¹ Do not use more than 4.2 pints (2.1 quarts) per acre per application on residential and sod farm turfgrass. Do not use more than 6.3 pints (3.1 quarts) per acre per application on golf course turfgrass, commercial or other non residential turfgrass.
- ² Residential is defined as turf in any residential situation as well as home lawns, schools, parks and playgrounds.
- ³ **Not for use** on bentgrass or *Poa annua* greens or tees.

The efficacy of **UP-EndUP End HydroCap** is best if the application is followed by one half inch of rainfall or its equivalent in sprinkler irrigation. If **UP-EndUP End HydroCap** is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

To prevent establishment of weeds along the edges of treated area, it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc. to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is undesirable, Do not rub or scrub surface, but rinse area immediately using a heavy spray of water to avoid staining. Allow treated turfgrass to dry before entering to avoid staining non treated surfaces.

TURFGRASS TANK MIXES

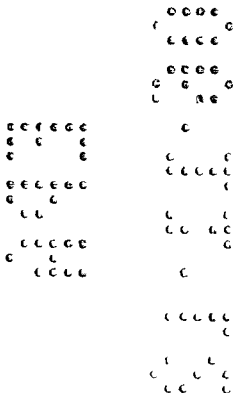
UP-EndUP End HydroCap can be mixed with postemergence herbicides to control emerged weeds in non residential turfgrasses. For annual grass control, applications can be made with DRIVE® or MSMA to control emerged weeds.

Broadleaf weeds can be controlled using Trimec, Three Way, 2,4-D and other similar products.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with **UP-EndUP End HydroCap** and follow those that are most restrictive.

TURFGRASS RESTRICTIONS



- Use on well established turfgrass with a dense and uniform stand. If turf has been thinned or damaged due to winter injury, excessive moisture, etc., allow turf to recover before application.
- On newly planted areas, do not apply until the turfgrass has filled in and has been mowed at least four times. Applications made to overseeded warm season turfgrasses may cause thinning or injury of the overseeded species.
- Do not use on bentgrass or *Poa annua* greens and tees or injury may occur.
- Delay reseeding or winter overseeding of treated turfgrass for at least three (3) months following the last **UP-EndUP End HydroCap** application.
- Delay sprigging turfgrass for five (5) months after application.

LANDSCAPE AND GROUNDS MAINTENANCE

UP-EndUP End HydroCap can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds in areas such as mulch beds, parking areas, roadsides, fences and borders, and around statuary or monuments. Ensure that these areas are free of emerged weeds before application. To remove emerged weeds, either cultivate or tank mix **UP-EndUP End HydroCap** with a postemergence product labeled for such use.

Not all ornamental species or cultivars of species have been tested for plant safety. Refer to the list of ornamental plant species found in this label. While **UP-EndUP End HydroCap** may be used on plant species not listed on this label, a small number of plants should be tested at the specified rate to evaluate suitability before a broad use application is made.

Refer to **Table 2 Application Rates for Weed Control in Ornamental Plantings, Tree Plantations and Other Noncropland Areas**. Avoid contact of spray solution with stone, wood, or other porous surfaces as staining may occur. Rinse surfaces immediately using a heavy spray of water to avoid staining.

ORNAMENTAL PLANTINGS AND TREE PLANTATIONS INCLUDING NONCROPLAND AREAS

Use **UP-EndUP End HydroCap** for grounds maintenance in noncropland areas: preemergence control of the weed species listed in and around established tree plantations for site preparation and maintenance and conifer and hardwood seedling nurseries and pulpwood and fiber farms. **UP-EndUP End HydroCap** may be used for hardwood and conifer regeneration on conservation reserve program (CRP) land. **UP-EndUP End HydroCap** can also be used in Christmas trees and non-bearing fruit and nut crops and vineyards established, or bulb and wildflower field plantings, and in and around established ornamentals planted in noncropland areas such as highway rights of way and utility substations. Refer to **Table 2 Application Rates for Weed Control in Ornamentals Plantings, Tree Plantations and Other Noncropland Areas**.

Applications at planting or to established trees: When applying at planting, it is important that slit closure be achieved to prevent **UP-EndUP End HydroCap** from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur. Refer to section on **Instructions and Restrictions in Landscape and Ornamental Plantings** before making an application.

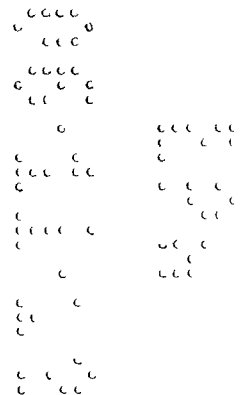
For postemergence control of weeds, use tank mix combinations of **UP-EndUP End HydroCap** plus VANTAGE® Roundup® Finale® or other labeled herbicides. Refer to approved labeling for species recommendations. Determine rates for the tank mix compounds from the product labels of both **UP-EndUP End HydroCap** and partner herbicides before use. Take care to prevent combination sprays from direct contact with desirable foliage or injury may result. **UP-EndUP End HydroCap** plus diuron or simazine combinations will broaden weed control spectrum; however, use of combinations may restrict **UP-EndUP End HydroCap** usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

ORNAMENTAL BULBS

UP-EndUP End HydroCap may be applied for control of susceptible annual weeds in ornamental bulbs listed under the Perennial Section on the label (crocus, daffodil, [narcissus], gladiolus, lilies, tulip, etc.). Apply **UP-EndUP End HydroCap** before, during, or after bulb emergence. If weeds have already germinated, add a labeled postemergence herbicide to control emerged weeds.

WILDFLOWERS

UP-EndUP End HydroCap may be applied for control of susceptible annual weeds in plantings of wildflowers listed in the Perennial section on the label. Those perennial species noted (*Black-eyed Susan, California Poppy, Coreopsis, Oxeye Daisy, etc.) have been evaluated for plant tolerance to applications of **UP-EndUP End HydroCap** at 4.2 pints (2.1 quarts) per acre. **UP-EndUP End HydroCap** may be applied to established perennial



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wildflowers before emergence of weeds or wildflowers For wildflowers being established from seed apply ~~UP-End~~**UP End HydroCap** no sooner than 4 weeks after wildflowers have emerged but before weed germination If weeds have already germinated add a labeled postemergence product to control emerged weeds Refer to all label restrictions before making an application

Due to the diversity of species and varieties which exist in areas where wildflowers are grown the response to ~~UP-End~~**UP End HydroCap** may vary greatly Test desirable species carefully to determine if area wide applications can be made

NON BEARING FRUIT AND NUTCROPS AND VINEYARDS

~~UP-End~~**UP End HydroCap** may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non bearing crops

| | | | |
|---------|-----------|-------|----------------|
| Almond | Citrus | Olive | Pistachio |
| Apple | Fig | Peach | Plum |
| Apricot | Grape | Pear | Prune |
| Cherry | Nectarine | Pecan | Walnut English |

NON CROPLAND WEED CONTROL

Use ~~UP-End herbicide~~**UP End HydroCap** for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad utility highway and pipeline rights of way highway guardrails delineators and sign posts utility substations petroleum tank farms pumping installations fence rows storage areas windbreaks and shelterbelts

INDUSTRIAL (UNIMPROVED) TURF

~~UP-End~~**UP End HydroCap** will provide preemergence control of the annual grasses and broadleaf weeds listed in **Weed Species Controlled** section of this label that might germinate in established grasses in rights of way roadsides construction sites parks substations or lots

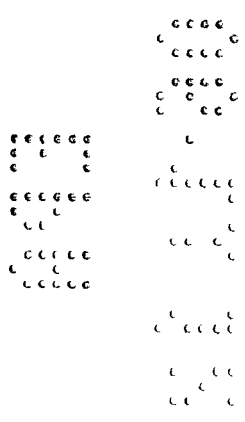
Apply before weeds germinate A postemergence herbicide such as 2 4 D DRIVE® VANTAGE® MSMA or similar products may be tank mixed to control established weeds Apply according to label instructions for the respective products and follow the most restrictive wording

TOTAL VEGETATION CONTROL

~~UP-End~~**UP End HydroCap** may be tank mixed with ARSENAL® SAHARA® PLATEAU® VANTAGE® Roundup® PRO Karmex® Finale® Oust® diuron glyphosate or other products to provide bare ground or total vegetation control ~~UP-End~~**UP End HydroCap** can be used to provide greater plant selectivity in areas where such action may be desired Such sites might have roots of landscape vegetation ornamentals or desirable trees encroaching into the treated zone Refer to tank mix partner labels regarding effects on desirable plants Do not tank mix with ARSENAL SAHARA or PLATEAU herbicides in California

Applications may be made to existing weeds controlled by the partner herbicide Determine rates from the product labels before use Follow the most restrictive label instructions

For Kochia control use a combination of ~~UP-End~~**UP End HydroCap** with ARSENAL herbicide or diuron if control has been a problem for other herbicides



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TABLE 2 APPLICATION RATES FOR WEED CONTROL IN LANDSCAPE ORNAMENTALS, TREE PLANTATIONS AND OTHER NONCROP AREAS*

For preemergence control of the weed species listed apply **UP-EndUP End HydroCap** as follows

| Length of Control | Product per Acre | Product per 1000 sq ft |
|---------------------------------|------------------|------------------------|
| Short Term Control (2-4 months) | 2 1 Quarts | 1 6 fl oz |
| Long Term Control (6 8 months) | 4 2 Quarts | 3 2 fl oz |

*For all turfgrass weed control rates refer to **Table 1** instructions

For extended weed control repeat applications of **UP-EndUP End HydroCap** can be made

INSTRUCTIONS AND RESTRICTIONS

LANDSCAPE AND ORNAMENTAL PLANTINGS¹

| Site | Application Instructions and Restrictions |
|----------------------------------|--|
| Landscape Plantings ² | 1 Do not apply to newly transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots 2 Apply as a directed or over the top spray 3 Use the lowest labeled rate when making applications to annuals Repeat applications can be made for extended landscape weed control |
| Ornamental Bulbs ³ | 1 UP-EndUP End HydroCap may be applied to bulb species listed on the label 2 Apply before during or after bulb emergence but not during bloom |
| Wildflowers ³ | 1 UP-EndUP End HydroCap may be applied in plantings of wildflowers listed on the label Refer to specific instructions for rate and plant tolerance 2 For wildflowers being established from seed apply at 4 weeks after wildflowers have germinated but before weed seed germination |

¹ Plant only those desirable plant species listed on this label into soil treated the previous season with **UP-EndUP End HydroCap** or injury may occur

² Do not treat plants grown for food or feed Do not use treated plants for food or feed

³ Before treating a large number of plants spray a few plants and observe for 1 2 months for plant damage before full scale application

HAND HELD SPRAY EQUIPMENT

Use table 2 above to determine the amount of **UP-EndUP End HydroCap** to be applied per 1000 square feet in sufficient water for thorough coverage without runoff Calibration of backpack or other hand held equipment will vary with each operator Determine the amount of water needed to treat 1000 square feet before mixing the spray solution Follow information in **MIXING INSTRUCTIONS** section of this label

UP-EndUP End HydroCap will not control established weeds If weeds germinate before activation of herbicide shallow cultivate to destroy existing weeds or where practical remove by hand Any necessary cultivation must be shallow **UP-EndUP End HydroCap** may be used together with herbicides registered for postemergence use (i.e. glyphosate or Finale) for the control of established weeds Do not apply sprays containing glyphosate or Finale over the top of desirable plants A **UP-EndUP End HydroCap** treatment may be followed by any registered herbicide to control weeds not listed on the **UP-EndUP End HydroCap** label

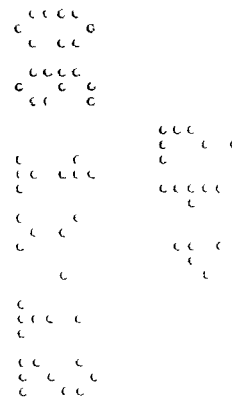
The efficacy of **UP-EndUP End HydroCap** will be best if the application is followed by one half inch of rainfall or its equivalent in sprinkler irrigation Erratic weed control may result if **UP-EndUP End HydroCap** is not activated by rainfall or irrigation within 30 days

The following grass and broadleaf weeds are controlled by preemergence treatments of **UP-EndUP End HydroCap** at the above specified rates

GRASSES CONTROLLED

| Common Name | Scientific Name |
|---------------|-------------------------------|
| Barnyardgrass | <i>Echinochloa crus galli</i> |

| | |
|------------------|---------------------------------|
| Bluegrass Annual | <i>Poa annua</i> |
| Crabgrass | <i>Digitaria spp</i> |
| Crowfootgrass | <i>Dactyloctenium aegyptium</i> |
| Foxtail Giant | <i>Setaria faberi</i> |



| | | | |
|-----------------------------------|--------------------------------|-------------------------|--------------------------------|
| Foxtail Green | <i>Setaria viridis</i> | Chickweed Mouseear | <i>Cerastium vulgatum</i> |
| Foxtail Yellow | <i>Setaria glauca</i> | Clover Hop | <i>Trifolium procumbens</i> |
| Goosegrass | <i>Eleusine indica</i> | Cudweed | <i>Gnaphalium</i> spp |
| Itchgrass | <i>Rottboellia exaltata</i> | Evening primrose | <i>Oenothera biennis</i> |
| Johnsongrass (from seed) | <i>Sorghum halepense</i> | Fiddleneck | <i>Amsinckia intermedia</i> |
| Junglerice | <i>Echinochloa colona</i> | Filaree | <i>Erodium</i> spp |
| Lovegrass (from seed) | <i>Eragrostis</i> spp | Henbit | <i>Lamium amplexicaule</i> |
| Panicum Browntop | <i>Panicum fasciculatum</i> | Knotweed prostrate | <i>Polygonum aviculare</i> |
| Panicum Fall | <i>Panicum dichotomiflorum</i> | Kochia | <i>Kochia scoparia</i> |
| Panicum Texas | <i>Panicum texanum</i> | Lambsquarters | <i>Chenopodium album</i> |
| Sandbur Field | <i>Cenchrus incertus</i> | Pigweed | <i>Amaranthus</i> spp |
| Signalgrass | <i>Brachiaria platyphylla</i> | Puncturevine | <i>Tribulus terrestris</i> |
| Sprangletop Mexican | <i>Leptochloa unnervia</i> | Purslane | <i>Portulaca oleracea</i> |
| Sprangletop Red | <i>Leptochloa filiformis</i> | Pusley Florida | <i>Richardia scabra</i> |
| Witchgrass | <i>Panicum capillare</i> | Rocket London | <i>Sisymbrium irio</i> |
| Woolly Cupgrass | <i>Eriochloa villosa</i> | Shepherdspurse | <i>Capsella bursa pastoris</i> |
| BROADLEAF WEEDS CONTROLLED | | Smartweed Pennsylvania | <i>Polygonum pensylvanicum</i> |
| Common Name | Scientific Name | Speedwell Corn | <i>Veronica arvensis</i> |
| Burweed Lawn | <i>Soliva pterosperma</i> | Spurge Annual | <i>Euphorbia</i> spp |
| Carpetweed | <i>Mollugo verticillata</i> | Spurge Prostrate | <i>Euphorbia humistrata</i> |
| Chickweed Common | <i>Stellaria media</i> | Woodsorrel Yellow | <i>Oxalis stricta</i> |
| | | Velvetleaf (Buttonweed) | <i>Abutilon theophrasti</i> |

COMMERCIAL ORNAMENTAL PRODUCTION

GENERAL INFORMATION

Application Use Sites ~~UP-End~~UP End HydroCap can be used in and around field inner and container ornamental production

~~UP-End~~UP End HydroCap sprays may be used around and over the top of the established plants listed in **Table 4** of this label. However, not all varieties or strains of the plant species listed have been tested. Refer to ornamental instructions and restrictions in this label before any application of ~~UP-End~~UP End HydroCap. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage before full scale application.

APPLICATION INSTRUCTIONS

~~UP-End~~UP End HydroCap will not control established weeds. Therefore, ensure that areas to be treated are free of established weeds at the time of treatment or ~~UP-End~~UP End HydroCap may be used together with herbicides registered for postemergence use in ornamentals and vegetation control sites. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas.

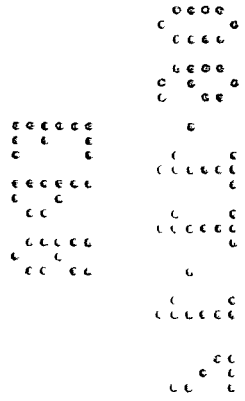
The efficacy of ~~UP-End~~UP End HydroCap will be best if the application is followed by one half inch of rainfall or its equivalent in sprinkler irrigation. If ~~UP-End~~UP End HydroCap is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, ~~UP-End~~UP End HydroCap or ~~UP-End~~UP End HydroCap tank mix combinations will not cause crop injury. Over application can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants and increase the possibility of plant damage from ~~UP-End~~UP End HydroCap.

SPRAYING INSTRUCTIONS

Apply uniformly with properly calibrated ground equipment in suggested spray volumes of 20-200 gpa for ornamental applications to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous



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agitation during spraying with good mechanical or bypass agitation Avoid overlaps that will increase rates above those specified Avoid application when winds may cause drift

Avoid contact of spray solution with driveways stone wood or other porous surfaces Rinse immediately with water to avoid staining Avoid mechanically scrubbing until surface area is thoroughly rinsed using a heavy spray of water

INSTRUCTIONS AND RESTRICTIONS¹ IN PRODUCTION ORNAMENTALS

Do not apply in greenhouses shadehouses or other enclosed structures

| Site | Application Instructions and Restrictions |
|---|--|
| Newly Transplanted Field Grown Nursery Stock ^{2 3} | 1 Do not make over the top applications at time of field transplanting Use shielded sprayer until plantings have been established for one (1) year or more in the field 2 Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants Take care to ensure there are no cracks in the soil where UP-End herbicide UP-End HydroCap could come into contact with the roots 3 DO NOT apply during bud swell bud break or at time of first flush of new growth 4 Direct sprays away from graphed or budded tissue on transplants at all times |
| Newly Transplanted Container Grown Nursery Stock ^{2 3} | 1 Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants Care must be taken to ensure there are no cracks in the soil where UP-End UP-End HydroCap could come into contact with the roots 2 For container grown ornamentals delay first application of the product to bareroot liners for two (2) weeks after transplanting 3 Do not apply during bud swell bud break or at time of first flush of new growth 4 Direct sprays away from graphed or budded tissue on transplants at all times |
| Established Container or Field Grown Nursery Stock ^{2 3} | 1 Do not apply during bud swell bud break or at time of first flush of new growth 2 Apply as a directed or over the top spray 3 If newly budded or graphed rootstock make an application using a shielded sprayer 4 Take care to ensure there are no cracks in the soil where UP-End UP-End HydroCap could come into contact with the roots |
| Bare Ground for Container Placement | 1 Apply to soil then water in (including mulch gravel wood chips or other permeable base) replace containerized ornamentals onto pad |

¹ Plant only those desirable plant species listed on this label into soil treated the previous season with ~~UP-End~~**UP-End HydroCap** or injury may occur

² Before treating a large number of plants spray a few plants and observe for 1 2 months for plant damage before full scale application

³ Do not treat plants grown for food or feed Do not use treated plants for food or feed

Refer to **Table 3 Application Rates for Weed Control in Production Ornamentals**

ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing VANTAGE® Roundup® Finale® Ornamec® Gallery® Princep® and other similar products Do not apply sprays containing Roundup or Finale over the top of ornamental plants

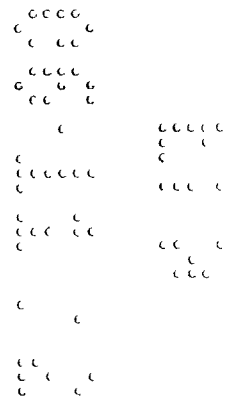
Before tank mixing perform a simple jar test to insure compatibility of herbicides

Refer to manufacturers labels for specific use directions precautions and limitations before tank mixing with ~~UP-End herbicide~~**UP-End HydroCap** and follow those that are most restrictive

CHRISTMAS TREE PLANTATIONS

~~UP-End~~**UP-End HydroCap** may be used in and around Christmas tree plantations ~~UP-End~~**UP-End HydroCap** may be applied at planting or to established trees When making an application at planting it is important that slit closure be achieved to prevent ~~UP-End~~**UP-End HydroCap** from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur

For postemergence control of weeds use tank mix combinations of ~~UP-End~~**UP-End HydroCap** plus VANTAGE Roundup Finale or other labeled herbicides Refer to approved labeling for species information Determine rates for the tank mix compounds from the product labels of both ~~UP-End~~**UP-End HydroCap** and partner herbicides before use Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury



may result ~~UP-EndUP End HydroCap~~ plus diuron or simazine combinations will broaden weed control spectrum however use of combinations may restrict ~~UP-EndUP End HydroCap~~ usage in sensitive areas Refer to manufacturers labels for specific use directions precautions and limitations before use and follow those that Refer to **Table 3 Application Rates for Weed Control in Production Ornamentals**

VEGETATION CONTROL IN ORNAMENTAL PRODUCTION

~~UP-EndUP End HydroCap~~ may be used for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as sign posts pumping installations fence rows storage areas and windbreaks and shelterbelts ~~UP-EndUP End HydroCap~~ may be tank mixed with VANTAGE Roundup PRO Karmex^{®3} Finale^{®4} diuron glyphosate or other products to provide bare ground or total vegetation control or can be used to provide greater plant selectivity in areas where such action may be desired Such sites might have roots of landscape vegetation ornamentals or desirable trees encroaching into the treated zone Refer to tank mix partner labels regarding effects on desirable plants Applications may be made to existing weeds controlled by the partner herbicide Determine rates from the product labels before use Follow the most restrictive label instructions Refer to **Table 3 Application Rates For Weed Control In Production Ornamentals**

Table 3 APPLICATION RATES FOR WEED CONTROL IN PRODUCTION ORNAMENTALS*

For preemergence control of the weed species listed apply ~~UP-EndUP End HydroCap~~ at the following rates

| Length of Control | Product per Acre | Product per 1000 sq ft |
|---------------------------------|------------------|------------------------|
| Short Term Control (2-4 months) | 2.1 Quarts | 1.6 fl oz |
| Long Term Control (6-8 months) | 4.2 Quarts | 3.2 fl oz |

*For extended weed control repeat applications of ~~UP-EndUP End HydroCap~~ can be made

HAND HELD SPRAY EQUIPMENT

Use the table above to determine the amount of ~~UP-EndUP End HydroCap~~ to be applied per 1000 square feet The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff Calibration of backpack or other hand held equipment will vary with each operator Determine the amount of water needed to treat 1000 square feet before mixing the spray solution Follow information in **MIXING INSTRUCTIONS** section of this label

~~UP-EndUP End HydroCap~~ will not control established weeds If weeds germinate before activation of herbicide shallow cultivate to destroy existing weeds or where practical remove by hand Any cultivation must be shallow ~~UP-EndUP End HydroCap~~ may be used together with herbicides registered for postemergence use (i.e. Roundup or Finale) for the control of established weeds Do not apply sprays containing Roundup or Finale over the top of desirable plants A ~~UP-EndUP End HydroCap~~ treatment may be followed by any registered herbicide to control weeds not listed on the ~~UP-EndUP End HydroCap~~ label

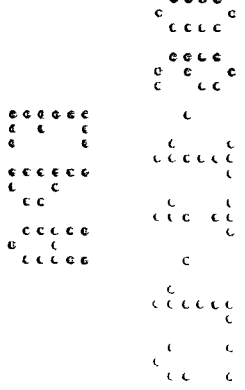
The efficacy of ~~UP-EndUP End HydroCap~~ will be improved if the application is followed by one half inch of rainfall or its equivalent in sprinkler irrigation Erratic weed control may result if ~~UP-EndUP End HydroCap~~ is not activated by rainfall or irrigation within 30 days

The following grass and broadleaf weeds are controlled by preemergence treatments of ~~UP-EndUP End HydroCap~~ at the above specified rates

GRASSES CONTROLLED

| Common Name | Scientific Name |
|------------------|---------------------------------|
| Barnyardgrass | <i>Echinochloa crus galli</i> |
| Bluegrass Annual | <i>Poa annua</i> |
| Crabgrass | <i>Digitaria spp</i> |
| Crowfootgrass | <i>Dactyloctenium aegyptium</i> |
| Foxtail Giant | <i>Setaria faberi</i> |
| Foxtail Green | <i>Setaria viridis</i> |

| | |
|--------------------------|--------------------------------|
| Foxtail Yellow | <i>Setaria glauca</i> |
| Goosegrass | <i>Eleusine indica</i> |
| Itchgrass | <i>Rottboellia exaltata</i> |
| Johnsongrass (from seed) | <i>Sorghum halepense</i> |
| Junglerice | <i>Echinochloa colona</i> |
| Lovegrass (from seed) | <i>Eragrostis spp</i> |
| Panicum Browntop | <i>Panicum fasciculatum</i> |
| Panicum Fall | <i>Panicum dichotomiflorum</i> |
| Panicum Texas | <i>Panicum texanum</i> |
| Sandbur Field | <i>Cenchrus incertus</i> |



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| | |
|---------------------|------------------------------|
| Signalgrass | <i>Bracharia platyphylla</i> |
| Sprangletop Mexican | <i>Leptochloa uninervis</i> |
| Sprangletop Red | <i>Leptochloa filiformis</i> |
| Witchgrass | <i>Panicum capillare</i> |
| Woolly Cupgrass | <i>Eriochloa villosa</i> |

| | |
|------------------------|------------------------------|
| Ash White | <i>Fraxinus americana</i> |
| Aspen Bigtooth | <i>Populus grandidentata</i> |
| Aspen Quaking | <i>Populus tremuloides</i> |
| Basswood | <i>Tilia spp</i> |
| Birch European Weeping | <i>Betula pendula</i> |
| Birch River | <i>Betula nigra</i> |

BROADLEAF WEEDS CONTROLLED

| Common Name | Scientific Name |
|-------------------------|---------------------------------|
| Burweed Lawn | <i>Soliva pterosperma</i> |
| Carpetweed | <i>Mollugo verticillata</i> |
| Chickweed Common | <i>Stellaria media</i> |
| Chickweed Mouseear | <i>Cerastium vulgatum</i> |
| Clover Hop | <i>Trifolium procumbens</i> |
| Cudweed | <i>Gnaphalium spp</i> |
| Eveningprimrose | <i>Oenothera biennis</i> |
| Fiddleneck | <i>Amsinckia intermedia</i> |
| Filaree | <i>Erodium spp</i> |
| Henbit | <i>Lamium amplexicaule</i> |
| Knotweed prostrate | <i>Polygonum aviculare</i> |
| Kochia | <i>Kochia scoparia</i> |
| Lambsquarters | <i>Chenopodium album</i> |
| Pigweed | <i>Amaranthus spp</i> |
| Puncturevine | <i>Tribulus terrestris</i> |
| Purslane | <i>Portulaca oleracea</i> |
| Pusley Florida | <i>Richardia scabra</i> |
| Rocket London | <i>Sisymbrium irio</i> |
| Shepherdspurse | <i>Capsella bursa pastoris</i> |
| Smartweed Pennsylvania | <i>Polygonum pennsylvanicum</i> |
| Speedwell Corn | <i>Veronica arvensis</i> |
| Spurge Annual | <i>Euphorbia spp</i> |
| Spurge Prostrate | <i>Euphorbia humistrata</i> |
| Woodsorrel Yellow | <i>Oxalis stricta</i> |
| Velvetleaf (Buttonweed) | <i>Abutilon theophrasti</i> |

TREES (continued)

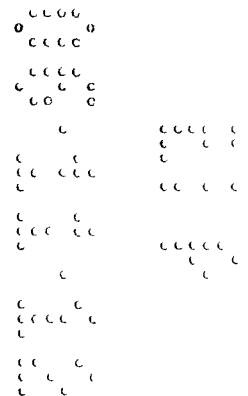
| Common Name | Scientific Name |
|---------------------------------|----------------------------------|
| Buckeye Red | <i>Aesculus pavia</i> |
| Cedar White | <i>Thuja occidentalis</i> |
| Chamaecyparis Boulevard | <i>Chamaecyparis pistifera</i> |
| Cherry Black | <i>Prunus serotina</i> |
| Cherry Choke | <i>Prunus virginiana</i> |
| Cherry Kwanzan | <i>Prunus serrulata</i> |
| Cherry Nanking | <i>Prunus tomentosa</i> |
| Cottonwood | <i>Populus deltoides</i> |
| Crabapple | <i>Malus spp</i> |
| Crepe Myrtle | <i>Lagerstroemia indica</i> |
| Cryptomeria Japanese Cedar | <i>Cryptomeria japonica</i> |
| Cypress Bald | <i>Taxodium distichum</i> |
| Cypress Leyland | <i>Cupressocyparis leylandii</i> |
| Dogwood Flowering | <i>Cornus florida</i> |
| Dogwood Korean | <i>Cornus kousa</i> |
| Dogwood Silky | <i>Cornus amomum</i> |
| Dogwood Shrub | <i>Cornus spp</i> |
| Elm | <i>Ulmus japonica</i> |
| Elm Winged | <i>Ulmus alata</i> |
| Eucalyptus (Silver dollar) tree | <i>Eucalyptus cinerea</i> |
| Fir Balsam | <i>Abies balsamiae</i> |
| Fir Douglas | <i>Pseudotsuga menziesii</i> |
| Fir Fraser | <i>Abies fraseri</i> |
| Fir White | <i>Abies concolor</i> |
| Franklinia | <i>Franklinia spp</i> |
| Fringe tree | <i>Chlonenthus retusus</i> |
| Ginkgo | <i>Ginkgo biloba</i> |
| Gum Black | <i>Nyssa sylvatica</i> |
| Gum Sour | <i>Nyssa sylvatica</i> |
| Haw Black | <i>Viburnum prunifolium</i> |
| Hawthorn | <i>Crataegus spp</i> |
| Hemlock Canada | <i>Tsuga canadensis</i> |
| Hemlock, Eastern | <i>Tsuga canadensis</i> |
| Holly American | <i>Ilex opaca</i> |
| Honeylocust | <i>Gleditsia triacanthos</i> |
| Lilac Common | <i>Syringa vulgaris</i> |
| Lilac Japanese Tree | <i>Syringa reticulata</i> |
| Linden | <i>Tilia spp</i> |

Table 4 ORNAMENTAL SPECIES

~~UP End herbicide~~ **UP End HydroCap** sprays may be used around and over the top of the established plants listed below. Refer to Ornamental Instructions and Restrictions before application. Refer to **Table 3 Application Rates For Weed Control Production Ornamentals**

TREES

| Common Name | Scientific Name |
|----------------------|-------------------------------|
| Alder European Black | <i>Alnus glutinosa</i> |
| Apple | <i>Malus spp</i> |
| Arborvitae American | <i>Thuja occidentalis</i> |
| Arbutus | <i>Arbutus spp</i> |
| Ash Red | <i>Fraxinus pennsylvanica</i> |



| | |
|-------------------|-----------------------------|
| Magnolia Saucer | <i>Magnolia soulangiana</i> |
| Magnolia Southern | <i>Magnolia grandiflora</i> |
| Magnolia Star | <i>Magnolia stellata</i> |
| Maidenhair Tree | <i>Ginkgo biloba</i> |
| Maple Norway | <i>Acer platanoides</i> |
| Maple Japanese | <i>Acer palmatum</i> |
| Maple Red | <i>Acer rubrum</i> |
| Maple Sugar | <i>Acer saccharum</i> |

| | |
|----------------------|--------------------------------|
| Spruce Dwarf Alberta | <i>Picea glauca albertiana</i> |
| Spruce Norway | <i>Picea abies</i> |
| Spruce White | <i>Picea glauca</i> |
| Sweetgum | <i>Liquidambar styraciflua</i> |
| Sycamore | <i>Platanus occidentalis</i> |
| Trachycarpus | <i>Trachycarpus spp</i> |
| Tulip tree | <i>Liriodendron tulipifera</i> |

TREES (continued)

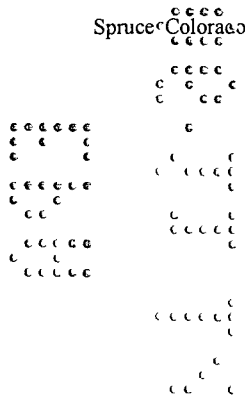
| Common Name | Scientific Name |
|----------------------|-------------------------------------|
| Nannyberry Rusty | <i>Viburnum rufidulum</i> |
| Oak, Chinquapin | <i>Quercus muehlenbergii</i> |
| Oak, Live | <i>Quercus virginiana</i> |
| Oak Pin | <i>Quercus palustris</i> |
| Oak Red | <i>Quercus rubra</i> |
| Oak Swamp Chestnut | <i>Quercus michauxii</i> |
| Oak, Water | <i>Quercus nigra</i> |
| Oak White | <i>Quercus alba</i> |
| Oak Willow | <i>Quercus phellos</i> |
| Olive | <i>Olea europaea</i> |
| Palm Date | <i>Phoenix spp</i> |
| Palm Fan | <i>Washingtonia spp</i> |
| Palm Pindo | <i>Butia spp</i> |
| Palm Washington | <i>Washingtonia spp</i> |
| Peach | <i>Prunus persica</i> |
| Pear Bradford | <i>Pyrus calleryana</i> Bradford |
| Pecan | <i>Carya illinoensis</i> |
| Pine Austrian | <i>Pinus nigra</i> |
| Pine Italian Stone | <i>Pinus pinea</i> |
| Pine Loblolly | <i>Pinus taeda</i> |
| Pine Monterey | <i>Pinus radiata</i> |
| Pine Red | <i>Pinus resinosa</i> |
| Pine Scotch | <i>Pinus sylvestris</i> |
| Pine Virginia | <i>Pinus virginiana</i> |
| Pine White | <i>Pinus strobus</i> |
| Plum Purple Leaf | <i>Prunus cerasifera</i> |
| Poplar Black | <i>Populus nigra</i> |
| Redcedar Eastern | <i>Juniperus virginiana</i> |
| Redcedar Western | <i>Thuja plicata</i> |
| Red Ironbark | <i>Eucalyptus sideroxylon</i> Rosea |
| Redwood Dawn | <i>Metasequoia glyptostroboides</i> |
| Sequoia Giant | <i>Sequoiadendron giganteum</i> |
| Serviceberry | <i>Amelanchier laevis</i> |
| Sourwood | <i>Oxydendrum arboreum</i> |
| Spruce Colorado Blue | <i>Picea pungens</i> |

TREES (continued)

| Common Name | Scientific Name |
|----------------|-------------------------|
| Walnut Black | <i>Juglans nigra</i> |
| Willow Weeping | <i>Salix babylonica</i> |
| Yellowwood | <i>Cladrastis lutea</i> |

SHRUBS

| Common Name | Scientific Name |
|----------------------|----------------------------------|
| Abelia Glossy | <i>Abelia grandiflora</i> |
| Alder Witch | <i>Fothergilla gardenii</i> |
| Aucuba Gold | <i>Aucuba japonica</i> |
| Azalea | <i>Rhododendron sp</i> |
| Bamboo Heavenly | <i>Nandina domestica</i> |
| Barberry | <i>Berberis gladywensis</i> |
| Barberry Japanese | <i>Berberis thunbergii</i> |
| Blue Indigo Bush | <i>Dalea gregii</i> |
| Bottlebrush Lemon | <i>Callistemon citrinus</i> |
| Boxwood Common | <i>Buxus sempervirens</i> |
| Boxwood Japanese | <i>Buxus microphylla</i> |
| Brittlebush | <i>Encelia farinosa</i> |
| Buttonbush | <i>Cephalanthus occidentalis</i> |
| Camellia | <i>Camellia japonica</i> |
| Cape Jasmine | <i>Gardenia jasminoides</i> |
| Cassia Feathery | <i>Cassia artemisioides</i> |
| Cordyline | <i>Cordyline spp</i> |
| Correa | <i>Correa spp</i> |
| Cotoneaster | <i>Cotoneaster apiculatus</i> |
| Cotoneaster Bayberry | <i>Cotoneaster dammeri</i> |
| Cotoneaster Rock | <i>Cotoneaster horizontalis</i> |
| Cypress Italian | <i>Cupressus sempervirens</i> |
| Cypress Leyland | <i>Cupressocyparis leylandii</i> |
| Deutzia Slender | <i>Deutzia gracilis</i> |
| Dogwood Red Twig | <i>Cornus sericea</i> |
| Elaeagnus | <i>Elaeagnus ebbingei</i> |
| Escallonia | <i>Escallonia fradesii</i> |
| Euonymus | <i>Euonymus fortunei</i> |



| | |
|--------------------|--------------------------------|
| Euonymus Golden | <i>Euonymus japonica</i> |
| Euonymus Winged | <i>Euonymus alata</i> |
| Firethorn | <i>Pyracantha coccinea</i> |
| Forsythia Border | <i>Forsythia intermedia</i> |
| Fragrant Olive | <i>Osmanthus fragrans</i> |
| Fuchsia California | <i>Zauschneria californica</i> |
| Gardenia | <i>Gardenia jasminoides</i> |
| Hawthorne Indian | <i>Raphiolepis indica</i> |
| Hibiscus | <i>Hibiscus syriacus</i> |
| Holly Chinese | <i>Ilex cornuta</i> |

| | |
|-------------------|--------------------------------|
| Photinia Fraser | <i>Photinia x Fraseri</i> |
| Pieris Japanese | <i>Pieris japonica</i> |
| Pine Mugo | <i>Pinus mugo</i> |
| Plum Natal | <i>Carissa grandiflora</i> |
| Privet California | <i>Ligustrum ovalifolium</i> |
| Privet Glossy | <i>Ligustrum lucidum</i> |
| Privet Variegated | <i>Ligustrum sinensis</i> |
| Privet Waxleaf | <i>Ligustrum japonicum</i> |
| Pyracantha | <i>Pyracantha coccinea</i> |
| Quince Flowering | <i>Chaenomeles japonica</i> |
| Ranger Texas | <i>Leucophyllum frutescens</i> |

SHRUBS (continued)

| Common Name | Scientific Name |
|------------------------|--------------------------------------|
| Holly Japanese | <i>Ilex crenata</i> |
| Holly Fosters | <i>Ilex attenuata</i> Fosteri |
| Holly Savannah | <i>Ilex attenuata</i> |
| Holly Yaupon | <i>Ilex vomitoria</i> |
| Honeysuckle Bush | <i>Diervilla lonicera</i> |
| Hopseed Bush | <i>Dodonaea viscosa</i> |
| Hopbush | <i>Dodonaea viscosa</i> |
| Hydrangea | <i>Hydrangea macrophylla</i> |
| Juniper | <i>Juniperus</i> sp |
| Juniper Chinese | <i>Juniperus chinensis</i> v pfitzer |
| Juniper Shore | <i>Juniperus conferta</i> |
| Juniper Trailing | <i>Juniperus horizontalis</i> |
| Laurel Cherry | <i>Prunus laurocerasus</i> |
| Laurel Mountain | <i>Kalmia latifolia</i> |
| Laurel Otto Luyken | <i>Prunus laurocerasus</i> |
| Laurel Schipka | <i>Prunus schipkanensis</i> |
| Laurustinus | <i>Viburnum tinus</i> |
| Lavender English | <i>Lavandula angustifolia</i> |
| Leucothoe | <i>Leucothoe fontanesiana</i> |
| Leucothoe Coast | <i>Leucothoe axillaris</i> |
| Lilac Cut leaf | <i>Syringa laciniata</i> |
| Lily of the Nile | <i>Agapanthus africanus</i> |
| Mahonia | <i>Mahonia aquifolium</i> |
| Mock Orange | <i>Pittosporum tobira</i> |
| Myrtle Compact | <i>Myrtus communis</i> |
| Myrtle Wax | <i>Myrica cerifera</i> |
| Nandina | <i>Nandina domestica</i> |
| Oleander | <i>Nerium oleander</i> |
| Oregon Grape | <i>Mahonia aquifolium</i> |
| Osmanthus | <i>Osmanthus fragrans</i> |
| Palm European Fan | <i>Chamaerops humilis</i> |
| Palm Mediterranean Fan | <i>Chamaerops</i> spp |
| Phlox Prickly | <i>Leptodactylon californicum</i> |

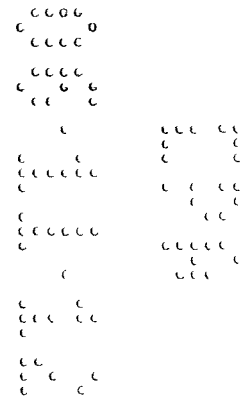
SHRUBS (continued)

| Common Name | Scientific Name |
|-------------------------|--------------------------------|
| Redroot | <i>Ceanothus</i> spp |
| Rhododendron | <i>Rhododendron</i> spp |
| Robira | <i>Pittosporum tobira</i> |
| Rose | <i>Rosa</i> spp |
| Spice Plant | <i>Illicium parviflorum</i> |
| Spiraea | <i>Spiraea vanhouttei</i> |
| Spiraea Anthony Waterer | <i>Spiraea X bumalda</i> |
| Spiraea Japanese | <i>Spiraea japonica</i> |
| Sweet Bay | <i>Laurus nobilis</i> |
| Trumpet Bush | <i>Tecoma stans</i> |
| Verbena Lemon | <i>Aloysia triphylla</i> |
| Viburnum | <i>Viburnum suspensum</i> |
| Vitex | <i>Vitex</i> spp |
| Weigela | <i>Weigela florida</i> |
| Wild Lilac | <i>Ceanothus</i> spp |
| Wisteria | <i>Wisteria</i> spp |
| Xylosma | <i>Xylosma congestum</i> |
| Yellowbells | <i>Tecoma stans</i> |
| Yew* | <i>Taxus media</i> |
| Yew Japanese* | <i>Taxus cuspidata</i> |
| Yew Southern* | <i>Podocarpus macrophyllus</i> |
| Yucca Adam s Needle | <i>Yucca filamentosa</i> |
| Yucca Weeping | <i>Yucca pendula</i> |

* Do not apply ~~UP-End herbicide~~ **UP End HydroCap** during spring growth or injury to terminals may occur

GROUND COVERS

| Common Name | Scientific Name |
|-------------------|-----------------------------|
| Ajuga | <i>Ajuga reptans</i> |
| Baby Sun Rose | <i>Aptenia cordifolia</i> |
| Beach Strawberry | <i>Fragaria chiloensis</i> |
| Capeweed | <i>Arctotheca calendula</i> |
| Cinquefoil Spring | <i>Potentilla verna</i> |
| Coyotebrush Dwarf | <i>Baccharis pitularis</i> |



| | |
|--------------------|---------------------------------------|
| Liriope Creeping | <i>Liriope spicata</i> |
| Liriope Variegated | <i>Liriope muscari</i> |
| Moonbeam | <i>Coreopsis verticillata</i> |
| Montbretia | <i>Crocoshia crocoshiflora</i> |
| Mugwort Western | <i>Artemesia ludoviciana</i> |
| Nightshade | <i>Solanum spp</i> |
| Orchid Peacock | <i>Acidanthera bicolor</i> |
| Oxeye Daisy† | <i>Chrysanthemum leucanthemum</i> |
| Palm Areca | <i>Chysalidocarpus lutescens</i> |
| Palm Pygmy Date | <i>Phoenix roebelence</i> |
| Palm Washington | <i>Washington robusta</i> |
| Peony Chinese | <i>Paeonia lactiflora</i> |
| Purple Coneflower† | <i>Echinacea purpurea</i> |

PERENNIALS (continued)

| <u>Common Name</u> | <u>Scientific Name</u> |
|--------------------|-------------------------------------|
| Purple Gay feather | <i>Liatris pycnostachys</i> |
| Purple Loosestrife | <i>Lythrum virgatum</i> |
| Rodgersia | <i>Rodgersia henricie</i> |
| Rosemary | <i>Rosmarinus officinalis</i> |
| Sedge | <i>Carex spp</i> |
| Shasta Daisy† | <i>Chrysanthemum x superbum</i> |
| Statice | <i>Limonium latifolia</i> |
| Statice German | <i>Goniolimon tartaricum</i> |
| Sweet Flag | <i>Acorus calamus</i> |
| Tickseed† | <i>Coreopsis lanceolata</i> |
| Texas Bluebonnet | <i>Lupinus texensis</i> |
| Tulip | <i>Tulipa spp</i> |
| Wonder Flower | <i>Ornithogalum thyrsoides</i> |
| Yarrow† | <i>Achillea millefolium</i> |
| Zephyr Lily | <i>Zephyranthes spp</i> |

* Applications of ~~UP-End herbicide~~ **UP-End HydroCap** to immature ferns (during periods of new growth of fronds) may result in some injury

† These plants have shown tolerance to ~~UP-End~~ **UP-End HydroCap** applications of 4.2 pints (2.1 quarts) in wildflower plantings established from seed

ORNAMENTAL GRASSES

| <u>Common Name</u> | <u>Scientific Name</u> |
|--------------------|------------------------------------|
| Beach Grass | <i>Ammophila breviligulata</i> |
| Fescue Blue | <i>Festuca glauca</i> |
| Fescue Sheep | <i>Festuca ovina</i> |

| | |
|-------------------|-----------------------------------|
| Fountain Grass | <i>Pennisetum setaceum</i> |
| Pampas Grass | <i>Cortaderia selloana</i> |
| Reed Canary Grass | <i>Phalaris arundinacea</i> |
| Reed Giant | <i>Arundo spp</i> |
| Ribbon Grass | <i>Phalaris arundinacea</i> |
| Tufted Hair Grass | <i>Deschampsia caespitosa</i> |

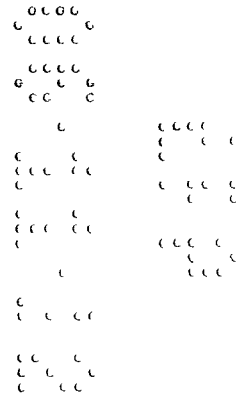
BEDDING PLANTS

| <u>Common Name</u> | <u>Scientific Name</u> |
|------------------------|------------------------------------|
| Ageratum | <i>Ageratum houstonianum</i> |
| Alyssum* | <i>Alyssum saxatile</i> |
| Anemone Poppy flowered | <i>Anemone coronaria</i> |
| Artemesia | <i>Artemesia spp</i> |
| Balloonflower | <i>Platycodon grandiflorum</i> |
| Begonia* | <i>Begonia spp</i> |
| Cabbage Ornamental | <i>Brassica oleracea</i> |

BEDDING PLANTS (continued)

| <u>Common Name</u> | <u>Scientific Name</u> |
|-------------------------|--------------------------------------|
| Caladium | <i>Caladium spp</i> |
| Cast Iron Plant | <i>Aspidistra elatior</i> |
| China Aster* | <i>Callistephus chinensis</i> |
| Crocoshia Montebretia | <i>Crocoshia x crocoshiflora</i> |
| Dahlia* | <i>Dahlia spp</i> |
| Dianthus | <i>Dianthus barbatus</i> |
| Dusty Miller | <i>Senecio cineraria</i> |
| Gayfeather | <i>Liatris spp</i> |
| Gazania Treasure Flower | <i>Gazania rigens</i> |
| Gazania Trailing | <i>Gazania rigens leucolaena</i> |
| Gloxinia | <i>Gloxinia sunningia</i> |
| Kale Ornamental | <i>Brassica napus</i> |
| Marigold African | <i>Tagetes erecta</i> |
| Moss Rose* | <i>Portulaca grandiflora</i> |
| Mum Garden | <i>Chrysanthemum spp</i> |
| Periwinkle* | <i>Vinca major</i> |
| Periwinkle Rose | <i>Catharanthus roseus</i> |
| Petunia* | <i>Petunia spp</i> |
| Plumosa Cockscomb | <i>Celosia cristata</i> |
| Portulaca* | <i>Portulaca grandiflora</i> |
| Salvia* | <i>Salvia splendens</i> |
| Snapdragon | <i>Antirrhinum majus</i> |
| Statice* | <i>Limonium spp</i> |
| Sweet William | <i>Dianthus barbatus</i> |
| Vinca* | <i>Vinca major</i> |

* Do not apply ~~UP-End~~ **UP-End HydroCap** sooner than four weeks after transplanting for these annuals. Use the lower labeled rate



~~UP End herbicide~~ UP End HydroCap may be used on plant species not listed on this label Determine the suitability for such uses by treating a small

number of such plants at the specified rate Evaluate treated plants 1 2 months following treatment for possible injury

STORAGE AND DISPOSAL

Do not contaminate water food or feed by storage or disposal

PESTICIDE STORAGE DO NOT STORE BELOW 15° F Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container If crystallization does occur store the container on its side at room temperature (70 F) and rock occasionally until crystals dissolve

PESTICIDE DISPOSAL Pesticide wastes are toxic 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

CONTAINER DISPOSAL Nonrefillable container Do not reuse or refill this container Clean container promptly after emptying Triple rinse after emptying then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration or by other procedures approved by state and local authorities

Containers less than or equal to 5 gallons 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 ¼ full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a rinse 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

Containers larger than 5 gallons triple rinse as follows Empty the remaining contents into application equipment or a mix tank Fill the container ¼ full with water Replace and tighten closures Tip container on its side and roll it back and forth ensuring at least one complete revolution for 30 seconds Stand the container on its end and tip it back and forth several times Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal Repeat this procedure two more times

**IMPORTANT INFORMATION
READ BEFORE USING PRODUCT**

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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