

9468-37

3/8/2010

1 of 41



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., NW  
Washington, D.C. 20460

EPA Reg. Number: 9468-37  
Date of Issuance: MAR - 8 2010

NOTICE OF PESTICIDE:  
 Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:  
Conditional

Name of Pesticide Product:  
Clethodim 26.4% EC

Name and Address of Registrant (include ZIP Code):  
  
Ritter Chemical LLC  
c/o Technology Sciences Group, Inc  
1150 18<sup>th</sup> Street N.W. Suite 1000  
Washington, DC 20036

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit data.
2. Make the following label changes listed below before you release the product for shipment:
  - a. Add the phrase, "EPA Reg. No. 9468-37".

Signature of Approving Official:  
  
  
Kathryn V. Montague  
Product Manager 23  
Herbicide Branch  
Registration Division (7505P)

Date:  
  
MAR - 8 2010

2041

page 2

EPA Reg. No. 9468-37

b. The preferred location for "Keep Out Of The Reach Of Children" is above the Signal Word WARNING on the Front Panel. Refer to the EPA Label Review Manuel at the following web site:

<http://www.epa.gov/oppfead1/labeling/lrm/>

3. Submit one (1) copy of your final printed labeling before you release the product for shipment.

4. Submit the results of one year storage stability and corrosion characteristic studies to EPA within one year of this date of registration. Submit a hard copy and an electronic copy also.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

3041

**Master Label Includes:**  
**Sublabel A: Container label**  
**Sublabel B: Booklet label**

### Clethodim 26.4% EC

**Active Ingredient:**  
\*Clethodim.....26.4%  
**Other Ingredients:** .....73.6%  
**Total:**.....100.0%

\* (E)-2-[1-[[[(3-chloro-2-propenyl)oxy]imino] propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one

Contains petroleum distillate.

### WARNING AVISO

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

### Keep Out of Reach of Children

EPA Reg. No.: 9468-XX  
EPA Est. No.: XXXXX-XXX-XXX

Net Contents: XXX

Manufactured in China for:  
Ritter Chemical  
P. O. Box 430974  
Houston, TX 77243  
(713) 461-2262

**ACCEPTED**  
**with COMMENTS**  
**In EPA Letter Dated:**  
MAR - 8 2010  
  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
  
9468-37

Store at temperatures below 104° F (40° C)

**Sublabel A: Container label**

**Clethodim 26.4% EC**

**Active Ingredient:**

\*Clethodim..... 26.4%

**Other Ingredients:** ..... 73.6%

**Total:**..... 100.0%

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**WARNING AVISO**

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**Keep Out of Reach of Children**

FIRST AID	
<b>If in eyes</b>	<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>
<b>If on Skin or Clothing</b>	<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>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<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 by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as Clethodim 26.4% EC, EPA Reg. No. 9468-XX. You may also contact CHEMTREC at 1-800 –xxx-xxx for emergency treatment information.</p>	
<p><b>NOTE TO PHYSICIAN:</b> Contains petroleum distillate. Vomiting may cause aspiration pneumonia. If ingested, probable mucosal damage may contraindicate the use of gastric lavage.</p>	

**See (back) (side) panel for Complete Precautionary Statements.**

**See booklet for complete Directions for Use.**

EPA Reg. No.: 9468-XX  
EPA Est. No.: XXXXX-XXX-XXX

Net Contents: XXX

Manufactured in China for:  
Ritter Chemical  
P. O. Box 430974  
Houston, TX 77243  
(713) 461-2262

Store at temperatures below 104° F (40° C)

5 of 41

Read entire label before using this product

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals.**

**WARNING.** Causes substantial but temporary eye irritation. Avoid contact with skin. Do not get in eyes, on skin, or on clothing. Harmful if swallowed or inhaled. Avoid breathing vapors or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks and chemical resistant gloves such as Barrier Laminate or Viton ≥ 14 mils, and protective eyewear.

**Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.** Follow the manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler and 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**

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not apply where weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment washwater or rinsate.

The use of this product may pose a hazard to the federally designated endangered species of Solano Grass and Wild Rice. Use of this product is prohibited in the following areas where the species are known to exist:

Solano Grass: Solano County, California: the vernal lakes area bounded by the Union Pacific Railroad and Hastings Road to the north, Highway 113 to the east, Highway 12 to the south, and Travis Air Force Base to the west.

Wild Rice: Hays County, Texas.

**PHYSICAL OR CHEMICAL HAZARDS**

Combustible. Do not use or store near heat or open flame.

**STORAGE AND DISPOSAL**

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**Pesticide Storage:** Keep container closed to prevent spills and contamination.

**Pesticide Disposal:** Wastes of this product may be dangerous. Improper disposal of excess pesticide or rinse is a violation of Federal Law. If these wastes cannot be disposed of according to the label instructions, contact your State Pesticide or Environmental Control Agency, or Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**Empty Container Disposal:**

**[FOR REFILLABLE CONTAINERS:]**

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. 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 mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**[FOR NONREFILLABLE CONTAINER:]**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. [For product less than 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 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.

[For product greater than 5 gallons:] Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after 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. Repeat this procedure two more times.

**WARRANTY AND LIABILITY**

Ritter Chemical LLC warrants that this product conforms to the chemical description on the label, and is reasonably fit for the purposes set forth in the "Complete Directions for Use" booklet labeling, when used in accordance with those Complete Directions for Use, under the conditions described therein. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE.** This warranty is also subject to the conditions and limitation stated herein.

7 of 41

**Sublabel B: Booklet label**

### Clethodim 26.4% EC

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\*Clethodim..... 26.4%

**Other Ingredients:** ..... 73.6%

**Total:**..... 100.0%

\* (E)-2-[1-[[[(3-chloro-2-propenyl)oxy]imino] propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one

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EPA Reg. No.: 9468-XX

EPA Est. No.: XXXXX-XXX-XX

Net Contents: XXX

Manufactured in China for:

Ritter Chemical

P. O. Box 430974

Houston, TX 77243

(713) 461-2262

Store at temperatures below 104° F (40° C)

Clethodim 26.4% EC – (pending as EPA File No. 9468-GT)

Label Version (1) dated December 2, 2009

Page 5 of 39

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals.**

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**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks and chemical resistant gloves such as Barrier Laminate or Viton ≥ 14 mils, and protective eyewear.

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**ENVIRONMENTAL HAZARDS**

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Wild Rice: Hays County, Texas.

**PHYSICAL OR CHEMICAL HAZARDS**

Combustible. Do not use or store near heat or open flame.

**DIRECTIONS FOR USE**

**Read entire label before using this product.**

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.



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#### **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 greater than 14 mils in thickness composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber, and 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.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift. Do not enter treated areas without protective clothing until sprays have dried.

#### **STORAGE AND DISPOSAL**

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**Pesticide Storage:** Keep container closed to prevent spills and contamination.

**Pesticide Disposal:** Wastes of this product may be dangerous. Improper disposal of excess pesticide or rinse is a violation of Federal Law. If these wastes cannot be disposed of according to the label instructions, contact your State Pesticide or Environmental Control Agency, or Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

#### **Empty Container Disposal:**

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100441

### TANK MIXES

**Notice: Tank mixing this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor.**

Read and follow the entire label of each product to be used in the tank mix with this product.

### CHEMIGATION

May be applied to onions and garlic by sprinkler irrigation systems. Do not apply by chemigation to any other crop, or to this crop using any other type of irrigation system.

### INFORMATION

For use on: Alfalfa, Asparagus, Bean and Pea (dry shelled)<sup>1</sup>, Bean and Pea (Succulent)<sup>2</sup>, Broccoli, Cabbage, Canola\*, Carrot, Cauliflower (and other Head and Stem Brassica Vegetables)<sup>3</sup>, Celery, Clover (grown in Idaho, Oregon and Washington only), Conifers, Cotton, Cranberry, Cucumber, Eggplant (and other Fruiting Vegetables)<sup>4</sup>, Fallow Land (and other non-producing agricultural areas), Flax\*, Garden Beet, Garlic, Herbs<sup>5</sup>, Hops, Horseradish (and other Root Vegetables)<sup>6</sup>, Legume Vegetables (edible podded)<sup>7</sup>, Lettuce, Head and Leaf (and other leafy greens)<sup>8</sup>, Melons (including Cantaloupes and Watermelons)<sup>9</sup>, Mint, Mustard Greens (and other leafy brassica greens)<sup>10</sup>, Mustard Seed\*, Non-Bearing Food Crops, Non-Crop or Non-Planted Areas, Onions (dry bulb and green), Ornamentals, Peanut (including perennial), Peppers (bell and non-bell), Potato, Radish, Rhubarb (and other Leaf Petioles)<sup>11</sup>, Safflower, Sesame, Shallots (dry bulbs and green), Squash (including Pumpkins)<sup>9</sup>, Soybeans, Strawberry, Sugar Beet, Sunflower, Sweet Potato, Tomato and Yam (and other Tuberous and Corn Vegetable)<sup>12</sup>.

#### \*Not for use in California

<sup>1</sup> Other Dry Shelled Bean and Pea crops approved for use with this product include: Bean (*lupinus* spp.), grain, sweet, white and white sweet; Bean (*Phaseolus* spp.), field, kidney, lima (dry), navy, pinto and tepary; Bean (*Vigna* spp.), adzuki bean, black-eyed pea, catjang, cowpea, crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, broad (dry), chickpea (garbanzo), guar, lablab bean and lentil; Pea (*Pisum* spp.), field and pigeon.

<sup>2</sup> Other succulent Bean and Pea crops approved for use with this product includes: Bean (*lupinus* spp.), grain, sweet, white and white sweet; Bean (*Phaseolus* spp.), field, kidney, lima (dry), navy, pinto and tepary; Bean (*Vigna* spp.), adzuki bean, black-eyed pea, catjang, cowpea, crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, broad (dry), chickpea (garbanzo), guar, lablab bean and lentil; Pea (*Pisum* spp.), field and pigeon.

<sup>3</sup> Other head and stem brassica vegetables approved for use with this product include: Chinese broccoli, Brussels sprouts, Chinese (napa) cabbage, Chinese mustard, cavalo broccoli and kohlrabi.

<sup>4</sup> Other Fruiting Vegetables (except tomato) approved for use with this product include: eggplant, groundcherry, pepino, peppers (all) and tomatillo.

<sup>5</sup> Other Herb crops approved for use with this product include: angelica, balm, basil, borage, burnet, chamomile, catnip, chervil (dried), chive, Chinese chive, clary, coriander (leaf), costmary, cilantro (leaf), curry (leaf), dill (dillweed), horehound, hyssop, lavender, lovage (leaf), marigold, marjoram (*origanum* spp.), nasturtium, parsley (dried), pennyroyal, rosemary, rue, sage and savory, summer and winter.

<sup>6</sup> Other root vegetables approved for use with this product include: burdock, edible, celeriac, chervil, turnip-rooted; chicory; ginseng; parsley, turnip-rooted; parsnip; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret and turnip.

<sup>7</sup> Other Edible Podded Legume crops approved for use with this product include: Bean (*Phaseolus* spp.), runner, snap and wax; Bean (*Vigna* spp.), asparagus, Chinese longbean, moth, yardlong, jackbean; Pea (*Pisum* spp.), dwarf, edible-pod, snow, sugar snap, pigeon and sword bean.

<sup>8</sup> Other Leafy Greens crops approved for use with this product include: amaranth (Chinese spinach, leafy amaranth and tampala), arugula (rocket), chervil, chrysanthemum (edible-leaved and garland), corn salad, cress (garden, yellow rock and winter), dandelion, dock (sorrel), endive (escarole), lettuce (head and leaf), orach, parsley, purslane (garden and winter), radicchio (red chicory), spinach (New Zealand and Vine (Indian and malabar).

<sup>9</sup> Other cucurbit crops approved for use with this product include: Chayote (fruit), Chinese Wax Gourd, Citron Melon, Edible Gourd, Gherkin and Muskmelons (all) including Honeydew Melon.

<sup>10</sup> Other leafy brassica greens approved for use with this product include: broccoli raab, Chinese (bok choy) cabbage, collards, kale, mizuna, mustard greens, mustard spinach, rape greens and turnip greens.

<sup>11</sup> Other leaf petiole crops approved for use with this product include: cardoon, celtuce, Chinese celery, Florence fennel, and Swiss chard.

<sup>12</sup> Other tuber and corn vegetables approved for use with this product include: arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, edible burdock, edible canna, bitter and sweet cassava, chayote (root), chufá, dasheen (taro), ginger, leren, taniar, turmeric and bean yam.

11 of 41

Clethodim 26.4% EC is not recommended for use on vegetables crops being grown for seed production unless specific use directions are provided.

Clethodim 26.4% EC is a selective postemergence herbicide for control of annual and perennial grasses. Clethodim 26.4% EC does not control sedges or broadleaf weeds.

Repeated use of Clethodim 26.4% EC (or similar postemergence grass herbicides with the same mode of action) may lead to the selection of naturally occurring biotypes that are resistant to these products in some grass species.

If poor performance occurs and cannot be attributed to adverse weather or application conditions, a resistant biotype may be present. This is most likely to occur in fields where other control strategies such as crop rotation, mechanical removal, and other classes of herbicides are not used from year to year.

Do not allow Clethodim 26.4% EC to come in contact with desirable grass crops such as corn, rice, sorghum, small grains, or turf, as these and other grass crops will be injured or killed. Minor leaf spotting may occur on treated plants under certain environmental conditions. New foliage is not affected.

**Control Symptoms**

Treated grass weeds show a reduction in vigor and growth. Early chlorosis/necrosis of younger plant tissue is followed by a progressive collapse of the remaining foliage. Symptoms will generally be observed in 7 to 14 days after application, depending on grass species treated and environmental conditions.

**APPLICATION INFORMATION**

**Timing of Applications**

Apply Clethodim 26.4% EC postemergence to actively growing grasses according to rate table recommendations. Applications made to grass plants stressed by insufficient moisture, or hot or cold temperatures, or to grass plants exceeding recommended growth stages may result in unsatisfactory control. Do not apply under these conditions.

In arid regions where irrigation is used to supplement limited rainfall, Clethodim 26.4% EC should be applied as soon as possible, after irrigation (within 7 days). In arid regions, a second application of Clethodim 26.4% EC will generally provide more effective control of perennial grass weeds than a single application. Make second application to actively growing grass 2 to 3 weeks after emergence of new growth.

Cultivation of treated grasses 7 days prior to or within 7 days after application of Clethodim 26.4% EC may reduce weed control. DO NOT APPLY Clethodim 26.4% EC if rainfall is expected within one hour, since control may be reduced.

**ADDITION OF ADJUVANT OR CROP OIL CONCENTRATE**

CROP	ADJUVANT RECOMMENDATIONS
Alfalfa, Cotton, Dry Shelled Bean & Pea, Edible Podded Legume Vegetables, Peanuts (including Perennial), Potato, Soybean, Succulent Bean & Pea, Sugar Beet and Sunflower	Always use a crop oil concentrate* at 1.0 qt./A by ground or 1% v/v (but not less than 1 pt./A) in the finished spray volume by air.  1 to 2 qts./A of liquid fertilizer (10-34-0, 28% N or 32%N), or an equivalent amount (2.5 to 4.0 lbs./A) of spray grade ammonium sulfate (AMS) may be added to Clethodim 26.4% EC applications, in addition to the recommended rate of crop oil concentrate. The addition of MAS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Asparagus, Canols, Carrot, Clover, Cranberry, Cucurbits, flax, Fruiting Vegetables (except tomato), Garden Beet, Garlic, Head & Stem Brassica Vegetables, Herbs, Hops, Leaf Petioles, Leafy Brassica Greens, Leafy Greens, Mint, Mustard	Always use a crop oil concentrate at 1% v/v in the finished spray volume unless tank mix instructions indicate otherwise.  Addition of liquid fertilizer is not recommended for

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Seed, Onion (Dry Bulb & Green), Root Vegetables, Safflower, Sesame, Shallots (Dry Bulb & Green), Strawberry, Sweet Potato (yam & other Tuberous and Corn Vegetables except Potato) and Tomato	these crops.
Non-Bearing Food Crops, Ornamental Plants	Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (0.025% v/v). Use of crop oil concentrate is not recommended since it may injure flowers and foliage.
Conifer Trees, Fallow Land (and other non-producing agricultural areas), and Non-Crop or Non-planted Areas	Always use a crop oil concentrate containing at least 15% emulsifier at 1% v/v (but not less than 1 pt./A) in the finished spray volume.

\*Acceptable crop oil concentrates would be those that contain a minimum of 80% oils and 15% emulsifier. A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all the following criteria: be non phytotoxic, contain only EPA exempt ingredients, provide good mixing quality, and be successful in local experience. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils.

**Ground Application**

Use sufficient spray volumes and pressure is essential to ensure complete coverage. Use a minimum of 5 gals. and a maximum of 40 gals. of spray solution per acre. Under the following conditions a minimum of 10 gals. per acre is required; ultra narrow row cotton, narrow row soybeans, broadleaf herbicide tank mixes, perennial grasses, volunteer corn, drought or stress conditions, heavy grass pressure or when grasses are at or near maximum height. Failure to use a minimum of 10 gals. per acre under these conditions can result in poor coverage and reduced grass control requiring repeat applications. Spray pressures should reflect a minimum of 30 psi and a maximum of 60 psi at the nozzle. Do not use flood nozzles.

Applications to onions (dry bulbs and green), garlic, and shallots (dry bulbs and green) should be made in minimum of 20 gals. of spray solution per acre.

**Air Application**

Use a minimum of 3 gals. of spray solution per acre unless otherwise directed in this label. Increase spray volumes up to 10 gals. as grass or crop foliage becomes dense. For onions (dry bulbs and green), garlic, or shallots (dry bulbs and green): When applying by air do not exceed 8 fl.oz./A in a single applications. In California, air applications to onions garlic or shallots should be made in a minimum of 20 gals. of spray solution per acre. In states other than California, air applications to onions, garlic, or shallots should be made in a minimum of 10 gals. of spray solution per acre.

**Note: Crop injury may occur when Clethodim 26.4% EC is applied to onions, garlic or shallots with aerial equipment.**

**Spot Treatment**

When using hand sprayers or high volume sprayers utilizing hand guns, mix ¼% to ½% (0.33 oz. to 0.65 oz. per gal.) Clethodim 26.4% EC and treat to wet vegetation, while not allowing runoff of spray solution. For uses requiring crop oil concentrate, include crop oil concentrate at 1% (1.3 oz. Per gal.) by volume. For uses requiring non-ionic surfactant, include non-ionic surfactant at ¼% (0.33 oz. per gal.) by volume.

**Note: If Clethodim 26.4% EC is applied as a spot treatment, care should be taken to not exceed the maximum rate allowed on a "per acre" basis or crop injury may occur.**

**CHEMIGATION – ONION (DRY BULB AND GREEN) AND GARLIC**

**SPRINKLER IRRIGATION APPLICATION**

**Do not apply Clethodim 26.4% EC by Chemigation in the states of Idaho, Montana, Oregon and Washington**

Apply Clethodim 26.4% EC at the high rate recommended for annual grasses (16 fl. oz. per acre) when the grass height is at the low end of the range (application to larger grasses may not provide adequate control). Add a crop oil concentrate containing at least 15% emulsifier at 1 quart per acre.

Apply Clethodim 26.4% EC in 0.1 to 0.2 acre-inch of water either at the end of a regular irrigation set or as a separate application not associated with a regular irrigation using the least amount of water that provides

proper distribution and coverage. Application of more than label recommended quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness. Use a metering device to inject the Clethodim 26.4% EC into the irrigation water at a constant flow. Constant agitation must be maintained in the chemical supply tank during the entire period of herbicide application. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. Allow time for all lines to flush the herbicide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining herbicide, a dye indicator may be injected into the lines to mark the end of the application period.

It is not recommended that Clethodim 26.4% EC be applied through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

**Use Precautions**

1. Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, travelers, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.
3. If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place.
5. A person knowledgeable of the chemigation system and responsible for its operation or under supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
6. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
8. The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
10. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
11. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
12. Do not apply when wind speed favors drift beyond the area intended for treatment.

**RESTRICTIONS AND LIMITATIONS**

Do not apply if rain is expected within 1 hour or application as control may be unsatisfactory.

Do not apply a postemergence broadleaf herbicide within one day following application of Clethodim 26.4% EC or reduced grass control may result.

Clethodim 26.4% EC is not recommended for use on vegetable crops being grown for seed production unless specific use directions are provided.

For canola, do not apply more than 6 fl.oz. of Clethodim 26.4% EC per acre per season. For clover, flax, mustard seed, and radish crops, do not apply more than 16 fl. oz. of Clethodim 26.4% EC (0.25 lb. ai) per acre per season. For all other crops, do not apply more than 32 fl. oz. of Clethodim 26.4% EC (0.50 lb. ai) per acre per season. Application on Long Island, New York, is restricted to no more than 16 fl. oz. of Clethodim 26.4% EC (0.25 lb. ai) per acre per season.

Do not apply more than 8 fl.oz./A of Clethodim 26.4% EC **per application** to the following crops: asparagus, brassica vegetables (head and stem), bean (succulent), carrot, cranberry, cucurbits, flax, fruiting vegetables (except tomato), garden beet, green onion, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, legume vegetables (edible podded), non-bearing food crops, pea (dry shelled), pea (succulent), root vegetables, safflower, sesame and strawberry. Do not apply more than 6 fl. oz./A of Clethodim 26.4% EC per application to canola or mustard seed. For all other crops, do not apply more than 16 fl. oz. of Clethodim 26.4% EC (0.25 lb. ai) per acre per application. **Exceeding these recommendations may result in unacceptable crop injury.**

Do not apply under conditions of stress. Applying Clethodim 26.4% EC under conditions that do not promote active grass growth will reduce herbicide effectiveness. These conditions include drought, excessive water, extremes in temperature, low humidity and grasses either partially controlled or stunted from prior pesticide applications. Grasses under these kinds of stressful conditions will not absorb and translocate Clethodim 26.4% EC effectively, and will be less susceptible to herbicide activity.

Optimal perennial grass control can be obtained if rhizomes or stolons are cut up by preplant tillage practices (discing, plowing, etc.) to stimulate maximum emergence of grass shoots. Cultural practices such as continuous no-tillage in which the perennial grass rhizomes or stolons are not cut up, result in a very staggered, non-uniform weed emergence. Due to this non-uniform weed emergence, no fewer than 2 Clethodim 26.4% EC applications per season per year are recommended at the appropriate weed-growth stage rate under continuous no-till conditions.

Grass crops such as corn, rice, sorghum, small grains, or turf, etc. are highly sensitive to Clethodim 26.4% EC.

While all the vegetable crops on this label have been tested and are tolerant to Clethodim 26.4% EC, not all specialty varieties of these crops have been tested. It is advised that, before applying Clethodim 26.4% EC to specialty varieties of vegetable crops on this label, crop tolerance be investigated first using a small section of the field. It is possible that injury symptoms can occur. Symptoms may appear as leaf speckling or stunting.

Always read and follow the restrictions and limitations for all products whether used alone or in a tank mix. The most restrictive labeling of any product applies in tank mixes, including all crop rotational and other crop restrictions.

Tank mixes of Clethodim 26.4% EC and broadleaf herbicides may result in reduced grass control. If grass regrowth occurs, an additional application of Clethodim 26.4% EC may be necessary.

**AVOID SPRAY DRIFT**

Do not allow spray from ground or aerial equipment to drift onto adjacent land or crops. When drift may be a problem, do everything possible to reduce spray drift, including:

- Do not spray if wind speeds are or become excessive.
- Do not spray if wind speed is 10 mph or greater. If sensitive crops or plants are downwind, extreme caution must be used under all conditions.

- Do not spray if winds are gusty.
- Use extreme caution when conditions are favorable for drift (high temperatures, drought, low relative humidity), especially when sensitive plants are located nearby.
- Do not apply when a temperature inversion exists. If inversion conditions are suspected, consult with local weather services before making an application.
- Further reductions in drift can be obtained by:
  1. Using large droplet size sprays. Do not use nozzles that produce small droplets. Orient nozzles downward and slightly backward as needed to reduce drift for ground applications.
  2. Orienting nozzles straight back with the windstream, using straight stream orifices for aerial applications. Use the lowest number of nozzles practical with the largest possible orifice size to obtain the minimum 3 GPA volume. Application height and boom length should be set according to manufacturer's instructions to minimize drift.
  3. Increasing the volume of spray mixture (for example, a minimum of 10 GPA for ground applications) by using higher flow rate nozzles. Using lower pressure with the appropriate nozzle to obtain higher volumes will also reduce drift.
  4. Applying as close to target plants as practical while maintaining a good spray pattern for adequate coverage.

**Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the other crops thereof rendered unfit for sale, use or consumption.**

**CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 26.4% EC**

Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
Alfalfa including: Sainfoin Holy Clover Birdsfoot trefoil <sup>(3)</sup>	15 days before grazing, feeding or harvesting (cutting) for forage hay	6 -16 fl.oz. <sup>(4)</sup>	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air <sup>(5)</sup>	Refer to tank mix partners for feeding, grazing and harvesting restrictions. <sup>(5,6)</sup>  The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Asparagus	1 day	6 – 8 fl. oz.	1% v/v in the finished spray volume	Do not apply more than 8 fl.oz./A in a single application.  For repeat applications make on minimum of a 14 day interval.

Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
<b>Beans, Dry Shelled</b> including: Bean ( <i>Lupinus</i> spp.) Grain Sweet White White Sweet Bean ( <i>Phaseolus</i> spp.) Field Kidney Lima (dry) Navy Pinto Tepary Bean ( <i>Vigna</i> spp.) Adzuki Bean Black-eyed Pea Catjang Cowpea Crowder Pea Moth Bean Mung Bean Rice Bean Southern Pea Urd Bean Broad (dry) Chickpea (garbanzo) Guar Lablab Bean Lentil	30 days	6 – 16 fl.oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	Do not apply more than 16 fl.oz./A per application.  For repeat applications make on a minimum of a 1 day interval.  Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses.  The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Bean, Succulent</b> including: Bean ( <i>Phaseolus</i> spp.) Broad Bean (succulent) Lima Bean (green) Bean ( <i>Vigna</i> spp.) Black-eyed Pea Cowpea Southern Pea	21 days	6 – 8 fl. oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses.  Do not apply more than one (1) application per acre per season.  The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Beet, Garden</b>	30 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application.  For repeat applications make on a minimum of a 14 day interval.



Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
<b>Brassica Vegetables, Head &amp; Stem</b> including: Broccoli Brussels sprouts Cabbage Cauliflower	30 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application.  For repeat applications make on a minimum of a 14 day interval.
<b>Canola</b>	70 days	4 – 6 fl.oz.	1% v/v in the finished spray volume.	Do not apply after crop has begun bolting. Crop injury may occur when Clethodim 26.4% EC is applied during bloom period.  Do not apply more than 6 oz./A in a single application.  Do not exceed 6 fl.oz./A in a season.
<b>Carrot</b>	30 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application.  For repeat applications make on a minimum of a 14 day interval.
<b>Clover</b>	15 days before grazing, feeding, or harvesting (cutting) for forage hay.	6 – 16 fl.oz.	1% v/v in the finished spray volume.	For use on clover grown in the states of Idaho, Oregon, and Washington only.  Do not exceed 16 fl.oz./A in a season.
<b>Cotton</b>	60 days	6 – 16 fl.oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	Do not graze treated fields or feed treated forage or hay to livestock.  The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Cranberry</b>	30 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application.  Do not apply between the "hook" stage and the full fruit set.  For repeat applications make on a minimum of a 14 day interval.
<b>Cucurbits</b> including: Chayote (fruit)	14 days	6 – 8 fl.oz.	1% v/v in the finished spray	Do not apply more than 8 fl.oz./A in a single

Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
Chinese Wax Gourd Citron Melon Cucumber Gherkin Gourd, edible Muskmelons (all) including: Cantaloupes Honeydew Melon Pumpkin Squash (all) Watermelon			volume.	application.  For repeat applications make on a minimum of a 14 day interval.
<b>Fallow Land</b> <b>Conifer Trees</b> (and other non-producing agricultural areas)  <b>Non-Crop or Non-Planted Areas</b>	N/A	6 – 16 fl.oz.	1% v/v (but not less than 1 pt./A) in the finished spray volume using a crop oil concentrate containing at least 15% emulsifier.	Do not plant any crop for 30 days after application unless clethodim is registered for use in that crop.
<b>Flax</b>	60 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Apply prior to bloom. Crop injury may occur when Clethodim 26.4% EC is applied during the bloom period.  Do not apply more than 8 fl.oz./A in a single application.  Do not exceed 16 fl.oz./A in a season.
<b>Fruiting Vegetables</b> (except Tomato) including: Eggplant Groundcherry Pepino Peppers (all) Tomatillo	20 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application.  For repeat applications make on a minimum of a 14 day interval.
<b>Herbs</b> including: Angelica Balm Basil Borage Burnet Camomile Catnip Chervil (dried) Chive Chive, Chinese Clary Coriander (leaf) Costmary Culantro (leaf) Curry (leaf) Dill (dillweed)	14 days	6 – 8 fl. oz.	1% v/v in the finished spray volume.	Clethodim 26.4% EC has not been tested on all herbs, and herb varieties. It is the responsibility of the user to test Clethodim 26.4% EC on a small portion the crop to be treated before treating entire field.  Crop tolerance should be verified to Clethodim 26.4% EC on a small area of the herb crop, at the desired Clethodim 26.4% EC rate and with the same crop oil concentrate that will be used on the herb field. If no crop

19 Oct 11

Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
Horehound Hyssop Lavender Lovage (leaf) Marigold Marjoram ( <i>Origanum</i> spp.) Nasturtium Parsley (dried) Pennyroyal Rosemary Rue Sage Savory, Summer and Winter				<p>response is evident seven (7) days after treatment, Clethodim 26.4% EC may be used on the entire field at the rate tested and with the same crop oil used in the tolerance test.</p> <p>Do not apply more than 8 fl.oz./A in a single application.</p> <p>For repeat applications make on a minimum of a 14 day interval.</p>
<b>Hops</b>	21 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	<p>Do not apply more than 8 fl.oz./A in a single application.</p> <p>For repeat applications make on a minimum of a 14 day interval.</p>
<b>Leaf Petioles</b> including: Cardoon Celery Celtuce Chinese Celery Fennel, Florence (finocchio) Rhubarb Swiss Chard	30 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	<p>Do not apply more than 8 fl.oz./A in a single application.</p> <p>For repeat applications make on a minimum or a 14 day interval.</p>
<b>Leafy Brassica Greens</b> Including: Broccoli Raab Cabbage, Chinese (bok choy) Collards Kale Mizuna Mustard Greens Mustard Spinach Rape Greens Turnip Greens	14 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	<p>Do not apply more than 8 fl.oz./A in a single application.</p> <p>For repeat applications make on a minimum or a 14 day interval.</p>
<b>Leafy Greens</b> Including: Amaranth Chinese Spinach Leafy Amaranth Tampala Arugula (roquette) Chervil Chrysanthemum, Garland Corn Salad Cress Garden Upland (yellow rock and winter)	14 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	<p>Do not apply more than 8 fl.oz./A in a single application.</p> <p>For repeat applications make on a minimum or a 14 day interval.</p>

20041

Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
Dandelion Dock (sorrel) Endive (escarole) Lettuce, Head and Leaf Orach Parsley Purslane Garden Winter Radicchio (red chicory) Spinach New Zealand Vine (Indian and Malabar)				
<b>Legume Vegetables Edible Podded</b> including: Bean ( <i>Phaseolus</i> spp.) Runner Snap Wax Bean ( <i>Vigna</i> spp.) Asparagus Chinese Longbean Moth Yardlong Jackbean Pea ( <i>Pisum</i> spp.) Dwarf Edible-pod Snow Sugar Snap Pigeon Sword Bean	21 days	6 – 8 fl.oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	Do not apply more than 8 fl.oz./A in a single application.  Do not apply more than one (1) application per acre per season.  For peas apply before bloom, but no later than 21 days before harvest.  Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses.  The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Mint</b>	21 days	6 – 16 fl.oz. <sup>(4)</sup>	1 qt. by ground or 1% v/v (but not less than 1 pt./A by air).	Do not apply more than 16 fl.oz./A in a single application.  For repeat applications make on a minimum of a 14 day interval.
<b>Mustard Seeds</b>	75 days	4 – 6 fl.oz.	1% v/v in the finished spray volume.	Do not apply after crop has begun bolting. Crop injury may occur when Clethodim 26.4% EC is applied during the bloom period.  Do not apply more than 6 fl.oz./A in a single application.  Do not exceed 16 fl.oz./A in

Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
				a season.
<b>Onion</b> (Dry Bulb Only) <b>Garlic</b> <b>Shallot</b> (Dry Bulb Only)	45 days	6 - 16 fl.oz. <sup>(7), (8)</sup>	1% v/v in finished spray volume.	Minimum of 20 gals./A spray volume by ground in entire U.S.  Minimum of 20 gals./A spray volume by air in California. <sup>(9)</sup>  In states other than California, air applications to onions, garlic or shallots should be made in a minimum of 10 gals./A.
<b>Onion, Green</b> including: Green Eschalot Green Shallot Japanese Bunching Onion Leeks Scallion or Spring Onion	14 days	6 - 8 fl.oz.	1%v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application.  For repeat applications make on a minimum of a 14 day interval.
<b>Ornamentals</b>  <b>Non-Bearing Food Crops</b>	N/A  N/A	6 - 16 fl.oz.  6 - 8 fl.oz. <sup>(8)</sup>	Use of crop oil concentrate is not recommended since it may injure flowers and foliage. See Special Use Instructions.	Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (0.25% v/v).  Sugar maples cannot be tapped for syrup within one year of Clethodim 26.4% EC application.  Do not apply more than 8 fl.oz./A in a single application to non-bearing food crops.
<b>Pea, Dry Shelled</b> including: Pea ( <i>Pisum</i> spp.) Field Pigeon	30 days	6 - 8 fl.oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	Do not apply more than 8 fl.oz./A per application.  Do not apply more than one (1) application per acre per season.  Apply before bloom but not later than 30 days prior to harvest. <sup>(10)</sup>  Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses.  The addition of AMS has shown improved grass control for difficult to control

Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
				species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Pea, Succulent</b> including: Pea ( <i>Pisum</i> spp.) English Pea Garden Pea Green Pea Pigeon Pea	21 days	6 – 8 fl.oz.	1 qt. by ground or 1%v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	Do not apply more than 8 fl.oz./A per application.  Do not apply more than one (1) application per acre per season.  Apply before bloom but not later than 21 days prior to harvest. <sup>(10)</sup>  Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses.  The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Peanut (including Perennial)</b>	40 days	6 – 16 fl.oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Potato</b>	30 days	6 – 16 fl.oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Radish</b>	15 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application.  Do not apply more than 16 fl.oz./A (0.25 lb.ai) per acre in a season.  For repeat applications make on a minimum of a 14 day interval.

230F41

Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
<b>Root Vegetables</b> (except Radish), including: Chicory Ginseng Horseradish Turnip	30 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
<b>Safflower</b>	70 days	6 – 8 fl.oz.	1%v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application.  For repeat applications make on a minimum of a 14 day interval.
<b>Sesame</b>	14 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Do not apply during flowering.  Do not apply more than 8 fl.oz./A in a single application.  For repeat applications make on a minimum of a 14 day interval.
<b>Soybean</b>	60 days	6 – 16 fl.oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	Do not graze treated fields or feed treated forage or hay to livestock.  Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses.  The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Strawberry</b>	4 days	6 – 8 fl.oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl.oz./A in a single application.  For repeat applications make on a minimum of a 14 day interval.
<b>Sugar Beet</b>	40 days	6 – 16 fl.oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses.  The addition of AMS has shown improved grass control for difficult to control

Crops <sup>(1)</sup>	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre <sup>(2)</sup>	Special Use Instructions
				species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Sunflower</b>	70 days	6 – 16 fl.oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air. <sup>(5)</sup>	The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Sweet Potato, Yam and other Tuberous and Corn Vegetables (except Potato)</b> including: Artichoke Chinese Jerusalem Cassava Bitter Sweet Ginger	30 days	6 – 16 fl.oz.	1% v/v in the finished spray volume.	The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
<b>Tomato</b>	20 days	6 – 16 fl.oz.	1% v/v in the finished spray volume.	For repeat applications make on a minimum of a 14 day interval.

N/A = Not Applicable

<sup>1</sup> Clethodim 26.4% EC is not recommended for use on vegetable crops being grown for seed production unless specific use directions are provided.

<sup>2</sup> Acceptable crop oil concentrates would be those which contain a minimum of 80% oils and 15% emulsifier. A crop oil concentrate must contain either petroleum or vegetable oil base and must meet all the following criteria: be non phytotoxic, contain only EPA-exempt ingredients, provide good mixing quality and be successful in local experience. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. See the Addition of Adjuvant and Crop Oil Concentrate section for further information.

<sup>3</sup> Clethodim 26.4% EC may be applied to seeding or established alfalfa grown for seed, hay, silage, green chop or direct grazing.

<sup>4</sup> For weed control in established alfalfa and mint, the minimum use rate is 10 fl.oz./A.

<sup>5</sup> 1 to 2 qts./A of a liquid fertilizer (10-34-0, 28%N or 32%N), or an equivalent amount (2.5 to 4.0 lbs/A) or spray grade ammonium sulfate (AMS) may be added to Clethodim 26.4% EC applications, in addition to the recommended rate of crop oil concentrate.

<sup>6</sup> Do not apply Clethodim 26.4% EC plus 2,4-DB as a tank mix to alfalfa unless the 60 day feeding, grazing, and harvesting restriction on the 2,4-DB label can be observed.

<sup>7</sup> For ground applications to garlic or shallot, do not exceed 8 fl.oz./A in a single application. For air applications to onion, garlic or shallot, do not exceed 8 fl.oz. in a single application. For garlic and shallot, do not exceed 2 applications per season. In CA for air applications to onion, do not exceed 2 applications per season.

<sup>8</sup> If Clethodim 26.4% EC is applied as a spot treatment to onion, garlic, shallot, or non-bearing food crops, care should be taken to not exceed the maximum allowed on a "per acre" basis or crop injury may occur.

<sup>9</sup> In California do not apply Clethodim 26.4% EC to onion, garlic, or shallot until the crop has at least two full leaves. In California, 14 day spray intervals are recommended between the application of Clethodim 26.4% EC and liquid nitrogen or other herbicide applications. Injury to crop may occur when shorter intervals are observed.

<sup>10</sup> Applications of Clethodim 26.4% EC to peas during the bloom period could result in severe crop injury, including loss of yield and delayed maturity.



**IMPORTANT**

Plant tolerance to Clethodim 26.4% EC at labeled rates has been found to be acceptable for the indicated genera and species listed below. Due to variability within species, crop growth stage, environmental conditions, and application techniques, it is recommended that the user determine if the herbicide can be used safely on a few plants prior to widespread application. Neither the seller nor the manufacturer of Clethodim 26.4% EC have investigated the safety factor to plants not listed on the label.

**NON-BEARING FOOD CROPS**

**CLETHODIM 26.4% EC SHOULD NOT BE APPLIED TO NON-BEARING FRUIT OR NUT CROPS WHICH ARE GROWN FOR ROOT STOCK.**

Crop injury to non-bearing fruit and nut crops can occur if Clethodim 26.4% EC is improperly applied. Clethodim 26.4% EC should not be applied directly over the top of these plant types. Instead, spray should be directed at the base of the plant where grassy weeds are growing near the ground.

Non-bearing fruit and nut crops are plants which will not bear fruit or nuts for at least one year following Clethodim 26.4% EC application.

Common Name	Scientific Name
Apples	<i>Malus</i> spp.
Berries	<i>Vaccinium</i> spp.
	<i>Rubus</i> spp.
Cherry, Sweet	<i>Prunus avium</i> spp.
Citrus Fruits	<i>Citrus</i> spp.
Grapes	<i>Vitis</i> spp.
Olives	<i>Olea</i> spp.
Peach	<i>Prunus persica</i> spp.
Pears	<i>Pyrus communis</i> spp.
Prunes	<i>Prunus</i> spp.
Stone Fruits	<i>Prunus</i> spp.
Strawberries	<i>Fragaria</i> spp.
Tree Nuts	
Almond	<i>Prunus triloba</i> spp.
Filbert	<i>Cortlus maxima</i> spp.
Pecan	<i>Carya illinoensis</i> spp.
Pistachio	<i>Pistacia vera</i> spp.
Walnut	<i>Juglans</i> spp.

**CONIFER TREES**

Clethodim 26.4% EC can be used to control labeled grasses in Christmas tree farms, conifer nurseries, and conifer plantations (but not in forests).

Common Name	Scientific Name
Arborvitae, American	<i>Thuja occidentalis</i>
Cedars	<i>Cedrus</i> spp.
Cypress	<i>Taxodium</i> spp.
Fir, Douglas	<i>Pseudotsuga menziesii</i>
Firs	<i>Abies</i> spp.
Hemlock, Canadian/Eastern	<i>Tsuga canadensis</i>
Hemlock, Western	<i>Tsuga heterophylla</i>
Pines	<i>Pinus</i> spp.
Spruces	<i>Picea</i> spp.
Yew	<i>Taxus</i> spp.

**NON-CROP OR NON-PLANTED AREAS**

The following areas are considered non-crop or non-planted areas: rights-of-way including railroads, highways, roads, dividers, medians, pipelines, public utility lines, pumping stations, transformer stations and substations. Around airports, electric utilities, commercial buildings, manufacturing plants, storage yards, rail yards, fence lines, parkways, and post-harvest croplands. Also beneath greenhouse benches and around gold courses.

**RECOMMENDATIONS FOR ANNUAL GRASSES  
(EXCEPT FOR IN ESTABLISHED ALFALFA AND MINT)**

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Use the high rate under heavy pressure and/or when grasses are at maximum height.
- Do not apply more than 8 fl.oz./A of Clethodim 26.4% EC **per application** to the following crops: asparagus, carrot, cranberry, cucurbits, flax, fruiting vegetables (except tomato), garden beets, green onion, head and stem brassica vegetables, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, non-bearing food crops, root vegetables, safflower, sesame and strawberry. Do not apply more than 6 fl.oz./A of Clethodim 26.4% EC per application to canola or mustard seed.

Grass Species	Scientific Name	Weed Height (inches)*	Rate Fl. oz./Acre	High Rate <sup>(1)</sup>
Barnyardgrass	<i>Echinochloa crus-galli</i>	2 to 8	6	8
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2 to 6	6	8
Brome				
California	<i>Bromus carinatus</i>	2 to 6	6	8
Cheat	<i>Bromus secalinus</i>	2 to 6	6	8
Downy	<i>Bromus tectorum</i>	2 to 6	6	8
Ripgut	<i>Bromus diandrus</i>	2 to 6	6	8
Canarygrass	<i>Phalaris canariensis</i>	1 to 4	6	8
Crabgrass				
Hairy	<i>Digitaria adscendens</i>	2 to 6**	6	8
Large	<i>Digitaria sanguinalis</i>	2 to 6**	6	8
Smooth	<i>Digitaria ischaemum</i>	2 to 6**	6	8
Southern	<i>Digitaria ciliaris</i>	2 to 6**	6	8
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2 to 6**	6	8
Fall Panicum	<i>Panicum dichotomiflorum</i>	2 to 8	6	8
Field Sandbur	<i>Cenchrus incertus</i>	2 to 6	6	8
Foxtail				
Giant	<i>Setaria faberi</i>	2 to 12	6	8
Green	<i>Setaria viridis</i>	2 to 8	6	8
Yellow	<i>Setaria glauc</i>	2 to 8	6	8
Goosegrass	<i>Eleusine indica</i>	2 to 6**	6	8
Itchgrass	<i>Rottboellia cochinchinensis</i>	2 to 6	6	8
Junglerice	<i>Echinochloa colona</i>	2 to 6	6	8
Lovegrass (Stinkgrass)	<i>Eragrostis cilianensis</i>	2 to 6	6	8
Rabbitsfootgrass	<i>Polypogon monspeliensis</i>	1 to 4	6	8
Red rice	<i>Oryza sativa</i>	1 to 3	6	8
Ryegrass				
Hardy	<i>Lolium remotum</i>	2 to 6	6	8
Italian	<i>Lolium multiflorum</i>	2 to 6	6	8
Seedling Johnsongrass	<i>Sorghum halepense</i>	4 to 10	6	8
Shattercane	<i>Sorghum bicolor</i>	6 to 18	6	8
Southwestern Cupgrass	<i>Eriochloa gracilis</i>	2 to 6	6	8
Sprangle top				
Amazon	<i>Leptochloa panicoides</i>	2 to 6	6	8
Bearded	<i>Leptochloa fascicularis</i>	2 to 6	6	8
Mexican	<i>Leptochloa uninervia</i>	2 to 6	6	8
Red	<i>Leptochloa filiformis</i>	2 to 6	6	8

**RECOMMENDATIONS FOR ANNUAL GRASSES  
(EXCEPT FOR IN ESTABLISHED ALFALFA AND MINT) (continued)**

Grass Species	Scientific Name	Weed Height (inches)*	Rate Fl. Oz./Acre	High Rate <sup>(1)</sup>
Texas Panicum	<i>Panicum texanum</i>	2 to 6	6	8
Volunteer Cereals <sup>(2)</sup>				
Barley	<i>Hordeum vulgare</i>	2 to 6	6	8
Oats	<i>Avena sativa</i>	2 to 6	6	8
Rye	<i>Secale cereale</i>	2 to 6	6	8
Wheat	<i>Triticum aestivum</i>	2 to 6	6	8
Volunteer Corn <sup>(3)</sup>	<i>Zea mays</i>	4 to 12	6	8
Volunteer Corn <sup>(3)</sup>	<i>Zea mays</i>	12 to 24	6	8
Volunteer Corn (S.R.) <sup>(4)</sup>	<i>Zea mays</i>	4 to 12	8 (suppression only)	
Volunteer Grain Sorghum	<i>Sorghum bicolor</i>	8 to 12	6	8
Wild Oats	<i>Avena fatua</i>	2 to 6	6	8
Wild Proso Millet	<i>Panicum miliaceum</i>	2 to 10	6	8
Witchgrass	<i>Panicum capillare</i>	2 to 8	6	8
Woolly Cupgrass	<i>Eriochloa villosa</i>	2 to 8	6	8

\* Generally occurs between 3-leaf stage and tillering.

\*\* Length of lateral growth.

<sup>(1)</sup> Rates higher than 8 fl.oz./A may be applied in certain geographic areas, cropping situations, or environmental conditions, where experience has shown that higher rates are needed for satisfactory control of annual grasses. In these situations, rates from 8 to 16 fl.oz./A may be applied. Do not apply more than 8 fl.oz./A of Clethodim 26.4% EC per application to the following crops: asparagus, carrot, cranberry, cucurbits, flax, fruiting vegetables (except tomato), garden beet, green onion, head and stem brassica vegetables, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, non-bearing food crops, root vegetables, safflower, sesame and strawberry. Do not apply more than 6 fl.oz./A of Clethodim 26.4% EC per application to canola or mustard seed.

<sup>(2)</sup> When a cereal grain crop (such as wheat) is interseeded for crop establishment or is planted as wind breaks to aid crop establishment, the minimum Clethodim 26.4% EC use rate for control is 8 fl.oz./A.

<sup>(3)</sup> Includes Roundup Ready®, Liberty Link® and IMI-CORN® volunteer corn.

<sup>(4)</sup> Sethoxydim resistant volunteer corn.

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RECOMMENDATIONS FOR ANNUAL & PERENNIAL GRASS CONTROL IN ESTABLISHED ALFALFA AND MINT WITH CLETHODIM 26.4% EC			
Grass Species	Weed Stage	Rate Fl. Oz./Acre	High Rate
Annual & Perennial Grasses Listed in Grass Table	See Table	10	16
<p><b>Mowing:</b> The best control of annual grasses can be achieved by applying Clethodim 26.4% EC before grass weeds are mowed. Once a grass is mowed it becomes tougher to control, as much of the available leaf surface has been removed. In areas without a killing frost, some annuals can over-winter after having been mowed multiple times. These grasses form large crowns and may contain many viable buds. These grasses, even though they may be an annual grass, may require repeated applications of Clethodim 26.4% EC for partial or complete control.</p> <p><b>Irrigated Alfalfa and Mint:</b> Irrigation practices can be very critical to the successful use of Clethodim 26.4% EC in established alfalfa and mint and may be necessary to initiate active growth of the weeds prior to applications. Generally applications 2 to 4 days after an irrigation are most effective. Irrigation made shortly after application (2 days) can be effective, but more consistent grass control occurs when the irrigation is made before the application.</p> <p><b>Aerial Application:</b> Apply Clethodim 26.4% EC in a minimum of 10 GPA in established alfalfa and mint when applying by air.</p> <p><b>Annual Grass Control:</b> Apply Clethodim 26.4% EC at the grass sizes indicated in the Recommendation for Annual Grass Table and rates indicated. If grass has been cut, apply Clethodim 26.4% EC after active growth has resumed and regrowth has reached a minimum height and before it reaches the maximum height indicated. Apply before the alfalfa/mint canopy covers the grasses and interferes with the spray coverage. Some annual grasses are spring- and summer-germinating plants, while others are fall-germinating plants, and the time they are actively growing and most susceptible to Clethodim 26.4% EC may vary from region to region. Also some annuals germinate over an extended period of time, and because control of small grasses is desired, applications after each weed flush may be required. As a general rule spray spring and summer-germinating grasses as early in the season as possible, after initial green-up. Spray fall-germinating weeds in the fall soon after they begin growing but before any damage is done due to frost. Late fall applications may be less effective due to environmental conditions, such as frost, slower plant growth, or the onset of flowering.</p> <p><b>Perennial Grass Control:</b> Clethodim 26.4% EC effectively controls perennial grasses such as bermudagrass, Johnsongrass, quackgrass, wirestem muhly, tall fescue, foxtail barley and orchardgrass. Due to the part to lack of tillage, perennial grasses are more difficult to control in a perennial crop such as established alfalfa or mint. A program of repeated applications is usually necessary for best results. The best way to control perennial grasses is to do so in the year of stand establishment before rhizomes and stolons become large and difficult to kill.</p> <p>Use the high rate under heavy grass pressure and/or when grasses are at or near maximum height.</p> <p>Always add a crop oil concentrate at 1 qt./A by ground or 1% v/v (but not less than 1 pt./A) to the finished spray volume by air.</p>			

RECOMMENDATIONS FOR ANNUAL BLUEGRASS CONTROL WITH CLETHODIM 26.4% EC			
Grass Species	Weed Stage	Rate Fl. oz./A	High Rate
Annual Bluegrass ( <i>Poa annua</i> )	to 4-leaf	6*	16
<p>Apply under favorable soil moisture and humidity, which exists within a few days after rainfall or within 7 days after irrigation. Grass needs to be actively growing at time of application(s).</p> <p>Apply at weed stage indicated on the label, as reduced control can be expected with more mature annual bluegrass.</p> <p>Use a high rate under heavy grass pressure and/or when annual bluegrass is more mature.</p> <p>Always add a crop oil concentrate at 1 qt./A by ground to the finished spray volume.</p> <p>*Use a minimum of 10 fl.oz./A to control annual bluegrass in seedling and established alfalfa and mint.</p>			

**DIRECTIONS FOR REDCED RATE TO CONTROL SMALL ANNUAL GRASSES IN CANOLA, DRY SHELLED BEAN & PEA (INCLUDING SOYBEAN), EDIBLE PODDED LEGUME VEGETABLES, FLAX, MUSTARD SEED, SUCCULENT BEAN & PEA AND SUGAR BEET (REDUCED RATE RECOMMENDATIONS NOT FOR USE IN CALIFORNIA)**

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Regrowth by tillering may occur if application is made when plants are stressed by lack of moisture, excessive moisture, low or high temperatures and/or under very low humidity.

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (inches)	RATE FL.OZ/ ACRE <sup>(1)</sup>
Barnyardgrass	<i>Echinochloa crus-galli</i>	1 to 4	4
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	1 to 4	5
Crabgrass			
Large	<i>Digitaria sanguinalis</i>	1 to 3*	4
Large	<i>Digitaria sanguinalis</i>	1 to 4*	5
Smooth	<i>Digitaria ischaemum</i>	1 to 3*	4
Smooth	<i>Digitaria ischaemum</i>	1 to 4*	5
Southern	<i>Digitaria ciliaris</i>	1 to 4*	5
Fall Panicum	<i>Panicum dichotomiflorum</i>	1 to 4	4
Foxtail			
Giant	<i>Setaria faberi</i>	1 to 4	4
Green	<i>Setaria viridis</i>	1 to 4	4
Millet	<i>Setaria italica</i>	1 to 4	5
Yellow	<i>Setaria glauca</i>	1 to 4	4
Seedling Johnsongrass	<i>Sorghum halepense</i>	1 to 6	5
Shattercane	<i>Sorghum bicolor</i>	4 to 10	4
Texas Panicum	<i>Panicum texanum</i>	1 to 4	5
Volunteer Cereals			
Barley	<i>Hordeum vulgare</i>	1 to 4	5
Oats	<i>Avena sativa</i>	1 to 4	5
Wheat	<i>Triticum aestivum</i>	1 to 4	5
Volunteer Corn**	<i>Zea mays</i>	4 to 12	4
Wild Proso Millet	<i>Panicum miliaceum</i>	1 to 6	4
Wild Oats	<i>Avena fatua</i>	1 to 4	5

\* Length of lateral growth

\*\* Not S.R. Corn

<sup>(1)</sup> Always add a crop oil concentrate at 1 qt./A by ground applications to the finished spray volume.

**RECOMMENDATIONS FOR PERENNIAL GRASSES**

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches recommended growth stage for treatment.
- Use the high rate under heavy grass pressure and/or when grasses are at maximum height.
- Do not apply more than 8 fl.oz./A of Clethodim 26.4% EC per application to the following crops: asparagus, carrot, cranberry, cucurbits, flax, fruiting vegetables (except tomato), garden beet, green onion, head & stem brassica vegetables, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, non-bearing food crops, root vegetables, safflower, sesame and strawberry. Do not apply more than 6 fl.oz./A of Clethodim 26.4% EC per application to canola or mustard seed.

GRASS SPECIES	WEED HEIGHT (inches)	RATE FL.OZ./ACRE	HIGH RATE
<i>Bermudagrass (Cynodon dactylon)</i>			
First Application	3 (or up to 6" runners)	8	16
Repeat Application(s) (if regrowth occurs)	3 (or up to 6" runners)	8	16
<i>Fescue, Tall (Festuca arundinacea)</i>			
First Application	4 to 8	8	16
Repeat Application(s) (if regrowth occurs)	4 to 8	8	16
<i>Foxtail Barley (Hordeum jubatum)</i>			
First Application	2 to 6	8	16
Repeat Application(s) (if regrowth occurs)	2 to 6	8	16
<i>Orchardgrass (Dactylis glomerata)</i>			
First Application	4 to 8	8	16
Repeat Application(s) (if regrowth occurs)	4 to 8	8	16
<i>Quackgrass (Elytrigia repens)</i>			
First Application	4 to 12	8	16
Repeat Application(s) (if regrowth occurs)	4 to 12	8	16
<i>Rhizome Johnsongrass (Sorghum halepense)</i>			
First Application	12 to 24	8	16
Repeat Application(s) (if regrowth occurs)	6 to 18	8	8
<i>Wirestem Muhly (Muhlenbergia frondosa)</i>			
First Application	4 to 8	8	16
Repeat Application(s) (if regrowth occurs)	4 to 8	8	16
<i>Perennial Bluegrass*</i>			
<i>Roughstalk (Poa trivialis)</i>			
<i>Kentucky (Poa prantensis)</i>			
First Application	2 to 4	8	16
Repeat Application(s) (if regrowth occurs)	2 to 4	8	16
<i>Bentgrass* (Agrostis spp.)</i>			
First Application	2 to 4	-	16
Repeat Application(s) (if regrowth occurs)	2 to 4	-	16

\*Control of quackgrass, perennial bluegrass and bentgrass with of Clethodim 26.4% EC may be enhanced by adding AMS at 2.5 to 4.0 lbs./A

**TANK MIXES INFORMATION**

The labels for each of the herbicides recommended for tank mixing with Clethodim 26.4% EC are unique to the characteristics of those products and contain restrictions and limitations that may include, but are not limited to:

1. Geographic restrictions – all products are not registered for use in all areas and rates may vary from one region of labeled use to another;
2. Crop rotation restrictions;
3. Applicator certification requirements;
4. Worker safety rules (e.g. protective clothing, reentry time, posting);
5. Soil type or soil characteristics (e.g. protective clothing, reentry time, posting);
6. Maximum dosage or number of applications per season;
7. Rain free period required; or
8. Application timing (e.g. pre-harvest interval);
9. Do not exceed the total season rates.

**THE MOST RESTRICTIVE LABELING OF ANY PRODUCT USED IN A TANK MIX MUST BE FOLLOWED**

**TANK MIX APPLICATION OF CLETHODIM 26.4% EC AND BROADLEAF HERBICIDES FOR CONTROL OF GRASSES AND BROADLEAF WEEDS**

- Apply only to actively growing grass and broadleaf weeds at recommended height or growth stage listed on each label.
- Apply when the first grass or broadleaf weed species in a mixed population reaches the recommended height or growth stage for treatment.
- Apply under favorable soil moisture and humidity that exist a few days after rainfall or within seven days after irrigation.
- Always add the appropriate adjuvant to the spray mix at the rate recommended for each specific tank mix combination.
- Tank mix applications may sometimes result in reduced grass control and possible increases in crop injury as compared to either product used alone. If regrowth occurs, or an additional flush of new grass emerges, make a second application of Clethodim 26.4% EC, as specified in the respective size and rate tables.
- Do not tank mix Clethodim 26.4% EC when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.

**MIXING INSTRUCTIONS**

1. Fill clean spray tank ½ to 2/3 of desired level with clean water.
2. While agitating, add the correct amount of Clethodim 26.4% EC. Agitation should create a rippling or rolling action on the water surface.
3. If tank mixing Clethodim 26.4% EC with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates, and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
4. Add any required adjuvants (crop oil concentrate, non-ionic surfactant and/or nitrogen solution).
5. Fill spray tank to desired level with water. **Agitation should continue until all spray solution has been applied.**

Failure to agitate the spray solution may result in improper mixing of the herbicides and unsatisfactory weed control. Mixing and compatibility qualities should be verified by a jar test.

**Information on Antagonism**

Tank mixes of Clethodim 26.4% EC with postemergence broadleaf herbicides have shown some reduction or failure to control certain grass species which would have otherwise been controlled when Clethodim 26.4% EC is applied alone. Activity of the postemergence broadleaf herbicide in the tank mix is not affected.

**ALFALFA**

**Table 1. Clethodim 26.4% EC Tank Mixes with Broadleaf Herbicides for Alfalfa (Refer to the recommended tables above for specific grasses and growth stages)**

Product <sup>(2)</sup>	Application Rates/Acre <sup>(1)</sup>		Crop Oil Concentrate <sup>(3)</sup> (V/V)	
	Annual Grasses	Perennial Grasses	Ground	Air
Clethodim 26.4% EC + 2,4-DB <sup>(4)</sup>	10 to 16 fl.oz. + Refer to 2,4-DB label	10 to 16 fl.oz. + Refer to 2,4-DB label	1%	1%
Clethodim 26.4% EC + Pursuit DG <sup>(5)</sup> Or Pursuit <sup>(5)</sup>	10 to 16 fl.oz. + 1.08 to 2.16 oz. Or 3 to 6 fl.oz.	-	1%	1%
Clethodim 26.4% EC	10 to 16 fl.oz.	-	0.5%	0.5%

+ Buctril® 2L <sup>(6)</sup> Or Buctril Gel <sup>(6,7)</sup>	+ 1.0 to 1.5 pts. Or 0.5 to 0.75 pt.			
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- <sup>(1)</sup> If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Clethodim 26.4% EC alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.
- <sup>(2)</sup> Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
- <sup>(3)</sup> Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.
- <sup>(4)</sup> Clethodim 26.4% EC plus 2,4-DB may increase the severity of crop injury when tank mixed. Alfalfa plants will generally outgrow this temporary crop injury within a few weeks.
- <sup>(5)</sup> Before using this tank mix, read and understand the PURSUIT or PURSUIT DG labels for geographical restrictions and restrictions regarding alfalfa growth stage and type. Failure to do so can result in crop injury to alfalfa. Do not feed, graze, or harvest alfalfa for 30 days following an application of PURSUIT to alfalfa.
- <sup>(6)</sup> In the states of Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada and the western halves of North Dakota, South Dakota, Nebraska, and Kansas: The Clethodim 26.4% EC plus BUCTRIL or BUCTRIL GEL tank mix must be applied in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliates. Unacceptable crop injury may occur to alfalfa seedlings less than the 2 trifoliates. Clethodim 26.4% EC plus BUCTRIL or BUCTRIL GEL applications made when temperatures are expected to exceed 80° F at (and 3 days following) application can result in unacceptable crop injury. In the states not listed above, apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leaf burn, unacceptable crop injury may occur to alfalfa in the 2 trifoliolate or smaller stage of growth. Clethodim 26.4% EC plus BUCTRIL or BUCTRIL GEL applications made when temperatures are expected to exceed 70° F at (and 3 days following) application can result in unacceptable crop injury. Crop leaf burn can occur following Clethodim 26.4% EC plus BUCTRIL or BUCTRIL GEL application. Warm, humid conditions may enhance leaf burn. New crop growth will not be affected.
- <sup>(7)</sup> Do not apply when alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.

**CANOLA**

**Table 2. REDUCED RATE CLETHODIM 26.4% EC TANK MIXES WITH BROADLEAF HERBICIDED FOR CANOLA**  
(Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT	APPLICATION RATES/ACRE		AMMONIUM SULFATE	
	ANNUAL GRASSES <sup>(1)</sup>	PERENNIAL GRASSES	GROUND	AIR
Clethodim 26.4% EC <sup>(2)</sup> + Liberty <sup>(3)</sup>	4 to 5 fl.oz. + 34 fl.oz.	-	3.0 lbs.	3.0 lbs.

- <sup>(1)</sup> Annual grasses and sizes controlled with these tank mixtures are those that are identified in the **DIRECTIONS FOR REDUCED RATE TO CONTROL SMALL ANNUAL GRASSES** table.
- <sup>(2)</sup> Do not apply Clethodim 26.4% EC tank mix during or after bolting or flowering or crop injury may occur.
- <sup>(3)</sup> For use only on LibertyLink® canola



**COTTON**

**Table 3. CLETHODIM 26.4% EC TANK MIXED WITH COBRA® AND MSMA APPLIED POST DIRECTED TO COTTON**

PRODUCT <sup>(1)</sup>	APPLICATION RATES/ACRE <sup>(2)</sup>		CROP OIL CONCENTRATE <sup>(3)</sup> V/V	COMMENTS
	ANNUAL GRASSES	PERENNIAL GRASSES		
Clethodim 26.4% EC <sup>(4)</sup> + Cobra + MSMA (4.0 lbs./gal) Or MSMA (6.6 lbs./gal)	6 to 8 fl.oz.	8 to 16 fl.oz.	GROUND 1%	Reduced broadcast rate in proportion to the band area actually treated.
	See COBRA label for rates to control broadleaf weeds and height limitations for cotton. Refer to the Clethodim 26.4% EC label for weed height and species controlled.			
	See MSMA label for rates to control broadleaf weeds and height limitations for cotton. Refer to the Clethodim 26.4% EC label for weed height and species controlled.			

- <sup>(1)</sup> Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
- <sup>(2)</sup> If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Clethodim 26.4% EC alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.
- <sup>(3)</sup> Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.
- <sup>(4)</sup> If at the time of application, grass height is so tall that post-directed applications cannot get good coverage over the top of the grassy weeds, then poor control may result and a second (non-post directed) application of Clethodim 26.4% EC may be necessary.

**Table 4. CLETHODIM 26.4% EC TANK MIXED WITH BUCTRIL 4 EC TO CONTROL EMERGED WEEDS IN BXN COTTON AS A BROADCAST APPLICATION**

PRODUCT <sup>(1)</sup>	APPLICATION RATES/ACRE <sup>(2)</sup>	CROP OIL CONCENTRATE <sup>(3)</sup> PER ACRE	COMMENTS <sup>(7)</sup>
	ANNUAL GRASSES		See charts for grasses controlled.
Clethodim 26.4% EC <sup>(4)</sup> + Buctril 4 EC <sup>(4,5,6)</sup>	8 to 16 fl.oz.	1 qt.	
	See Buctril 4 EC label for rated to control broadleaf weeds and height limitations for cotton.		

- <sup>(1)</sup> Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
- <sup>(2)</sup> If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Clethodim 26.4% EC at the recommended rate with the appropriate amount of crop oil concentrate in a non-Buctril tank mix.
- <sup>(3)</sup> Always use a crop oil concentrate at 1 qt./A in the finished spray volume.
- <sup>(4)</sup> Applications of Buctril 4 EC can be made only to cotton that has been genetically modified for crop tolerance to postemergence over-the-top applications of bromoxynil.
- <sup>(5)</sup> Do not apply Clethodim 26.4% EC plus Buctril tank mix within 75 days of harvest.
- <sup>(6)</sup> Do not exceed 2 applications of Buctril before cotton is 12 inches tall and one application after 12 inches tall.
- <sup>(7)</sup> Use a minimum of 10 gals. of spray solution per acre.

34 of 41

**Table 5. CLETHODIM 26.4% EC TANK MIXED WITH GLYPHOSATE TO CONTROL EMERGED GRASSES IN COTTON AS A BROADCAST APPLICATION**

PRODUCT <sup>(1)</sup>	APPLICATION RATES/ACRE <sup>(2)</sup>		ADJUVANT		COMMENTS <sup>(7)</sup>
	ANNUAL GRASSES	PERRENIAL GRASSES	Glyphosate formulation with built in adjuvant	Glyphosate formulation without built in adjuvant	
Clethodim 26.4% EC <sup>(4)</sup> + Glyphosate	6 to 8 fl.oz.	8 to 16 fl.oz.	Non-ionic surfactant @ 0.125% to 0.25% v/v plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gals. of carrier	Crop oil concentrate @ 1pt./A plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gals. of carrier	Use a minimum of 10 gals. of spray solution per acre.
	See glyphosate label for rates to control broadleaf weeds and height limitations for cotton.				

<sup>(1)</sup> If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Clethodim 26.4% EC at the recommended rate with the appropriate amount of crop oil concentrate.

**DRY SHELLED AND SUCCULENT BEANS**

**Table 6. CLETHODIM 26.4% EC TANK MIXES WITH BROADLEAF HERBICIDES FOR DRY SHELLED AND SUCCULENT BEANS**  
(Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>		CROP OIL CONCENTRATE <sup>(3)</sup> (V/V)	
	ANNUAL GRASSES <sup>(1)</sup>	PERENNIAL GRASSES	GROUND	AIR
Clethodim 26.4% EC <sup>(2)</sup> + Basagran®	8 to 10 fl.oz.  + 1.0 to 2.0 pts.	10 to 16 fl.oz.  + 1 to 2 pts.	1%	1%

<sup>(1)</sup> If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Clethodim 26.4% EC alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.

<sup>(2)</sup> Broadleaf weed control may be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.

<sup>(3)</sup> Always use a crop oil at the listed rate (but not less than 1 pt./A) in the finished spray volume.

**FLAX**

**Table 7. REDUCED RATE CLETHODIM 26.4% EC TANK MIXES WITH BROADLEAF HERBICIDES FOR FLAX**  
(Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT	APPLICATION RATES/ACRE		CROP OIL CONCENTRATE	
	ANNUAL GRASSES <sup>(1)</sup>	PERENNIAL GRASSES	GROUND	AIR
Clethodim 26.4% EC + Bronate Advanced™ <sup>(2,3)</sup>	4 to 5 fl.oz. + 11.4 fl.oz.	-	1 pt.	1 pt.

Clethodim 26.4% EC + Bronate® <sup>(2,3)</sup>	4 to 5 fl.oz. + 0.9 pt.	-	1 pt.	1 pt.
Clethodim 26.4% EC + Buctril <sup>(2,3)</sup>	4 to 5 fl.oz. + 1.0 pt.	-	1 pt.	1 pt.
Clethodim 26.4% EC + Rhonox® <sup>(2,3)</sup>	4 to 5 fl.oz. + 0.25 to 0.5 pt.	-	1 pt.	1 pt.

<sup>(1)</sup> Annual grasses and sizes controlled with these tank mixtures are those that are identified in the **DIRECTIONS FOR REDUCED RATE TO CONTROL SMALL ANNUAL GRASSES** table.

<sup>(2)</sup> Do not apply Clethodim 26.4% EC tank mix during or after bud or to ornamental flax or crop injury may occur.

<sup>(3)</sup> Do not apply tank mixes if temperatures are expected to exceed 85°F at (or 3 days following) application or crop injury may occur.

**FALLOW LAND**

**DIRECTIONS FOR USE**

Clethodim 26.4% EC may be used to control annual and perennial grasses in land has been left fallow the previous year and other non-producing agricultural areas. Apply Clethodim 26.4% EC at 6 to 8 fl.oz./A for annual grasses and 8 to 16 fl.oz./A for perennial grasses. When both grass and broadleaf weeds are the target pest, Clethodim 26.4% EC may be tank mixed with 2,4-D ester or Banvel® SGF for broad spectrum control. When both annual ad perennial grasses occur in the same field, use a minimum of 8 fl.oz./A Clethodim 26.4% EC rate.

**Information**

- Use a minimum spray volume of 5 gals./A for aerial applications and 15 gals./A for ground applications.
- Apply only to actively growing grasses when the first grass reaches the recommended weed height as specified by the Recommendations for Annual and Perennial Grasses section of this label.
- Annual grasses that emerge after the Clethodim 26.4% EC application will not be controlled, and a second application may be necessary.
- The control of perennial grasses may require more than 1 application in non-tilled areas.
- Do not plant any crop for 30 days after application unless clethodim is registered for use in that crop.
- Do not apply to grasses that have tillered, formed seedheads or exceeded recommended growth stage.
- Do not use flood jet nozzles.
- Do not apply to drought stressed grasses.
- Do not mow area for 2 weeks prior to or after the Clethodim 26.4% EC application.

**TABLE 8. Clethodim 26.4% EC IN TANK MIXES TO CONTROL ANNUAL AND PERENNIAL GRASSES IN FALLOW LAND**

PRODUCT	APPLICATION RATES/ACRE <sup>(1)</sup>		CROP OIL CONCENTRATE <sup>(2)</sup> V/V	
	Annual Grasses	Perennial Grasses	Ground	Air
Clethodim 26.4% EC + 2,4-D ester or BANVEL SGF	6 to 8 fl.oz. + 0.5 lb./A Or See BANVAL SGF label for rates	8 to 16 fl.oz.	1%	1%

Refer to Clethodim 26.4% EC label for weed height and species control. Review BANVEL SGF and 2,4-D labels for crops restrictions, use rates and weeds controlled.

Always use a crop oil concentrate or methylated seed oil containing at least 15% emulsifier at the listed rate (but not less than 1 pt./A) in the finished spray volume.

RECOMMENDATIONS FOR GRASS SUPPRESSION IN NON-CROP AREAS WITH CLETHODIM 26.4% EC			
GRASS SPECIES	WEED STAGE	RATE FL.OZ./ACRE	HIGH RATE
Annual and perennial grasses that exceed height claimed for control on height chart above	Up to and including grasses in the seed head stage.	12	16
Do not apply as part of a tank mix when applying Clethodim 26.4% EC for grass suppression.			
Add a crop oil concentrate at 1 qt./A by ground to the finished spray volume.			

**TABLE 9. CLETHODIM 26.4% EC FOR THE CONTROL AND/OR SUPPRESSION OF TALL FESCUE IN NATIVE PRAIRIE WARM-SEASON GRASS RESTORATION PROJECTS**

PRODUCT	PRODUCT RATES	GRASS WEEDS CONTROLLED/SUPRESSED		WEED STAGES
		COMMON NAME	SCIENTIFIC NAME	
Clethodim 26.4% EC	10 to 12 fl.oz./A	Tall Fescue	<i>Festuca arundinacea</i>	4 to 6 inches tall (40 to 60% green-up)
<b>Adjuvant: Clethodim 26.4% EC must be applied with crop oil concentrate at 1 qt./A, plus a spray grade ammonium sulfate at 2.5 to 4 lbs./A. Recommended Mixing Order: Thoroughly mix spray grade ammonium sulfate in water, add Clethodim 26.4% EC, then add the crop oil concentrate.</b>				

SPECIAL APPLICATION INSTRUCTIONS/PRECAUTIONS
<p>Burn or mow fields a minimum of 3 weeks prior to application to remove excess crop residue. Apply in the spring. At 40 to 60% tall fescue green-up, prior to emergence of warm-season grasses. Do not mow area for 2 weeks after the Clethodim 26.4% EC application.</p> <p>Apply in a minimum of 15 to 20 gals. of water per acre at a spray pressure of 40 to 60 PSI at the nozzle. Apply using flat fan or hollow cone nozzles. Do not use flood jet nozzles.</p> <p>Apply only to fields that have warm-season grasses established for 2 years. Applications of Clethodim 26.4% EC to emerged warm-season grasses may cause injury. Do not apply to warm-season grasses grown for seed.</p> <p>Do not graze treated fields or feed treated forage and or hay to livestock. Do not plant any crop for 30 days after application, unless clethodim is registered for use in that crop.</p> <p><b>Note:</b> Clethodim 26.4% EC applications are most effective if applied when average nighttime temperatures are consistently greater than or equal to 47° F.</p>

**TABLE 10. CLETHODIM 26.4% EC FOR THE SUPPRESSION OF TALL FESCUE SEED-HEADS IN NON-PRODUCING AGRICULTURAL AREAS**

Product	Product Rate	Suppression	Application Timing
Clethodim 26.4% EC	1 ½ to 2 fl.oz./A	Tall Fescue Seed-Heads ( <i>Festuca arundinacea</i> )	(50 to 90% Tall Fescue green-up)
<b>Adjuvant:</b> Clethodim 26.4% EC must be applied with crop oil concentrate at 1 qt./A, plus a spray grade ammonium sulfate at 2.5 to 4 lb./A. <b>Recommended Mixing Order:</b> Thoroughly mix spray grade ammonium sulfate in water, add Clethodim 26.4% EC, then add crop oil concentrate.			

**SPECIAL APPLICATION INSTRUCTIONS/ PRECAUTIONS**

Apply at 50 to 90% tall fescue green-up.

Use the higher Clethodim 26.4% EC rate if less tall fescue green matter is present.

Do not mow area for two weeks after the Clethodim 26.4% EC application.

Apply in a minimum of 15 to 20 gals. of water per acre at a spray pressure of 40 to 60 psi at the nozzle. Apply using a flat fan or hollow cone nozzles. Do not use flood nozzles.

2-4-D ester maybe added to this tank mix for broadleaf control (see 2,4-D ester label for weeds controlled).

Do not graze treated fields or feed treated forage and/or hay to livestock. Do not plant any crop for 30 days application, unless clethodim is registered for use in that crop.

**DIRECTIONS FOR USE IN ORNAMENTALS**

For ornamental plant uses, Clethodim 26.4% EC can be used to control labeled grass weeds in greenhouses, lathhouses, shadehouses, and around outdoor ornamental, including nurseries, parks, roadside plantings, and structure landscapes.

**IMPORTANT**

Clethodim 26.4% EC successfully controls weeds in newly transplanted and established non-grassy ornamentals. Plant tolerance to Clethodim 26.4% EC a labeled rates has been found to be acceptable for the indicated genera and species listed below. Due to variability within species, crop growth stage, environmental conditions, and application techniques, it is recommended that the user determine if herbicide can be use safely on a few plants prior to widespread application. Neither the seller not the manufacturer of Clethodim 26.4% EC have investigated the safety factor to ornamental plants not listed on the label.

The following plants have shown tolerance for Clethodim 26.4% EC applications:

**ORNAMENTAL TREES**

COMMON NAME	SCIENTIFIC NAME
Alder, Red	<i>Alnus rubra</i>
Ash	<i>Fraxinus</i> spp.
Basswood	<i>Tilia</i> spp.
Birch, European White	<i>Betula pendula</i>
Birch, River	<i>Betula nigra</i>
Birch, White	<i>Betula papyrifera</i>
Crabapple, Flowering	<i>Malus halliana</i>
Dogwood, Flowering	<i>Cornus, florida</i>

380 of 41

Golden Chain Tree	<i>Laburnum anagyroides</i>
Maples	<i>Acer spp.</i>
Mulberry, White	<i>Morus alba</i>
Oaks	<i>Quercus spp.</i>
Olive, Wild	<i>Elaeagnus angustifolia</i>
Redbud, Eastern	<i>Cercis Canadensis</i>
Sweet Gum, American	<i>Liquidambar styraciflua</i>

**GROUND COVERS**

COMMON NAME	SCIENTIFIC NAME
Bugleweed, Carpet	<i>Ajuga reptans</i>
Ivy, English	<i>Hedera helix</i>
Japanese Spurge	<i>Pachysandra terminalis</i>
Lilyturf	<i>Liriope muscari</i>
Moneywort	<i>Lysimachia nummularia</i>
Mondo Grass, White	<i>Ophiopogon jaburan</i>
Mondo Grass, Dwarf	<i>Ophiopogon japonicus</i>
Periwinkle, Lesser	<i>Vinca minor</i>

**GARDEN FLOWERS AND PLANTS**

COMMON NAME	SCIENTIFIC NAME
Ageratum	<i>Ageratum spp.</i>
Alysum*, Sweet	<i>Lobularia maritime</i>
Asparagus Fern	<i>Asparagus setaceus</i>
Bleeding Heart	<i>Dicentra spectabilis</i>
Cast Iron Plant	<i>Aspidistra elatior</i>
Chrysanthemum	<i>Chrysanthemum spp.</i>
Cinquefoil	<i>Potentilla spp.</i>
Coleus	<i>Coleus spp.</i>
Coralbells	<i>Heuchera sanguinea</i>
Cranesbill	<i>Geranium spp.</i>
Dahlia	<i>Dahlia spp.</i>
Daisy, Trailing African	<i>Osteospermum fruticosum</i>
Daylily	<i>Hemerocallis spp.</i>
Dusty Miller	<i>Senecio cineraria</i>
Euonymus	<i>Euonymus spp.</i>
Gazania	<i>Gazania spp.</i>
Geranium, House	<i>Pelargonium hortotum</i>
Heather, False	<i>Cuphea hyssopifolia</i>
Hosta	<i>Hosta fortunei</i>
Iris	<i>Iris spp.</i>
Jasmine Tobacco	<i>Nicotiana alata</i>
Loosestrife	<i>Lythrum salicaria</i>
Marigold	<i>Tagetes spp.</i>
Partridgeberry	<i>Mitchella repens</i>
Petunia*	<i>Petunia hybrida</i>
Phlox	<i>Phlox spp.</i>
Pinks	<i>Dianthus spp.</i>
Portulaca	<i>Portulaca grandiflora</i>
Salvia	<i>Salvia spp.</i>
Saxifrage	<i>Saxifraga spp.</i>
Sedum	<i>Sedum spp.</i>
Selloum	<i>Philodendron selloum</i>
Snapdragon*	<i>Antirrhinum majus</i>
Sweet Flag	<i>Acorus gramineus</i>

Tickseed	<i>Coreopsis grandiflora</i>
Touch-Me-Not	<i>Impatiens spp.</i>
Verbena	<i>Verbena spp.</i>
Violet	<i>Viola spp.</i>
Yarrow, Common	<i>Achillea millefolium</i>
Zinnia	<i>Zinnia elegans</i>

\* Slight foliage or flower speckling has been observed on these species.

**SHRUBS**

COMMON NAME	SCIENTIFIC NAME
Abelia	<i>Abelia spp.</i>
Anise, Purple	<i>Illicium floridanum</i>
Aucuba	<i>Aucuba spp.</i>
Azalea*	<i>Rhododendron spp.</i>
Bamboo	<i>Bambusa spp.</i>
Barberry, Japanese	<i>Berberis thunbergii</i>
Barberry, Magellan	<i>Berberis buxifolia</i>
Bayberry	<i>Myrica pensylvanica</i>
Bottlebrush	<i>Callistemon citrinus</i>
Boxwood, Common	<i>Buxus sempervirens</i>
Camelia, Common	<i>Camellia japonica</i>
Candytuft	<i>Iberis sempevirens</i>
Cleyera	<i>Cleyera japonica</i>
Coralberry	<i>Ardisia crenata</i>
Crape Myrtle	<i>Lagerstroemia indica</i>
Coyote Brush	<i>Baccharis pilularis</i>
Fig, Creeping	<i>Ficus pumila</i>
Gardenia	<i>Gardenia spp.</i>
Holly	<i>Ilex spp.</i>
Honeysuckle	<i>Lonicera spp.</i>
Indian Hawthorn	<i>Raphiolepis indica</i>
Jasmine, Asiatic	<i>Jasminum spp.</i>
Jasmine, Star	<i>Trachelospermum asiaticum</i>
Juniper	<i>Trachelospermum jasminoides</i>
Lantana	<i>Juniperus spp.</i>
Nandina* Bamboo, Heavenly	<i>Lantana spp.</i>
Oleander, Common	<i>Nandinia domestica</i>
Oregon Grape	<i>Nerium oleander</i>
Photinia	<i>Mahonia aquifolium</i>
Pittosporum	<i>Photinia spp.</i>
Podocarpus	<i>Pittosporum spp.</i>
Privet	<i>Pododendron spp.</i>
Pyracantha	<i>Ligustrum spp.</i>
Rhododendron	<i>Pyracantha spp.</i>
Rose	<i>Spiraea bumalda</i>
Sweet Olive	<i>Osmanthus fragrans</i>
Viburnum	<i>Viburnum tinus</i>
Wisteria	<i>Wisteria spp.</i>
Yellow Sage/ Shrub Verbena	<i>Lantana camara</i>

\* Slight foliage or flower speckling has been observed on these species.

**RECOMMENDATIONS FOR ANNUAL GRASSES IN ORNAMENTALS**

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Use the high rate under heavy grass pressure and/or when grasses are at a maximum height.

COMMON NAME	SCIENTIFIC NAME	WEED* HEIGHT INCHES	RATE FLOZ./ACRE <sup>(1)</sup>	HIGH RATE <sup>(2)</sup>
Barnyardgrass	<i>Echinochloa crus-galli</i>	2 to 8	8	16
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2 to 6	8	16
<b>Brome</b>				
California	<i>Bromus carinatus</i>	2 to 6	8	16
Cheat	<i>Bromus secalinus</i>	2 to 6	8	16
Downy	<i>Bromus tectorum</i>	2 to 6	8	16
Ripgut	<i>Bromus diandrus</i>	2 to 6	8	16
Canarygrass	<i>Phalaris canariensis</i>	1 to 4	8	16
<b>Crabgrass</b>				
Hairy	<i>Digitaria adscendens</i>	2 to 6**	8	16
Large	<i>Digitaria sanguinalis</i>	2 to 6**	8	16
Smooth	<i>Digitaria ischaemum</i>	2 to 6**	8	16
Southern	<i>Digitaria ciliaris</i>	2 to 6**	8	16
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2 to 6**	8	16
Fall Panicum	<i>Panicum dichotomiflorum</i>	2 to 8	8	16
Field Sandbur	<i>Cenchrus incertus</i>	2 to 6	8	16
<b>Foxtail</b>				
Giant	<i>Setaria faberi</i>	2 to 12	8	16
Green	<i>Setaria viridis</i>	2 to 8	8	16
Yellow	<i>Setaria glauca</i>	2 to 8	8	16
Goosegrass	<i>Eleusine indica</i>	2 to 6**	8	16
Itchgrass	<i>Rottboellia cochin</i>	2 to 6	8	16
Junglerice	<i>Echinochloa colona</i>	2 to 6	8	16
Lovegrass (Stinkgrass)	<i>Eragrostis ciliaris</i>	2 to 6	8	16
Rabbitsfootgrass	<i>Polypogon monspeliensis</i>	1 to 4	8	16
Red Rice	<i>Oryza sativa</i>	1 to 3	8	16
<b>Rygrass</b>				
Hardy	<i>Lolium remotum</i>	2 to 6	8	16
Italian	<i>Lolium multiflorum</i>	2 to 6	8	16
Seedling Johnsongrass	<i>Sorghum halepense</i>	4 to 10	8	16
Shattercane	<i>Sorghum bicolor</i>	6 to 18	8	16
Southwestern Cupgrass	<i>Eriochloa gracilis</i>	2 to 6	8	16
<b>Sprangletop</b>				
Amazon	<i>Leptochloa panicoides</i>	2 to 6	8	16
Bearded	<i>Leptochloa fascicularis</i>	2 to 6	8	16
Mexican	<i>Leptochloa uninervis</i>	2 to 6	8	16
Red	<i>Leptochloa filiformis</i>	2 to 6	8	16
Texas Panicum	<i>Panicum texanum</i>	2 to 6	8	16
<b>Volunteer Cereals</b>				
Barley	<i>Hordeum vulgare</i>	2 to 6	8	16
Oats	<i>Avena sativa</i>	2 to 6	8	16
Rye	<i>Secale cereale</i>	2 to 6	8	16
Wheat	<i>Triticum aestivum</i>	2 to 6	8	16
Volunteer Corn	<i>Zea mays</i>	4 to 12	6	8
Volunteer Corn	<i>Zea mays</i>	12 to 24	8	16
Volunteer Grain Sorghum	<i>Sorghum bicolor</i>	8 to 12	8	16
Wild Oats	<i>Avena fatua</i>	2 to 6	8	16
Wild Proso Millet	<i>Panicum miliaceum</i>	2 to 10	8	16
Witchgrass	<i>Panicum capillare</i>	2 to 8	8	16
Woolly Cupgrass	<i>Eriochloa villosa</i>	2 to 8	8	16

\* Generally occurs between 3-leaf stage and tillering.

\*\* Length of lateral growth

<sup>(1)</sup> 8 fl.oz./A = approximately 0.2 fl. oz./1000 sq ft.

<sup>(2)</sup> 16 fl.oz./A = approximately 0.4 fl. oz./1000 sq ft.

Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (0.25% v/v).



41 of 41

RECOMMENDATIONS FOR ANNUAL BLUEGRASS CONTROL WITH CLETHODIM 26.4% EC IN ORNAMENTALS			
GRASS SPECIES	WEED STAGE	RATE FL.OZ./ACRE	HIGH RATE
Annual Bluegrass ( <i>poa annua</i> )	To 4 -leaf	6	16
Apply under favorable soil moisture and humidity that exists within a few days after rainfall or within 7 days after irrigation. Grass needs to be actively growing at time of application(s).			
Apply at weed stage indicated on the label, as reduced control can be expected with more mature annual bluegrass.			
Use the high rate under heavy grass pressure and/or when annual bluegrass is more mature.			
Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (0.25% v/v).			

**RECOMMENDATIONS FOR PERENNIAL GRASSES**

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Use the high rate under heavy grass pressure and/or when grasses are at a maximum height.

GRASS SPECIES	WEED HEIGHT (INCHES)	RATE FL.OZ./ACRE <sup>(1)</sup>	HIGH RATE <sup>(2)</sup>
<b>Bermudagrass (<i>Cynodon dactylon</i>)</b>			
First Application	3 (or up to 6" runners)	8	16
Repeat Application(s) (if regrowth occurs)	3 (or up to 6" runners)	8	16
<b>Quackgrass (<i>Elytrigia repens</i>)</b>			
First Application	4 to 8	8	16
Repeat Application(s) (if regrowth occurs)	4 to 8	8	16
<b>Rhizome Johnsongrass (<i>Sorghum halepense</i>)</b>			
First Application	12 to 24	8	16
Repeat Application(s) (if regrowth occurs)	6 to 18	8	16
<b>Wirestem Muhly (<i>Muhlenbergia frondosa</i>)</b>			
First Application	4 to 8	8	16
Repeat Application(s) (if regrowth occurs)	4 to 8		

<sup>(1)</sup> 8 fl.oz./A = approximately 0.2 fl. oz./1000 sq ft.  
<sup>(2)</sup> 16 fl.oz./A = approximately 0.4 fl. oz./1000 sq ft.  
 Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (0.25% v/v).

**WARRANTY AND LIABILITY**

Ritter Chemical LLC warrants that this product conforms to the chemical description on the label, and is reasonably fit for the purposes set forth in the "Complete Directions for Use" booklet labeling, when used in accordance with those Complete Directions for Use, under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitation stated herein.