

## **PERENNIAL GRASSES - BERMUDAGRASS**

### General Information

### PRODUCT INFORMATION

For use on: Alfalfa, Asparagus, Bean (dry) and Pea (shelled), Bean and Pea (succulent shelled), Broccoli, Cabbage, Canola, Carrot, Cauliflower (and other Head and Stem Brassica Vegetables), Celery, Clover (grown in Idaho, Oregon and Washington only), Conifers, Cotton, Cranberry, Cucumber, Eggplant (and other Fruiting Vegetables), Fallow Land (and other non-producing agricultural areas), Flax, Garden Beet, Garlic, Herbs, Hops, Horseradish (and other Root Vegetables), Legume Vegetables (edible podded), Lettuce, Head and Leaf (and other leafy greens), Melons (including Cantaloupes and Watermelons), Mint, Mustard Greens (and other leafy brassica greens), 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), Safflower, Sesame, Shallots (dry bulbs and green), Squash (including Pumpkins), Soybeans, Strawberry, Sugar Beet, Sunflower, Sweet Potato, Tomato, and Yam (and other Tuberous and Corm Vegetables).

- Not for use in California: Canola, Flax, Mustard seed

1 Other Bean (dry) and Pea (shelled) crops approved for use with Clethodim 2EC include: Bean (*Lupinus* spp.), grain lupin, sweet lupin, white lupin and white sweet lupin; 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

2 Other Bean and Pea (succulent shelled) crops approved for use with Clethodim 2EC includes: Bean (*Lupinus* spp.), broad bean (succulent), lima bean (green); 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

3 Other head and stem brassica vegetables approved for use with Clethodim 2EC

include: Chinese broccoli, Brussels sprouts, Chinese (napa) cabbage, Chinese mustard, cavalo broccolo and kohlrabi.

4 Other Fruiting Vegetables (except tomato) approved for use with Clethodim 2EC include: eggplant, groundcherry, pepino, peppers (all) and tomatillo.

5 Other Herb crops approved for use with Clethodim 2EC include: angelica, balm, basil, borage, burnet, camomile, catnip, chervil (dried), chive, Chinese chive, clary, coriander (leaf), costmary, culantro (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.

6 Other root vegetables approved for use with Clethodim 2EC include: burdock, edible; celeriac; chervil, turnip-rooted; chicory; ginseng; parsley, turnip-rooted; parsnip; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret and turnip.

7 Other Edible Podded Legume Vegetable crops approved for use with Clethodim 2EC 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.

8 Other Leafy Greens crops approved for use with Clethodim 2EC 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)).

9 Other cucurbit crops approved for use with Clethodim 2EC include: Chayote (fruit), Chinese Wax Gourd, Citron Melon, Edible Gourd, Gherkin and Muskmelons (all) including Honeydew Melon.

10 Other leafy brassica greens approved for use with Clethodim 2EC include: broccoli raab, Chinese (bok choy) cabbage, collards, kale, mizuna, mustard greens, mustard spinach, and rape greens.

11 Other leafy brassica greens approved for use with Clethodim 2EC include: cardoon, celtuce, Chinese celery, Florence fennel, and Swiss chard.

12 Other tuber and corm vegetables approved for use with Clethodim 2EC include: arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, edible canna, bitter and sweet cassava, chayote (root), chufa, dasheen (taro), ginger, leren, tanier, turmeric and bean yam.

Clethodim 2EC is not for use on vegetable crops being grown for seed production unless specific use directions are provided.

Clethodim 2EC is a selective postemergence herbicide for control of annual and perennial grasses. Clethodim 2EC does not control sedges or broadleaf weeds.

Repeated use of Clethodim 2EC (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 2EC 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.

### RESTRICTIONS AND LIMITATIONS

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

Do not apply postemergence broadleaf herbicide within one day following application of Clethodim 2EC or reduced grass control may result.

Do not apply Clethodim 2EC 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 2EC per acre per season. For clover, flax, mustard seed and radish crops, do not apply more than 16 fl. oz. of Clethodim 2EC (0.25 lb. ai) per acre per season. For all other crops, do not apply more than 32 fl. oz. Clethodim 2EC (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 2EC (0.25 lb. ai) per acre per season.

Do not apply more than 8 fl. oz./A of Clethodim 2EC 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 2EC per application to canola or mustard seed. For all other crops, do not apply more the 16 fl. oz. of Clethodim 2EC (0.25 lb. ai) per acre per application. Exceeding these instructions may result in unacceptable crop injury.

Do not apply under conditions of stress. Applying Clethodim 2EC 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 2EC 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 2EC 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 2EC.

While all the vegetable crops on the label have been tested and are tolerant to Clethodim 2EC, not all specialty varieties of these crops have been tested. It is advised that, before applying Clethodim 2EC to specialty varieties of vegetable crops on the 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 used applies in tank mixtures, including all crop rotational and other crop restrictions.

Tank mixes of Clethodim 2EC and broadleaf herbicides may result in reduced grass control. If grass regrowth occurs, an additional application of Clethodim 2EC 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 crops thereof rendered unfit for sale, use or consumption.

#### Limitations, Restrictions, and Exceptions

- Apply only to actively growing grasses at listed 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 maximum height.
- Do not apply more than 8 fl. oz./A of Clethodim 2EC 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 2EC per application to canola or mustard seed.
- Repeat Application(s) (if regrowth occurs)

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

#### Rates

[field rates 0](#)

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#### Restricted Entry Interval

24 hours

Timings

Apply when the first grass weed species in a mixed grass weed population reaches the listed growth stage for treatment.