



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

January 31, 2026

Carrie Xiang
pesticideapp@reach24h.com
LONGWIND CROPS SCIENCE USA, LLC

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment - Update the tree nut use in California and make other minor label changes
Product Name: Clefandim 480 EC
Admin Number: 103087-9
EPA Receipt Date: 11/11/2025
Action Case Number: 00676481

Dear Carrie Xiang:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have questions, please contact Olivia Anderson by telephone at (202) 564-2255 or via email at anderson.olivia@epa.gov.

Sincerely,

Kable Bo Davis

Kable Bo Davis, Senior Advisor
FHB, RD
Office of Pesticide Programs

[Text in brackets is optional]

CLETHODIM GROUP 1 HERBICIDE

Clefandim 480 EC

ACTIVE INGREDIENT: % BY WT.

*Clethodim 46.94%

OTHER INGREDIENTS: 53.06%

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 distillates.

Clefandim 480 EC is an emulsifiable concentrate containing 4.0 lb clethodim active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN

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.)

See [front][back][side][inside] panel for First Aid Instructions and [Leaflet][Booklet] for complete Precautionary Statements and Directions for Use.

FIRST AID

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

NOTE TO PHYSICIAN: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid, which can cause pneumonitis. If ingested, probable mucosal damage may contraindicate the use of gastric lavage.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In the event of a leak, fire or medical emergency involving a human or animal please call INFOTRAC at 1-800-535-5053 or Outside the USA and Canada at 1-352-323-3500, 24/7/365.

EPA Reg. No. 103087-9

xxxxxxV002

Manufactured for:

Longwind Cropscience USA LLC

8 THE GREEN, STE A, DOVER, Kent, DE, 19901

EPA EST. No.:

NET CONTENTS: 10 L (2.5 Gal.), 20 L (5 Gal.), 200 L (50 Gal.), 510 L (135 Gal.), 1000 L IBC (265 Gal.)

ACCEPTED

01/31/2026

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 103087-9

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING/AVISO: Causes substantial but temporary eye injury. **DO NOT** get in eyes, on skin or on clothing. Wear appropriate protective eye wear (goggles, face shield or safety glasses). Harmful if swallowed or absorbed through the skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Wear long-sleeved shirt and long pants, shoes plus socks and appropriate chemical-resistant/waterproof gloves. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, chemical-resistant gloves including Barrier Laminate or Viton \geq 14 mils, shoes plus socks, 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 manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users must:

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and change into 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.

NON-TARGET ORGANISM ADVISORY STATEMENT

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

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

DO NOT use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

READ ENTIRE LABEL AND PAMPHLET. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (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, including plants, soil, or water, is:

- coveralls
- chemical-resistant gloves, including Barrier Laminate or Viton \geq 14 mils
- shoes plus socks
- protective eyewear

NON-AGRICULTURAL USE REQUIREMENTS

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

Keep all unprotected persons out of operating areas, or vicinity where there may be drift. **DO NOT** enter or allow other persons to enter treated areas without protective clothing until sprays have dried.

Weed Resistance Management

For resistance management, **Clefandim 480 EC** is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to **Clefandim 480 EC** and other Group 1 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies must be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of **Clefandim 480 EC** or other Group 1 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank-mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method including hoeing or tillage. Prevent movement of

resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.

- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Longwind Cropsience USA LLC at +86-21-64881723.

PRODUCT INFORMATION RESTRICTIONS

- Application on Long Island, New York, is restricted to no more than 8 fl oz of **Clefandim 480 EC** (0.25 lb ai) per acre per year.
- **DO NOT** apply if rain is expected within 1 hour of application as control may be unsatisfactory.
- **DO NOT** apply a postemergence broadleaf herbicide within one day following application of **Clefandim 480 EC** or reduced grass control may result.
- **DO NOT** apply under conditions of stress. Applying **Clefandim 480 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 **Clefandim 480 EC** effectively and will be less susceptible to herbicide activity.
- **DO NOT** allow **Clefandim 480 EC** to come in contact with desirable grass crops including 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.
- Aerial applications for all tree fruits and tree nuts uses are prohibited.
- **Clefandim 480 EC** may not be used on vegetable crops being grown for seed production unless specific instructions are included in this labeling.

ROTATIONAL RESTRICTIONS

DO NOT plant rotational crops until 30 days after application of **Clefandim 480 EC** unless the crop is listed on **Clefandim 480 EC** label.

PRECAUTIONS

- Grass crops including corn, rice, sorghum, small grains, or turf, etc. are highly sensitive to **Clefandim 480 EC**.
- **Clefandim 480 EC** is a selective postemergence herbicide for control of annual and perennial grasses.
- **Clefandim 480 EC** does not control sedges or broadleaf weeds.
- 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, including 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 **Clefandim 480 EC** applications per year are specified at the appropriate weed-growth stage rate under continuous no-till conditions.
- While all the vegetable crops on this label have been tested for crop safety with **Clefandim 480 EC**, not all specialty varieties of these crops have been tested. It is advised that, before applying **Clefandim 480 EC** to specialty varieties of vegetable crops on this label, first apply a small section of the field to evaluate potential injury. Injury symptoms may appear as leaf speckling or stunting.
- It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels

involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

- Tank-mixes of **Clefandim 480 EC** and broadleaf herbicides may result in reduced grass control. If grass regrowth occurs, an additional application **Clefandim 480 EC** may be necessary. **AVOID SPRAY DRIFT.**
- Repeated use of **Clefandim 480 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 including crop rotation, mechanical removal, and other classes of herbicides are not used from year to year.

APPLICATION INFORMATION

Timing of Applications

Apply **Clefandim 480 EC** postemergence to actively growing grasses according to prescribed rates in the table. Applications made to grass plants stressed by insufficient moisture, or hot or cold temperatures, or to grass plants exceeding specified growth stages may result in unsatisfactory control. **DO NOT** apply under these conditions.

In arid regions where irrigation is used to supplement limited rainfall, **Clefandim 480 EC** must be applied as soon as possible, after irrigation (within 7 days). In arid regions, a second application of **Clefandim 480 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 **Clefandim 480 EC** may reduce weed control. **DO NOT APPLY Clefandim 480 EC** if rainfall is expected within one hour, since control may be reduced.

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.

ADDITION OF ADJUVANT OR CROP OIL CONCENTRATE	
CROP	ADJUVANT RECOMMENDATIONS
Alfalfa, Cotton, Bean (dry) & Pea (shelled), Edible Podded Legume Vegetables, Peanuts (including perennial), Potato, Soybean, Bean & Pea (succulent shelled), Sugar Beet, 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 Clefandim 480 EC applications, in addition to the specified rate of crop oil concentrate. 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, Berry (low-growing), Canola, Carrot, Clover, Cranberry, Cucurbits, Flax, Fruiting Vegetables (except okra and tomato),	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 advised for these crops.

Garden Beet, Garlic, Head & Stem Brassica Vegetables, Herbs, Hops, Leaf Petioles, Leafy Brassica Greens, Leafy Greens, Mint, Mustard Seed, Okra, Onion (dry bulb), Green Onion, Pome Fruit, Root Vegetables, Safflower, Sesame, Stalk and Stem Vegetable, Stone Fruit, Strawberry, Stevia (dried leaves), Sweet Potato (Yam & other Tuberous and Corn Vegetables except Potato), Tomato, Tree Nuts, Watercress.	
Non-Bearing Fruit and Nut Crops, Ornamental Plants.	Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt per 50 gals (0.25% v/v). Use of crop oil concentrate is not advised since it may injure flowers and foliage.
Conifer Trees, Fallow Land (and other non-producing agricultural areas), 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 of 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 must reflect a minimum of 30 psi and a maximum of 60 psi at the nozzle. **DO NOT** use flood nozzles.

Applications to onions (dry bulb), green onion and garlic must be made in a 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 bulb), green onion or garlic: When applying by air **DO NOT** exceed 8 fl oz/A(0.250 lb ai)/A in a single application. In California, air applications to onions or garlic must be made in a minimum of 20 gals of spray solution per acre. In states other than California, air application to onions or garlic must be made in a minimum of 10 gals of spray solution per acre.

NOTE: Crop injury may occur when Clefandim 480 EC is applied to onions or garlic with aerial equipment.

Spot Treatment

When using hand sprayers or high-volume sprayers utilizing handguns, mix 1/4% to 1/2% (0.33 oz to 0.65 oz per gal) **Clefandim 480 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 1/4% (0.33 oz per gal) by volume.

NOTE: If Clefandim 480 EC is applied as a spot treatment, care must be taken to not exceed the Maximum rate allowed on a “per acre” basis or crop injury may occur.

CHEMIGATION

ONION (Dry Bulb), GREEN ONION AND GARLIC SPRINKLER IRRIGATION APPLICATION

Only apply **Clefandim 480 EC** by chemigation to Onions (dry bulb and green) and Garlic crops.

May be applied to onions and garlic by sprinkler irrigation systems.

Apply **Clefandim 480 EC** at the high rate for annual grasses (8 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 **Clefandim 480 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 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 **Clefandim 480 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.

Restrictions for chemigation use

- **DO NOT** apply **Clefandim 480 EC** by chemigation in the states of Idaho, Montana, Oregon and Washington.
- **DO NOT** apply this product through any irrigation system connected to a public water system.
- **DO NOT** apply by chemigation to any other crop, or to this crop using any other type of irrigation system.
- **DO NOT** apply **Clefandim 480 EC** 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 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.
- **DO NOT** apply this product through any other type of irrigation system (i.e. Public Irrigation System).
- **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.
- A person knowledgeable of the chemigation system and responsible for its operation or under supervision of the responsible person, must shut the system down and make necessary adjustments must the need arise.

- 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.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 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.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 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.
- Systems must use a metering pump, including 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.
- **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
- 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.

Precautions

- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.
- If you have any questions about calibration, you must contact State Extension Service specialists, equipment manufacturers or other experts.

MANDATORY SPRAY DRIFT

Aerial Application

- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Ground Boom Applications

- Apply with the nozzle height specified by the manufacturer, but no more than 3 feet above the ground or crop canopy. For all other ground applications, the nozzle must be no more than 3 feet from the target vegetation.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- **Volume** – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** – Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.
- **Spray Nozzle** – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- **Adjust Nozzles** – Follow nozzle manufacturer's directions for setting up nozzles. Generally, to reduce fine droplets, nozzles must be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom must remain level with the crop and have minimal bounce.

RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Alfalfa including: Sainfoin Holy Clover Birdsfoot trefoil ⁽³⁾	15 days before grazing, feeding or harvesting (cutting) for forage or hay	3-8 fl oz ⁽⁴⁾ (0.094-0.250 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air ⁽⁵⁾	Refer to tank-mix partners for feeding, grazing and harvesting restrictions. ⁽⁵⁾ The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn. Restrictions <ul style="list-style-type: none"> • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Bean, Dry except Soybean Dried Shelled Pea and Bean (except soybean) Subgroup 6C 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	3-8 fl oz (0.094-0.250 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air ⁽⁵⁾	Refer to appropriate Table for reduced rate directions for the control of small annual grasses. The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn. Restrictions <ul style="list-style-type: none"> • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. • DO NOT make more than 2 applications at 8 fl oz (0.25 lb ai) per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. • For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 8 applications at 2 fl oz (0.0625 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Bean, Succulent Shelled Succulent Shelled Pea and Bean Subgroup 6B 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	3-4 fl oz (0.094-0.125 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air ⁽⁵⁾	Refer to appropriate Table for reduced rate prescribed 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. Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per year. DO NOT make more than 1 application per acre per year. For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 2 applications at 2 fl oz (0.0625 lb ai) per acre per year. <ul style="list-style-type: none"> For repeat applications make on a minimum of a 14 day interval.
Beet, Garden	30 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Berry Low Growing (except Cranberry and Strawberry) Subgroup 13-07G including: Bearberry Bilberry Blueberry, lowbush Cloudberry Lingonberry Muntries Partridgeberry	45 days	2-4 fl oz (0.0625-0.125 lb ai)	Non-Ionic surfactant (NIS) at 0.25% v/v	Verify crop safety to Clefandim 480 EC on a small area of the crop, at the desired Clefandim 480 EC rate and with the same non-ionic surfactant (NIS) that will be used on the field. If no crop response is evident 7 days after treatment, Clefandim 480 EC may be used on the entire field at the rate tested and with the same NIS used in the crop safety test. Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Brassica Head and Stem Vegetable Crop Group 5-16[*] including: Broccoli Brussels sprouts Cabbage Cabbage, Chinese (napa) Cauliflower cultivars, varieties and/or hybrids of these commodities	30 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT apply more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Brassica Leafy Greens Subgroup 4-16B[*] (except Radish Leaves, Turnip Greens and Watercress) including: Arugula Broccoli, Chinese Broccoli Raab Cabbage, Abyssinian Cabbage, Chinese (bok choy) Cabbage, Seakale Collards Cress, Garden Cress, Upland Hanover Salad Kale Maca (leaves) Mizuna Mustard Greens Rape Greens Rocket, Wild Shepherd's Purse cultivars, varieties, and/or hybrids of these commodities	14 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT apply more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Canola including Rapeseed Subgroup 20A[*] except flax seed, mustard seed and sesame seed Borage Crambe Cuphea Echium Gold of Pleasure (Camelina) Hare's Ear Mustard Lesquerella Lunaria Meadowfoam Milkweed Oil Radish Poppy seed Rapeseed (canola) Sweet Rocket	70 days	2-3 fl oz (0.0625-0.094 lb ai)	1% v/v in the finished spray volume.	Verify crop safety to Clefandim 480 EC on a small area of the crop, at the desired Clefandim 480 EC rate and with the same non-ionic surfactant (NIS) that will be used on the field. If no crop response is evident 7 days after treatment, Clefandim 480 EC may be used on the entire field at the rate tested and with the same NIS used in the crop safety test. Restrictions <ul style="list-style-type: none"> DO NOT apply more than 3 fl oz (0.094 lb ai) per acre per application. For Annual and Perennial Grasses: DO NOT make more than 1 application at 3 fl oz (0.094 lb ai) per acre per year. For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 1 application at 2 fl oz (0.0625 lb ai) per acre per year. DO NOT apply after crop has begun bolting. Crop injury may occur when Clefandim 480 EC is applied during the bloom period.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Carrot	30 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Clover	15 days before grazing, feeding, or harvesting (cutting) for forage or hay	3-8 fl oz (0.094-0.250 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> For use on clover grown in the states of Idaho, Oregon and Washington only. DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. DO NOT make more than 1 application per acre per year. DO NOT exceed 8 fl oz (0.25 lb ai) per acre per year.
Conifer Trees Including: <ul style="list-style-type: none"> Arbovitae, American (Thuja occidentalis) Cedars (Cedrus spp.) Cypress (Taxodium spp.) Fir, Douglas (Pseudotsuga menziesii) Firs (Abies spp.) Hemlock, Canadian/Eastern (Tsuga canadensis) Hemlock, Western (Tsuga heterophylla) Pines (Pinus spp.) Spruces (Picea spp.) Yew (Taxus spp.) 	N/A	3-8 fl oz (0.094-0.250 lb ai)	Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt per 50 gal (0.25% v/v)	Clefandim 480 EC can be used to control labeled grasses in Christmas tree farms, conifer nurseries and conifer plantations (but not in forests) Restrictions <ul style="list-style-type: none"> DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. DO NOT make more than 2 applications per acre per year at the 8 fl oz (0.25 lb ai) rate DO NOT make more than 5 applications per acre per year at the 3 fl oz (0.094 lb ai) rate For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. DO NOT apply in forests

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Cotton (including cotton grown for seed)	60 days	3-8 fl oz (0.094-0.250 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air. ⁽³⁾	<p>The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.</p> <p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. • DO NOT graze treated fields or feed treated forage or hay to livestock.
Cranberry	30 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	<p>Restriction</p> <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. • DO NOT apply between the "hook" stage and full fruit set.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Fallow Land	N/A	<p>3-4 fl oz for annual Grasses (0.094-0.125 lb ai)</p> <p>4-8 fl oz for perennial Grasses (0.125-0.250 lb ai)</p>	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.	<p>Annual grasses that emerge after the Clefandim 480 EC application will not be controlled and a second application may be necessary</p> <p>The control of perennial grasses may require more than 1 application in non tilled areas</p> <p>Restrictions</p> <ul style="list-style-type: none"> • Apply at a minimum spray volume of 5 gal/acre for aerial applications • Apply at a minimum spray volume of 15 gal/acre for ground applications

				<ul style="list-style-type: none"> • Apply only to actively growing grasses when the first grass reaches the specified weed height as specified in the Instructions for Annual and Perennial Grasses section of this label • DO NOT apply more than 4 fl oz (0.125lb ai) to annual grasses or 8 fl oz (0.25 lb ai) to perennial grasses per acre per application. • Use a minimum of 8 fl oz (0.250 lb ai) for fields with both annual and perennial grasses • DO NOT make more than 5 applications at the 3 oz (0.094 lb ai) rate for Annual Grasses or 4 applications at the 4 oz (0.125 lb ai) rate for perennial grasses per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. • 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 specified grow 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 Clefandim 480 EC application
--	--	--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Flax[*]	60 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	<p>Apply prior to bloom. Crop injury may occur when Clefandim 480 EC is applied during the bloom period.</p> <p>Restrictions</p> <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 2 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per year. For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 4 applications at 2 fl oz (0.0625 lb ai) per acre per year.
Fruiting Vegetables (except Okra and Tomato) Crop Group 8-10 including: African Eggplant Bush Tomato Bell Pepper Cocona Currant Tomato Eggplant Garden Huckleberry Goji Berry Groundcherry Martynia Naranjilla Pea Eggplant Pepino Nonbell Pepper Roselle Scarlet Eggplant Sunberry Tomatillo Tree Tomato Cultivars, varieties, and/or hybrids of these.	20 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	<p>Restrictions</p> <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Subgroup 19A Herbs including: Angelica Balm Basil Borage Burnet Camomile Catnip Chervil (dried) Chive Chive, Chinese Clary Coriander (leaf) Costmary Culantro (leaf) Curry (leaf) Dill (dillweed) Horehound Hyssop Lavender Lovage (leaf) Marigold Marjoram (<i>Origanum</i> spp.) Nasturtium Parsley (dried) Pennyroyal Rosemary Rue Sage Savory, Summer and Winter	14 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	<p>Clefandim 480 EC has not been tested on all herbs, and herb varieties. It is the responsibility of the user to test Clefandim 480 EC on a small portion of the crop to be treated before treating the entire field. Verify crop safety to Clefandim 480 EC on a small area of the crop, at the desired Clefandim 480 EC rate and with the same crop oil concentrate that will be used on the field. If no crop response is evident 7 days after treatment, Clefandim 480 EC may be used on the entire field at the rate tested and with the same crop oil used in the crop safety test.</p> <p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Hops	21 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	<p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Subgroup 22B Leaf Petiole Vegetables[*] including: Cardoon Celery Celery, Chinese Fuki Rhubarb Udo Zuiki cultivars, varieties, and/or hybrids of these commodities	30 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Subgroup 4-16A Leafy Greens[*] including: Amaranth, Chinese Amaranth, Leafy Aster, Indian Blackjack Cat's Whiskers Cham-chwi Cham-na-mul Chervil (fresh leaves) Chipilin Chrysanthemum, Garland Cilantro (fresh leaves) Corn Salad Cosmos Dandelion (leaves) Dang-gwi (leaves) Dillweed Dock Dol-nam-mul Ebolo Endive Escarole Fameflower Feather Cockscomb Good King Henry Huauzontle Jute (leaves) Lettuce, Bitter Lettuce, Head Lettuce, Leaf Orach Parsley (fresh leaves) Plantain, Buckhorn Primrose, English Purslane, Garden Purslane, Winter Radicchio Spinach Spinach, Malabar Spinach, New Zealand Spinach, Tanier Swiss Chard Violet, Chinese (leaves) Cultivars, varieties, and/or hybrids of these commodities	14 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz/(0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Subgroup 6A Legume Vegetables, Edible Podded 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	3-4 fl oz (0.094-0.125 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt./A) by air. ⁽⁵⁾	Refer to appropriate Table for reduced rate prescribed for the control of small annual grasses. The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn. Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT apply more than 1 application per acre per year. DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per year. For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 2 applications at 2 fl oz (0.0625 lb ai) per acre per year. <ul style="list-style-type: none"> For repeat applications make on a minimum of a 14 day interval. For peas, apply before bloom and no later than 21 days before harvest.
Melon Subgroup 9A Citron melon Muskmelon (including cantaloupe) Watermelon	14 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Mint	21 days	3-8 fl oz ⁽⁴⁾ (0.094-0.250 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A by air.)	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. DO NOT make more than 2 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Mustard Seed[*]	75 days	2-3 fl oz (0.0625-0.094 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 3 fl oz (0.094 lb ai) per acre per application. DO NOT make more than 2 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 6 fl oz (0.188 lb ai) per acre per year. DO NOT apply after crop has begun bolting. Crop injury may occur when Clefandim 480 EC is applied during the bloom period. For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 3 applications at 2 fl oz (0.0625 lb ai) per acre per year.
Non Bearing Fruit and Nut Crops: Plants which will not bear fruit or nuts for at least one year following Clefandim 480 EC application Fruits Apple (Vaccinium spp.) Berry (Vaccinium spp, Rubus spp.) Cherry, Sweet (Prunus avium) Citrus Fruits (Citrus spp). Grapes (Vitis spp) Olives (Olea spp). Peach (Prunus persica) Pears (Pyrus communis) Prunes (Prunus spp). Stone Fruits (Prunus spp) Strawberries (Fragaria spp) Tree Nuts Almond (Prunus triloba) Filbert (Corylus maxima) Pecan (Carya illinoensis) Pistachio (Pistacia vera) Walnut (Juglans spp.)	N/A	3-4 fl oz (0.094-0.125 lb ai)	Use of crop oil concentrate is not advised since it may injure flowers and foliage. Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt per 50 gals (0.25% v/v).	Crop injury to non-bearing fruit and nut crops can occur if Clefandim 480 EC is improperly applied. Clefandim 480 EC must not be applied directly over the top of these plant types. Instead, direct spray at the base of the plant where grassy weeds are growing near the ground. Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per year. If Clefandim 480 EC is applied as a spot treatment to non-bearing fruit and nut crops DO NOT exceed the maximum rate allowed on a per acre basis DO NOT tap Sugar Maples for syrup within one year of Clefandim 480 EC application

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Non-Crop or Non-Planted Areas: 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 golf courses	N/A	6-8 fl oz (0.188-0.250 lb ai)	1 qt by ground or 1% v/v	Apply to annual and perennial grasses that exceed the minimum height for control on the tables in this label Apply up to and including grasses in the seed head stage Restrictions <ul style="list-style-type: none"> DO NOT apply more than 8 fl oz (0.250 lb ai) per acre per application. DO NOT make more than 2 applications per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. DO NOT plant any crop for 30 days after application unless clethodim is registered for use in that crop. DO NOT apply as part of a tank mix when applying Clefandim 480 EC for grass suppression
Okra[*]	3 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz/A (0.125 lb ai/A) in a single application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz/A (0.500 lb ai/A) per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Ornamentals Clefandim 480 EC can be used to control labeled grass weeds in greenhouses, lathhouses, shadehouses, and around outdoor ornamentals, including nurseries, parks, roadside plantings, and structure landscapes See tables under Directions for Use in Ornamentals for lists of ornamental trees, ground covers, garden flowers and plants, and shrubs which have been tested for use	N/A	4-8 fl oz (0.125-0.250 lb ai)	Use of crop oil concentrate is not advised since it may injure flowers and foliage Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt per 50 gal (0.25% v/v)	Restrictions <ul style="list-style-type: none"> • DO NOT apply to non-bearing fruit or nut crops which are grown for root stock • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz/A (0.50 lb ai/A) per year

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Bulb Onion Subgroup 3-07A Onion (Dry Bulb Only) including Daylily, Bulb Fritillaria, Bulb Garlic, Bulb Garlic, Great-headed, Bulb Garlic, Serpent, Bulb Lily, Bulb Onion, Bulb Onion, Chinese, Bulb Onion, Pearl Onion, Potato, Bulb Shallot, Bulb Cultivars, varieties, and/or hybrids of these.	45 days	3-8 fl oz (0.094-0.250 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> Minimum of 20 gal/A spray volume by ground in entire U.S. Minimum of 20 gal/A spray volume by air in California. In states other than California, air applications to onions or garlic must be made in a minimum of 10 gal/A. DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. DO NOT make more than 2 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. When applying by air, DO NOT exceed 4 fl oz (0.125 lb ai) per acre per application and 8 fl oz (0.25 lb ai) per acre per year. If Clefandim 480 EC is applied as a spot treatment to onion or garlic, DO NOT exceed the maximum rate allowed on a "per acre" basis. In California, DO NOT apply Clefandim 480 EC to garlic or onion until the crop has at least two full leaves. Use a 14-day spray interval between the application of Clefandim 480 EC and liquid nitrogen or other herbicide applications. Injury to crop may occur when shorter intervals are observed. For Garlic <ul style="list-style-type: none"> When applying by ground, DO NOT exceed 4 fl oz (0.125 lb ai) per acre per application or 8 fl oz (0.25 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Onion, Green Subgroup 3-07B[*] including: Chive (fresh leaves) Chive, Chinese (fresh leaves) Elegans Hosta Fritillaria (leaves) Kurrat Lady's Leek Leek Leek, Wild Onion, Beltsville (bunching) Onion (fresh) Onion, Green Onion, Macrostem Onion, Tree (tops) Onion, Welsh (tops) Shallot (fresh leaves) Cultivars, varieties, and/or hybrids of these commodities.	14 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. For air applications to onion, DO NOT exceed 4 fl oz (0.125 lb ai) per acre per application Apply a minimum of 20 gallons of spray solution per acre when applying by air to onions, garlic or shallots in the state of California. In states other than California, make air applications to onions, garlic, and shallots, in a minimum of 10 gallons per acre. In California for air applications to onion, DO NOT exceed 2 applications per year. If Clefandim 480 EC is applied as a spot treatment to onion or garlic, DO NOT exceed the maximum rate allowed on a "per acre" basis. In California, DO NOT apply Clefandim 480 EC to onion or garlic until the crop has at least two full leaves. Use a 14-day spray interval between the application of Clefandim 480 EC and liquid nitrogen or other herbicide applications. Injury to crop may occur when shorter intervals are observed.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Subgroup 6C Dried Shelled Pea including: Pea (<i>Pisum</i> spp.) Field Pigeon	30 days	3-4 fl oz (0.094- 0.125 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air. ⁽³⁾	<p>Refer to appropriate Table for reduced rate prescribed for the control of small annual grasses.</p> <p>The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.</p> <p>Applications of Clefandim 480 EC to peas during the bloom period could result in severe crop injury, including loss of yield and delayed maturity.</p> <p>Restrictions</p> <ul style="list-style-type: none"> • Apply before bloom but not later than 30 days prior to harvest. • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 1 application per acre per year. • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per year. • For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 2 applications at 2 fl oz (0.0625 lb ai) per acre per year. • For repeat applications make on a minimum of a 14 day interval

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Subgroup 6B Pea, Succulent Shelled including: Pea (<i>Pisum</i> spp.) English Pea Garden Pea Green Pea Pigeon Pea	21 days	3-4 fl oz (0.094-0.125 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air. ⁽³⁾	Refer to appropriate Table for reduced rate prescribed for the control of small annual grasses. The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn. Restrictions <ul style="list-style-type: none"> • Apply before bloom but not later than 21 days prior to harvest. • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 1 application per acre per year. • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per year. • For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 2 applications at 2 fl oz (0.0625 lb ai) per acre per year. <ul style="list-style-type: none"> ○ For repeat applications make on a minimum of a 14 day interval.
Peanut (including Perennial)	40 days	3-8 fl oz (0.094-0.250 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air. ⁽³⁾	The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn. Restrictions <ul style="list-style-type: none"> • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval. • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Crop Group 11-10 Pome Fruit including Apple Azarole Crabapple Loquat Mayhaw Medlar Pear Pear, Asian Quince Quince, Chinese Quince, Japanese Tejocote	14 days	2-4 fl oz (0.0625-0.125 lb ai)	Non-ionic surfactant (NIS) at 0.25% v/v	Restrictions <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval. • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Potato	30 days	3-8 fl oz (0.094-0.250 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air. ⁽³⁾	<p>The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.</p> <p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Radish Radish Leaves	15 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	<p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per year.
Subgroup 1B Root Vegetables (except Sugar Beet and Radish), including: Burdock, Edible Celeriac Chervil, Turnip Rooted Chicory Ginseng Horseradish Parsley, Turnip Rooted Parsnip Radish, Oriental Rutabaga Salsify Salsify, Black Salsify, Spanish Skirret Turnip	30 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	<p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Safflower	70 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Sesame	14 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. DO NOT apply during flowering.
Soybean	60 days	3-8 fl oz (0.094-0.250 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air. ⁽³⁾	<p>Refer to appropriate Table for reduced rate prescribed for the control of small annual grasses. The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.</p> Restrictions <ul style="list-style-type: none"> DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. DO NOT make more than 2 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. DO NOT graze treated fields or feed treated forage or hay to livestock. For Reduced Rate Control for Small Annual Grasses: Do not make more than 8 applications at 2 fl oz (0.0625 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Squash/Cucumber Subgroup 9B Chayote (fruit) Chinese waxgourd (Chinese preserving melon) Cucumber Gherkin Gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra) <i>Momordica</i> spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber) Pumpkin Squash, Summer Squash, Winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash)	14 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Stalk and Stem Vegetable Subgroup 22A[*] Agave Aloe Vera Asparagus Bamboo Shoots Celtuce Fennel, Florence (fresh leaves and stalk) Fern, Fiddlehead (edible) Kale, Sea Kohlrabi Palm Hearts Prickly Pear (pads) Prickly Pear, Texas (pads) cultivars, varieties, and/or hybrids of these commodities	1 day	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Stevia, dried leaves	14 days	2-4 fl oz (0.0625-0.125 lb ai)	Non-ionic Surfactant (NIS) at 0.25% v/v	<p>Clefandim 480 EC has not been tested on all varieties. It is the responsibility of the user to test Clefandim 480 EC on a small portion of the crop to be treated before treating the entire field. Verify crop safety to Clefandim 480 EC on a small area of the crop, at the desired Clefandim 480 EC rate and with the same non-ionic surfactant (NIS) that will be used on the field. If no crop response is evident 7 days after treatment, Clefandim 480 EC may be used on the entire field at the rate tested and with the same NIS used in the crop safety test.</p> <p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Crop Group 12-12 Stone Fruit including Apricot Apricot, Japanese Capulin Cherry, Black Cherry, Nanking Cherry, Sweet Cherry, Tart; Jujube, Chinese Nectarine Peach Plum Plum, American Plum, Beach Plum, Canada Plum, Cherry Plum, Chickasaw Plum, Damson Plum, Japanese; Plum, Klamath Plum, Prune Plumcot Sloe	14 days	2-4 fl oz (0.0625-0.125 lb ai)	Non-ionic Surfactant (NIS) at 0.25% v/v	<p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Strawberry	4 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> • DO NOT apply more than 4 fl oz (0.125 lb ai) per acre per application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Sugar Beet	40 days	3-8 fl oz (0.094-0.250 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air. ⁽³⁾	<p>Refer to appropriate Table for reduced rate prescribed for the control of small annual grasses. The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.</p> Restrictions <ul style="list-style-type: none"> • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. • For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 8 applications at 2 fl oz (0.0625 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Subgroup 20B Sunflower including: Calendula Castor oil Plant Chinese Tallowtree Euphorbia Evening Primrose Jojoba Niger Seed Rose Hip Stokes Aster Tallowwood Tea Oil Plant Vernonia	70 days	3-8 fl oz (0.094-0.250 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air. ⁽³⁾	<p>The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.</p> <p>Verify crop safety to Clefandim 480 EC on a small area of the crop, at the desired Clefandim 480 EC rate and with the same crop oil concentrate that will be used on the field. If no crop response is evident seven (7) days after treatment, Clefandim 480 EC may be used on the entire field at the rate tested and with the same crop oil used in the crop safety test.</p> <p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year. • For Reduced Rate Control for Small Annual Grasses: DO NOT make more than 8 applications at 2 fl oz (0.0625 lb ai) per acre per year.
Tomato	20 days	3-8 fl oz (0.094-0.250 lb ai)	1% v/v in the finished spray volume.	<p>Restrictions</p> <ul style="list-style-type: none"> • DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Tree Nuts Crop Group 14-12 including: African Nut-tree Almond Beechnut Brazil Nut Brazilian Pine Bunya Bur Oak Butternut Cajou Nut Candlenut Cashew Chestnut Chinquapin Coconut Coquito Nut Dika Nut Ginkgo Guiana Chestnut Hazelnut (Filbert) Heartnut Hickory Nut Japanese Horse-chestnut Macadamia Nut Mongongo Nut Monkey-pot Monkey Puzzle Nut Okari Nut Pachira Nut Peach Palm Nut Pecan Pequi Pili Nut Pine Nut Pistachio Sapucaia Nut Tropical Almond Walnut, Black Walnut, English Yellowhorn Cultivars, varieties, and/or hybrids of these.	14 days	3-8 fl oz (0.094- 0.250 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> • DO NOT apply more than 8 fl oz/A (0.25 lb ai/A) in a single application. • DO NOT make more than 4 applications per acre per year. • For repeat applications make on a minimum of a 14 day interval • DO NOT apply more than 32^[**] fl oz/A (1.0 lb ai/A) per year.

[**] [In California the maximum rate is 16 fl oz/acre (0.50 lb ai/A) per year]

CROP SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC				
Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Tuberous and Corm Vegetables Subgroup 1C (except Potato) Including Sweet Potato, Yam Artichoke Chinese Jerusalem Cassava Bitter Sweet Ginger	30 days	3-8 fl oz (0.094-0.250 lb ai)	1% v/v in the finished spray volume.	The addition of Ammonium Sulfate (AMS) has shown improved grass control for difficult to control species including: quackgrass, rhizome, Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn. Restrictions <ul style="list-style-type: none"> DO NOT apply more than 8 fl oz (0.25 lb ai) per acre per application. DO NOT make more than 2 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz (0.50 lb ai) per acre per year.
Turnip Greens	14 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz/A (0.125 lb ai/A) in a single application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz/A (0.50 lb ai/A) per year.
Watercress[*]	30 days	3-4 fl oz (0.094-0.125 lb ai)	1% v/v in the finished spray volume.	Restrictions <ul style="list-style-type: none"> DO NOT apply more than 4 fl oz/A (0.125 lb ai/A) in a single application. DO NOT make more than 4 applications per acre per year. For repeat applications make on a minimum of a 14 day interval DO NOT apply more than 16 fl oz/A (0.50 lb ai/A) per year. DO NOT apply when watercress is under flood conditions. DO NOT apply Clefandim 480 EC when water is in the field and hold water for at least 24 hours after an application.

N/A = Not Applicable

[*Not for use in California.]

- Clefandim 480 EC** is not to be used on vegetable crops being grown for seed production unless specific use directions are provided.
- Acceptable crop oil concentrates would be those which 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. See the Addition of Adjuvant and Crop Oil Concentrate section for further information.
- Clefandim 480 EC** may be applied to seedling or established alfalfa grown for seed, hay, silage, green chop or direct grazing.
- For weed control in established alfalfa and mint, the minimum use rate is 5 fl oz/A (0.156 lb ai).
- 1 to 2 qt/A of liquid fertilizer (10-34-0, 28%N or 32%N), or an equivalent amount (2.5 to 4.0 lb/A) of spray grade ammonium sulfate (AMS) may be added to **Clefandim 480 EC** applications, in addition to the specified rate of crop oil concentrate.

IMPORTANT

Plant safety to **Clefandim 480 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, determine if the herbicide can be used safely on a few plants prior to widespread application. Neither the seller nor the manufacturer of **Clefandim 480 EC** have investigated the safety factor to plants not listed on the label.

INSTRUCTIONS FOR ANNUAL GRASSES (EXCEPT FOR IN ESTABLISHED ALFALFA AND MINT)

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

Restrictions

- **DO NOT** exceed the maximum rate per application listed in Table 1, Crop Specific Use Directions and Restrictions for **Clefandim 480 EC**.
- **DO NOT** exceed the maximum number of applications per year listed in Table 1, Crop Specific Use Directions and Restrictions for **Clefandim 480 EC**.
- **DO NOT** exceed the maximum yearly rate listed in Table 1, Crop Specific Use Directions and Restrictions for **Clefandim 480 EC**.

INSTRUCTIONS FOR ANNUAL GRASSES (EXCEPT FOR IN ESTABLISHED ALFALFA AND MINT)				
GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT* (inches)	RATE FL OZ/ ACRE (lb ai/A)	HIGH RATE ⁽¹⁾ FL OZ/ ACRE (lb ai/A)
Barnyardgrass	<i>Echinochloa crus-galli</i>	2 to 8	3 (0.094)	4 (0.125)
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2 to 6	3	4
Brome				
California	<i>Bromus carinatus</i>	2 to 6	3	4
Cheat	<i>Bromus secalinus</i>	2 to 6	3	4
Downy	<i>Bromus tectorum</i>	2 to 6	3	4
Ripgut	<i>Bromus diandrus</i>	2 to 6	3	4
Canarygrass	<i>Phalaris canariensis</i>	1 to 4	3	4
Crabgrass				
Hairy	<i>Digitaria adscendens</i>	2 to 6**	3	4
Large	<i>Digitaria sanguinalis</i>	2 to 6**	3	4
Smooth	<i>Digitaria ischaemum</i>	2 to 6**	3	4
Southern	<i>Digitaria ciliaris</i>	2 to 6**	3	4
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2 to 6**	3	4
Fall Panicum	<i>Panicum dichotomiflorum</i>	2 to 8	3	4
Field Sandbur	<i>Cenchrus incertus</i>	2 to 6	3	4
Foxtail				
Giant	<i>Setaria faberi</i>	2 to 12	3	4
Green	<i>Setaria viridis</i>	2 to 8	3	4
Yellow	<i>Setaria glauc</i>	2 to 8	3	4
Goosegrass	<i>Eleusine indica</i>	2 to 6**	3	4
Itchgrass	<i>Rottboellia cochinchinensis</i>	2 to 6	3	4
Junglerice	<i>Echinochloa colona</i>	2 to 6	3	4
Lovegrass (Stinkgrass)	<i>Eragrostis cilianensis</i>	2 to 6	3	4
Rabbitsfootgrass	<i>Polypogon monspeliensis</i>	1 to 4	3	4
Red Rice	<i>Oryza sativa</i>	1 to 3	3	4
Ryegrass				
Hardy	<i>Lolium remotum</i>	2 to 6	3	4
Italian	<i>Lolium multiflorum</i>	2 to 6	3	4
Seedling Johnsongrass	<i>Sorghum halepense</i>	4 to 10	3	4
Shattercane	<i>Sorghum bicolor</i>	6 to 18	3	4
Southwestern Cupgrass	<i>Eriochloa gracilis</i>	2 to 6	3	4
Sprangle top				
Amazon	<i>Leptochloa panicoides</i>	2 to 6	3	4
Bearded	<i>Leptochloa fascicularis</i>	2 to 6	3	4
Mexican	<i>Leptochloa uninervia</i>	2 to 6	3	4
Red	<i>Leptochloa filiformis</i>	2 to 6	3	4
Texas Panicum	<i>Panicum texanum</i>	2 to 6	3	4
Volunteer Cereals ⁽²⁾				
Barley	<i>Hordeum vulgare</i>	2 to 6	3	4
Oats	<i>Avena sativa</i>	2 to 6	3	4
Rye	<i>Secale cereale</i>	2 to 6	3	4
Wheat	<i>Triticum aestivum</i>	2 to 6	3	4
Volunteer Corn ⁽³⁾	<i>Zea mays</i>	4 to 12	2 (0.0625)	3
Volunteer Corn ⁽³⁾	<i>Zea mays</i>	12 to 24	3	4
Volunteer Corn (S.R.) ⁽⁴⁾	<i>Zea mays</i>	4 to 12	4 (suppression only)	
Volunteer Grain Sorghum	<i>Sorghum bicolor</i>	8 to 12	3	4
Wild Oats	<i>Avena fatua</i>	2 to 6	3	4
Wild Proso Millet	<i>Panicum miliaceum</i>	2 to 10	3	4
Witchgrass	<i>Panicum capillare</i>	2 to 8	3	4
Woolly Cupgrass	<i>Eriochloa villosa</i>	2 to 8	3	4

*Generally occurs between 3-leaf stage and tillering.

**Length of lateral growth.

⁽¹⁾Rates higher than 4 fl oz/A (0.125 lb ai/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 4 to 8 fl oz/A (0.125 to 0.25 lb ai/A) may be applied.

⁽²⁾When a cereal grain crop (including wheat) is interseeded for crop establishment or is planted as wind breaks to aid crop establishment, the minimum **Clelandim 480 EC** use rate for control is 4 fl oz/A (0.125 lb ai/A).

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

⁽⁴⁾Sethoxydim resistant volunteer corn.

INSTRUCTIONS FOR ANNUAL & PERENNIAL GRASS CONTROL IN ESTABLISHED ALFALFA AND MINT WITH CLEFANDIM 480 EC			
GRASS SPECIES	WEED STAGE	RATE FL OZ/ ACRE (lb ai/A)	HIGH RATE FL OZ/ ACRE (lb ai/A)
Annual & Perennial Grasses Listed in Grass Table	See Table	5 (0.156)	8 (0.250)
<p>Mowing: The best control of annual grasses can be achieved by applying Clefandim 480 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 Clefandim 480 EC for partial or complete control.</p> <p>Irrigated Alfalfa and Mint: Irrigation practices can be very critical to the successful use of Clefandim 480 EC in established alfalfa and mint and may be necessary to initiate active growth of the weeds prior to application. 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>Aerial Application: Apply Clefandim 480 EC in a minimum of 10 GPA in established alfalfa and mint when applying by air.</p> <p>Annual Grass Control: Apply Clefandim 480 EC at the grass sizes indicated in the Directions for Annual Grass Table and rates indicated. If a grass has been cut, apply Clefandim 480 EC after active growth has resumed and regrowth has reached the 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 Clefandim 480 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, including frost, slower plant growth, or the onset of flowering.</p> <p>Perennial Grass Control: Clefandim 480 EC effectively controls perennial grasses including bermudagrass, Johnsongrass, quackgrass, wirestem muhly, tall fescue, foxtail barley and orchardgrass. Due in part to lack of tillage, perennial grasses are more difficult to control in a perennial crop including 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>			

INSTRUCTIONS FOR ANNUAL BLUEGRASS CONTROL WITH CLEFANDIM 480 EC			
GRASS SPECIES	WEED STAGE	RATE FL OZ/ ACRE (lb ai/A)	HIGH RATE FL OZ/ ACRE (lb ai/A)
Annual Bluegrass (<i>Poa annua</i>)	to 4-leaf	3* (0.094)	8 (0.250)
<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 the 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 5 fl oz/A (0.156 lb ai/A) to control annual bluegrass in seedling and established alfalfa and mint.</p>			

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

- Apply only to actively growing grasses at specified weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the specified 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 ⁽¹⁾ (lb ai/A)
Barnyardgrass	<i>Echinochloa crus-galli</i>	1 to 4	2 (0.0625)
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	1 to 4	2.5 (0.078)
Crabgrass			
Large	<i>Digitaria sanguinalis</i>	1 to 3*	2
Large	<i>Digitaria sanguinalis</i>	1 to 4*	2.5
Smooth	<i>Digitaria ischaemum</i>	1 to 3*	2
Smooth	<i>Digitaria ischaemum</i>	1 to 4*	2.5
Southern	<i>Digitaria ciliaris</i>	1 to 4*	2.5
Fall Panicum	<i>Panicum dichotomiflorum</i>	1 to 4	2
Foxtail			
Giant	<i>Setaria faberi</i>	1 to 4	2
Green	<i>Setaria viridis</i>	1 to 4	2
Millet	<i>Setaria italica</i>	1 to 4	2.5
Yellow	<i>Setaria glauca</i>	1 to 4	2
Seedling Johnsongrass	<i>Sorghum halepense</i>	1 to 6	2.5
Shattercane	<i>Sorghum bicolor</i>	4 to 10	2
Texas Panicum	<i>Panicum texanum</i>	1 to 4	2.5
Volunteer Cereals			
Barley	<i>Hordeum vulgare</i>	1 to 4	2.5
Oats	<i>Avena sativa</i>	1 to 4	2.5
Wheat	<i>Triticum aestivum</i>	1 to 4	2.5
Volunteer Corn**	<i>Zea mays</i>	4 to 12	2
Wild Proso Millet	<i>Panicum miliaceum</i>	1 to 6	2
Wild Oats	<i>Avena fatua</i>	1 to 4	2.5
*Length of lateral growth			
**Not S.R. Corn			
⁽¹⁾ Always add a crop oil concentrate at 1 qt/A by ground application to the finished spray volume.			

INSTRUCTIONS FOR PERENNIAL GRASSES

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

Restrictions

- **DO NOT** exceed the maximum application rate listed in Table 1, Crop Specific Use Directions and Restrictions for **Clefandim 480 EC**.
- **DO NOT** exceed the maximum number of applications per year listed in Table 1, Crop Specific Use Directions and Restrictions for **Clefandim 480 EC**.
- **DO NOT** exceed the maximum yearly rate listed in Table 1, Crop Specific Use Directions and Restrictions for **Clefandim 480 EC**.

INSTRUCTIONS FOR PERENNIAL GRASSES continued			
GRASS SPECIES	WEED HEIGHT (inches)	RATE FL OZ/ ACRE (lb ai/A)	HIGH RATE FL OZ/ ACRE (lb ai/A)
Bermudagrass (<i>Cynodon dactylon</i>)			
First Application	3 (or up to 6" runners)	4 (0.125)	8 (0.250)
Repeat Application(s) (if regrowth occurs)	3 (or up to 6" runners)	4	8
Fescue, Tall (<i>Festuca arundinacea</i>)			
First Application	4 to 8	4	8
Repeat Application(s) (if regrowth occurs)	4 to 8	4	8
Foxtail Barley (<i>Hordeum jubatum</i>)			
First Application	2 to 6	4	8
Repeat Application(s) (if regrowth occurs)	2 to 6	4	8
Orchardgrass (<i>Dactylis glomerata</i>)			
First Application	4 to 8	4	8
Repeat Application(s) (if regrowth occurs)	4 to 8	4	8
Quackgrass* (<i>Elytrigia repens</i>)			
First Application	4 to 12	4	8
Repeat Application(s) (if regrowth occurs)	4 to 12	4	8
Rhizome Johnsongrass (<i>Sorghum halepense</i>)			
First Application	12 to 24	4	8
Repeat Application(s) (if regrowth occurs)	6 to 18	3 (0.094)	4
Wirestem Muhly (<i>Muhlenbergia frondosa</i>)			
First Application	4 to 8	4	8
Repeat Application(s) (if regrowth occurs)	4 to 8	4	8
Perennial Bluegrass*			
Roughstalk (<i>Poa trivialis</i>)			
Kentucky (<i>Poa prantensis</i>)			
First Application	2 to 4	4	8
Repeat Application(s) (if regrowth occurs)	2 to 4	4	8
Bentgrass* (<i>Agrostis</i> spp.)			
First Application	2 to 4	-	8
Repeat Application(s) (if regrowth occurs)	2 to 4	-	8
*Control of quackgrass, perennial bluegrass and bentgrass with Clefandim 480 EC may be enhanced by adding Ammonium Sulfate (AMS) at 2.5 to 4.0 lb/A			

TANK-MIXES INFORMATION

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture, including all crop rotational and other crop restrictions. Those concerns 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. pH, OM);
6. Maximum dosage or number of applications per year;
7. Rain free period required; or
8. Application timing (e.g. pre-harvest interval)
9. **DO NOT** exceed the total yearly rates.

TANK-MIX APPLICATION OF CLEFANDIM 480 EC AND BROADLEAF HERBICIDES FOR CONTROL OF GRASSES AND BROADLEAF WEEDS

- Apply only to actively growing grass and broadleaf weeds at specified height or growth stage listed on each label.
- Apply when the first grass or broadleaf weed species in a mixed population reaches the specified 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 labeled rate 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 **Clefandim 480 EC**, as specified in the respective size and rate tables.
- **DO NOT** tank-mix **Clefandim 480 EC** when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.

MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. While agitating, add the correct amount of **Clefandim 480 EC**. Agitation must create a rippling or rolling action on the water surface.
3. If tank-mixing **Clefandim 480 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 must 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 must be verified by a jar test.

INFORMATION ON ANTAGONISM

Tank-mixes of **Clefandim 480 EC** with postemergence broadleaf herbicides have shown some reduction or failure to control certain grass species which would have otherwise been controlled when **Clefandim 480 EC** is applied alone. Activity of the postemergence broadleaf herbicide in the tank-mix is not affected.

ALFALFA

Table 1. CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR ALFALFA
(Refer to the instruction tables above for specific grasses and growth stages)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Clefandim 480 EC + 2,4-DB ⁽⁴⁾	5 to 8 fl oz (0.156 to 0.250 lb ai) + Refer to 2,4-DB label for use rate.	5 to 8 fl oz (0.156 to 0.250 lb ai) + Refer to 2,4-DB label for use rate.	1%	1%
Clefandim 480 EC + Pursuit [®] DG ⁽⁵⁾ (imazethapyr) (EPA Reg No: 241-350) or Pursuit ⁽⁵⁾ (imazethapyr) (EPA Reg No: 241-310)	5 to 8 fl oz (0.156 to 0.250 lb ai) + Refer to Pursuit DG or Pursuit labels for use rate.	-	1%	1%
Clefandim 480 EC + BUCTRIL [®] HERBICIDE ⁽⁶⁾ (bromoxynil) (EPA Reg No: 264-437)	5 to 8 fl oz (0.156 to 0.250 lb ai) + Refer to BUCTRIL HERBICIDE label for use rate.	-	0.5%	0.5%

⁽¹⁾ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** alone (without a tank-mix herbicide), according to the appropriate size and rate requirements.

⁽²⁾ 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 advised in these situations.

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

⁽⁴⁾ **Clefandim 480 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. **DO NOT** apply Clefandim 480 EC and 2,4-DB as a tank-mix to alfalfa unless the most restrictive language on both labels can be observed including restrictions on feeding grazing and harvesting.

⁽⁵⁾ 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.

Restriction: DO NOT feed, graze, or harvest alfalfa for 30 days following an application of Pursuit to alfalfa.

⁽⁶⁾ 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 **Clefandim 480 EC** plus Buctril 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 trifoliolate leaf stage. **Clefandim 480 EC** plus Buctril 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. **Clefandim 480 EC** plus Buctril 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 **Clefandim 480 EC** plus Buctril application. Warm, humid conditions may enhance leaf burn. New crop growth will not be affected.

Restriction: DO NOT apply when alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.

CANOLA (EXCEPT FLAX)

[Rapeseed Subgroup 20A (except flax seed, mustard seed and sesame seed)]

Table 2. REDUCED RATE CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES

(Refer to the instruction tables above for specific grasses and growth stages.)

PRODUCT	APPLICATION RATES/ACRE		AMMONIUM SULFATE	
	ANNUAL GRASSES ⁽¹⁾	PERENNIAL GRASSES	GROUND	AIR
Clefandim 480 EC⁽²⁾ + Liberty^{®(3)} (glufosinate) (EPA Reg No: 7969-447)	2 to 2.5 fl oz (0.0625 to 0.078 lb ai) + Refer to Liberty label for use rate.	-	3.0 lb	3.0 lb
⁽¹⁾ 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. ⁽²⁾ Restriction: DO NOT apply Clefandim 480 EC tank-mix during or after bolting or flowering or crop injury may occur. ⁽³⁾ For use only on Liberty Link canola.				

COTTON

Table 3. CLEFANDIM 480 EC TANK-MIXED WITH COBRA[®] HERBICIDE AND MSMA APPLIED POST DIRECTED TO COTTON

PRODUCT ⁽¹⁾	APPLICATION RATES/ACRE ⁽²⁾		CROP OIL CONCENTRATE ⁽³⁾ V/V	COMMENTS
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	
Clefandim 480 EC⁽⁴⁾ + Cobra Herbicide (lactofen) (EPA Reg No: 59639-34) + MSMA (4.0 lb/gal) or MSMA (6.6 lb/gal)	3 to 4 fl oz (0.094 to 0.125 lb ai)	4 to 8 fl oz (0.125 to 0.250 lb ai)	1%	Reduce broadcast rate in proportion to the band area actually treated.
	See Cobra Herbicide label for rate to control broadleaf weeds and height limitations for cotton. Refer to the Clefandim 480 EC label for weed height and species controlled.			
	See MSMA label for rate to control broadleaf weeds and height limitations for cotton. Refer to the Clefandim 480 EC label for weed height and species controlled.			

⁽¹⁾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 advised in these situations.

⁽²⁾ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** alone (without a tank-mix herbicide), according to the appropriate size and rate requirements.

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

⁽⁴⁾ 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 **Clefandim 480 EC** may be necessary.

COTTON (continued)

Table 4. CLEFANDIM 480 EC TANK-MIXED WITH BUCTRIL 4 EC TO CONTROL EMERGED WEEDS IN BXN COTTON AS A BROADCAST APPLICATION

WEEDS IN BXN COTTON AS A BROADCAST APPLICATION			
PRODUCT ⁽¹⁾	APPLICATION RATE/ACRE ⁽²⁾	CROP OIL CONCENTRATE PER ACRE ⁽³⁾	COMMENTS ⁽⁷⁾
	ANNUAL GRASSES		
Clefandim 480 EC + Buctril 4 EC ^(4,5,6) (bromoxynil) (EPA Reg No: 264-540)	4 to 8 fl oz (0.125 to 0.250 lb ai) Refer to Buctril 4 EC label for use rate to control broadleaf weeds and height limitations for cotton.	1 qt	See charts for grasses controlled.

⁽¹⁾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.

⁽²⁾ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** at the prescribed rate with the appropriate amount of crop oil concentrate in a non- Buctril tank-mix.

⁽³⁾Always add a crop oil concentrate at 1 qt/A by ground in the finished spray solution.

⁽⁴⁾Applications of Buctril 4 EC can be made only to BXN cotton or other cotton where bromoxynil can be applied in postemergence over-the-top applications.

⁽⁵⁾**Restriction: DO NOT** apply the **Clefandim 480 EC** plus Buctril tank-mix within 75 days of harvest.

⁽⁶⁾**Restriction: DO NOT** exceed 2 applications of Buctril before cotton is 12 inches tall and one application after 12 inches tall.

⁽⁷⁾Use a minimum of 10 gals of spray solution per acre.

Table 5. CLEFANDIM 480 EC TANK-MIXED WITH GLYPHOSATE TO CONTROL EMERGED GRASSES IN COTTON AS A BROADCAST APPLICATION

PRODUCT	APPLICATION RATE/ACRE ⁽¹⁾		ADJUVANT		COMMENTS
	ANNUAL GRASSES	PERENNIAL GRASSES	Glyphosate formulation with built in adjuvant	Glyphosate formulation without built in adjuvant	
Clefandim 480 EC + Glyphosate	3 to 4 fl oz (0.094 to 0.125 lb ai) Refer to glyphosate label for use rate to control broadleaf weeds and height limitations for cotton.	4 to 8 fl oz (0.125 to 0.250 lb ai)	Non-ionic surfactant @ 0.125 to 0.25% v/v plus ammonium sulfate @ 8.5 to 17 lb per 100 gals of carrier.	Crop oil concentrate @ 1 pt/A plus ammonium sulfate @ 8.5 to 17 lb per 100 gals of carrier.	See charts for grasses controlled. Use a minimum of 10 gals of spray solution per acre.

⁽¹⁾ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** at the prescribed rate with the appropriate amount of crop oil concentrate.

BEANS (DRY AND SUCCULENT SHELLED)
[Succulent Shelled Pea and Bean Subgroup 6B]
[Dried Shelled Pea and Bean (except Soybean 6C)]

Table 6. CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR BEANS (DRY AND SUCCULENT SHELLED)

(Refer to the instruction tables above for specific grasses and growth stages.)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Clefandim 480 EC + Basagran® (bentazon) (EPA Reg No: 7969-45)	4 to 5 fl oz (0.125 to 0.156 lb ai) + Refer to Basagran label for use rate.	5 to 8 fl oz (0.156 to 0.25 lb ai) + Refer to Basagran label for use rate.	1%	1%

⁽¹⁾If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** alone (without a tank-mix herbicide), according to the appropriate size and rate requirements.

⁽²⁾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 advised in these situations.

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

FLAX

Table 7. REDUCED RATE CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR FLAX

(Refer to the instruction tables above for specific grasses and growth stages)

PRODUCT	APPLICATION RATES/ACRE		CROP OIL CONCENTRATE	
	ANNUAL GRASSES ⁽¹⁾	PERENNIAL GRASSES	GROUND	AIR
Clefandim 480 EC + Bronate Advanced™ ^(2, 3) (bromoxynil) (EPA Reg No: 264-690)	2 to 2.5 fl oz (0.0625 to 0.078 lb ai) + Refer to Bronate Advanced label for use rate.	-	1 pt	1 pt
Clefandim 480 EC + Buctril ^(2, 3) (bromoxynil) (EPA Reg No: 264-437)	2 to 2.5 fl oz (0.0625 to 0.078 lb ai) + Refer to Buctril label for use rate.	-	1 pt	1 pt
Clefandim 480 EC + Rhonox® MCPA Low Volatile Ester Herbicide ^(2, 3) (MCPA Ester) (EPA Reg No: 11685-21)	2 to 2.5 fl oz (0.0625 to 0.078 lb ai) + Refer to Rhonox label for use rate.	-	1 pt	1 pt

⁽¹⁾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**.

⁽²⁾**Restriction: DO NOT** apply **Clefandim 480 EC** tank-mix during or after the bud stage or to ornamental flax or crop injury may occur.

⁽³⁾**Restriction: DO NOT** apply tank-mixes if temperatures are expected to exceed 85°F at (or 3 days following) application or crop injury may occur.

SOYBEAN

Table 8. CLEFANDIM 480 EC TANK-MIXES⁽³⁾ TO CONTROL ANNUAL GRASSES WHEN USED AS A BURNDOWN IN NO-TILL SOYBEAN

PRODUCT	PRODUCT RATE/ACRE ⁽¹⁾	GRASS HEIGHT (inches)	CROP OIL CONCENTRATE /ACRE ⁽²⁾	28%N OR 32%N QTS/A OR 2.5 TO 4.0 LB AMS
Clefandim 480 EC + 2,4-D ester ⁽³⁾	1.5 fl oz (0.047 lb ai)	Foxtail 1 to 3 Fall Panicum 1 to 3	1 qt	1 to 2 qt or 2.5 to 4.0 lb AMS
	2 fl oz (0.0625 lb ai)	Foxtail 1 to 4 Fall Panicum 1 to 4	1 qt	1 to 2 qt or 2.5 to 4.0 lb AMS
	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to 2,4-D ester label for use rate.	(See Grass Chart for grasses claimed.)	1 qt	1 to 2 qt or 2.5 to 4.0 lb AMS

*2,4-D ester must not be used where drift sensitive crops may be grown.

⁽¹⁾ If regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** according to the appropriate size and rate requirements.

⁽²⁾ Always use a crop oil concentrate at the listed rate in the finished spray volume.

⁽³⁾ The following products can be tank-mixed with **Clefandim 480 EC** plus 2,4-D ester: Valor® Herbicide (EPA Reg No: 59639-99), Dual II Magnum® (EPA Reg No: 100-818), plus other Dual product..

Table 9. CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN
(Refer to the instruction tables above for specific grasses and growth stages.)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Clefandim 480 EC + <i>Cobra</i> Herbicide (lactofen) (EPA Reg No: 59639-34)	3 to 4 fl oz (0.094 to 0.125 lb ai) + 12.5 fl oz	4 to 8 fl oz (0.125 to 0.250 lb ai) + 12.5 fl oz	0.5 to 1%	1%
Clefandim 480 EC + BASAGRAN HERBICIDE (bentazon) (EPA Reg No: 7969-45)	4 to 5 fl oz (0.125 to 0.156 lb ai) + Refer to Basagran label for use rate.	5 to 8 fl oz (0.156 to 0.250 lb ai) + Refer to Basagran Label for use rate.	1%	1%
Clefandim 480 EC + Glyphosate (For use on Roundup Ready soybean only)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to glyphosate label for use rate.	4 to 8 fl oz (0.125 to 0.250 lb ai) + Refer to glyphosate label for use rate.	0.5 to 1% ⁽⁴⁾	1% ⁽⁴⁾
Clefandim 480 EC + Ultra Blazer® (acifluorfen) (EPA Reg No: 70506-60)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Ultra Blazer label for use rate.	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Ultra Blazer label for use rate.	0.5 to 1%	1%

continued

Table 9. CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN
(Refer to the instruction tables above for specific grasses and growth stages.)
(continued)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Clefandim 480 EC + FLEXSTAR⁽⁶⁾ (fomesafen) (EPA Reg No: 100-1101)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to the Flexstar label for use rate.	4 to 8 fl oz (0.125 to 0.250 lb ai) + Refer to the Flexstar label for use rate.	1%	1%
Clefandim 480 EC + CLASSIC[®] HERBICIDE (chlorimuron ethyl) (EPA Reg No: 5481-681)	4 to 5 fl oz (0.125 to 0.156 lb ai) + Refer to Classic label for use rate.	5 to 8 fl oz (0.156 to 0.250 lb ai) + Refer to Classic label for use rate.	1%	1%
Clefandim 480 EC⁽⁴⁾ + PURSUIT DG HERBICIDE (imazethapyr) (EPA Reg No: 241-350)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Pursuit DG label for use rate.	4 to 8 fl oz (0.125 to 0.250 lb ai) + Refer to Pursuit DG label for use rate.	1%	1%
Clefandim 480 EC⁽⁵⁾ + Cobra Herbicide (lactofen) (EPA Reg No: 59639-34) + CLASSIC HERBICIDE (chlorimuron ethyl) (EPA Reg No: 5481-681)	4 to 5 fl oz (0.125 to 0.156 lb ai) + 6 to 8 fl oz + Refer to Classic label for use rate.	-	0.5%	1%
Clefandim 480 EC⁽⁵⁾ + Cobra Herbicide (lactofen) (EPA Reg. No. 59639-34) + BASAGRAN HERBICIDE (bentazon) (EPA Reg No: 7969-45)	4 to 5 fl oz (0.125 to 0.156 lb ai) + 6 to 10 fl oz + Refer to Basagran label for use rate.	-	0.5%	1%
Clefandim 480 EC⁽⁵⁾ + Cobra Herbicide (lactofen) (EPA Reg No: 59639-34) + PURSUIT DG HERBICIDE (imazethapyr) (EPA Reg No: 241-350)	4 to 5 fl oz (0.125 to 0.156 lb ai) + 6 to 10 fl oz + Refer to Pursuit DG label for use rate.	-	0.5%	1%

continued

Table 9. CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN
(Refer to the instruction tables above for specific grasses and growth stages.)
(continued)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Clefandim 480 EC⁽⁵⁾ + Resource [®] Herbicide (flumiclorac) (EPA Reg No: 59639-82) + PURSUIT DG HERBICIDE (imazethapyr) (EPA Reg No: 241-350)	4 to 5 fl oz (0.125 to 0.156 lb ai) + 4 fl oz + Refer to Pursuit DG for use rate.	-	1%	1%
Clefandim 480 EC⁽⁵⁾ + Resource Herbicide (flumiclorac) (EPA Reg No: 59639-82) + Basagran (bentazon) (EPA Reg No: 7969-45)	4 to 5 fl oz (0.125 to 0.156 lb ai) + 4 fl oz + Refer to Basagran label for use rate.	-	1%	1%
Clefandim 480 EC⁽⁵⁾ + Resource Herbicide (flumiclorac) (EPA Reg No: 59639-82) + Classic (chlorimuron ethyl) (EPA Reg No: 5481-681)	4 to 5 fl oz (0.125 to 0.156 lb ai) + 4 fl oz + Refer to Classic label for use rate.	-	1%	1%
Clefandim 480 EC⁽⁵⁾ + Cobra Herbicide (lactofen) (EPA Reg No: 59639-34) + Resource Herbicide (flumiclorac) (EPA Reg No: 59639-82)	3 to 4 fl oz (0.094 to 0.125 lb ai) + 6 fl oz + 4 fl oz	-	0.5%	1%
Clefandim 480 EC⁽⁵⁾ + FirstRate [®] (cloransulam) (EPA Reg No: 5481-676)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Firstrate label for use rate.	4 to 8 fl oz (0.094 to 0.125 lb ai) + Refer to FirstRate label for use rate.	1%	-

Table 9. CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN
(Refer to the instruction tables above for specific grasses and growth stages.)
(continued)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Clefandim 480 EC⁽⁵⁾ + <i>Cobra</i> Herbicide (lactofen) (EPA Reg. No. 59639-34) + FirstRate (cloransulam) (EPA Reg No: 5481-676)	3 to 4 fl oz (0.094 to 0.125 lb ai) + 6 to 8 fl oz + Refer to FirstRate label for use rate.	4 to 8 fl oz (0.125 to 0.250 lb ai) + 6 to 8 fl oz + Refer to FirstRate label for use rate.	1%	-
Clefandim 480 EC⁽⁵⁾ + RAPTOR [®] HERBICIDE (imazamox) (EPA Reg No: 241-379)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Raptor label for use rate.	-	1%	-
Clefandim 480 EC⁽⁵⁾ + <i>Cobra</i> Herbicide (lactofen) (EPA Reg No: 59639-34) + RAPTOR HERBICIDE (imazamox) (EPA Reg No: 241-379)	3 to 4 fl oz (0.094 to 0.125 lb ai) + 6 to 8 fl oz + Refer to Raptor label for use rate.	-	1%	-
Clefandim 480 EC⁽⁵⁾ + <i>Resource</i> Herbicide (flumiclorac) (EPA Reg. No. 59639-82)	3 to 4 fl oz (0.094 to 0.125 lb ai) + 4 to 12 fl oz	-	1 qt	-

continued

Table 9. CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN
(Refer to the instruction tables above for specific grasses and growth stages.)
 (continued)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Clefandim 480 EC⁽⁵⁾ + FirstRate (cloransulam) (EPA Reg No: 5481-676) + FLEXSTAR ⁽⁶⁾ (fomesafen) (EPA Reg No: 100-1101)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to FirstRate and Flexstar label for use rates.	4 to 8 fl oz (0.125 to 0.250 lb ai) + Refer to FirstRate and Flexstar label for specific application rates.	1%	-

⁽¹⁾If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** alone (without a tank-mix herbicide), according to the appropriate size and rate requirements.

⁽²⁾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 advised in these situations.

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

⁽⁴⁾The addition of 2.5 lb of ammonium sulfate is required when **Clefandim 480 EC** is tank-mixed with glyphosate. If the glyphosate formulation has a stand-alone built-in adjuvant, add 0.125% v/v non-ionic surfactant in place of crop oil concentrate. If the glyphosate formulation does not have a built-in adjuvant system, add 0.5 to 1% crop oil concentrate for ground application and 1% v/v for aerial application.

⁽⁵⁾The addition of 1 to 2 qt/A of liquid fertilizer (10-34-0, 28%N, or 32%N) is advised when **Clefandim 480 EC** is tank-mixed with Pursuit, Resource, FirstRate, Raptor, Frontrow, *Cobra* Herbicide plus Classic, *Cobra* Herbicide plus Basagran, *Cobra* Herbicide plus Pursuit, *Cobra* plus FirstRate, *Cobra* Herbicide plus Resource, and *Cobra* Herbicide plus Raptor. An equivalent amount (2.5 to 4.0 lb/A) of spray grade ammonium sulfate (AMS) may be added in place of liquid fertilizer. Fertilizer adjuvants are to be added in addition to the crop oil concentrate.

⁽⁶⁾Refer to Flexstar label for geographic and rotational restrictions.

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.

SOYBEAN (continued)

Table 10. REDUCED RATE CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN (Refer to table Directions for reduced rate to control small annual grasses in canola, dried shelled bean & pea (including soybean, edible podded legume vegetables, flax, mustard seed, bean & pea (succulent) and sugar beet (Reduced rate directions not for use in California))

PRODUCT	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ^(3,4) (V/V)	
	ANNUAL GRASSES ⁽²⁾	PERENNIAL GRASSES		
			GROUND	AIR
Clefandim 480 EC + FirstRate (cloransulam) (EPA Reg No: 5481-676)	2 to 4 fl oz (0.0625 to 0.125 lb ai) + Refer to FirstRate label for use rate.	-	1%	1%
Clefandim 480 EC + PURSUIT DG HERBICIDE (imazethapyr) (EPA Reg No: 241-350)	2 to 3 fl oz (0.0625 to 0.094 lb ai) + Refer to Pursuit DG for use rate.	-	1%	1%

- ⁽¹⁾ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** alone (without a tank-mix herbicide), according to the appropriate size and rate requirements.
- ⁽²⁾ 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.
- ⁽³⁾ Always use a crop oil concentrate at the listed rate (but not less than 1 pt/A) in the finished spray volume.
- ⁽⁴⁾ The addition of 1 to 2 qt/A of liquid fertilizer (10-34-0, 28%N, or 32%N) is required when **Clefandim 480 EC** is tank-mixed at reduce rates. An equivalent amount (2.5 to 4.0 lb/A) of spray grade ammonium sulfate (AMS) may be added in place of liquid fertilizer. Fertilizer adjuvants are to be added in addition to the crop oil concentrate.

PEANUT (INCLUDING PERENNIAL)

Table 11. CLEFANDIM 480 EC TANK-MIXES WITH BROADLEAF HERBICIDES FOR PEANUT (INCLUDING PERENNIAL)
(Refer to the instruction tables above for specific grasses and growth stages.)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES ⁽²⁾	PERENNIAL GRASSES		
			GROUND	AIR
Clefandim 480 EC + Basagran (bentazon) (EPA Reg No: 7969-45)	4 to 5 fl oz (0.125 to 0.156 lb ai) + Refer to Basagran label for use rate.	-	1%	1%
Clefandim 480 EC + Ultra Blazer (acifluorfen) (EPA Reg No: 70506-60)	4 to 5 fl oz (0.125 to 0.156 lb ai) + Refer to Ultra Blazer label for use rate.	-	1%	1%

- (¹) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** alone (without a tank-mix herbicide), according to the appropriate size and rate requirements.
- (²) 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 advised in these situations.
- (³) Always use a crop oil concentrate at the listed rate (but not less than 1 pt/A) in the finished spray volume.

INSTRUCTIONS FOR GRASS SUPPRESSION FOR HARVEST EFFICIENCY IN PEANUT (INCLUDING PERENNIAL) WITH CLEFANDIM 480 EC			
GRASS SPECIES	WEED STAGE	RATE FL OZ/ ACRE (lb ai/A)	HIGH RATE FL OZ/ACRE (lb ai/A)
Annual and perennial grasses that exceed height claimed for control on height charts “INSTRUCTIONS FOR ANNUAL GRASSES” & “INSTRUCTIONS FOR PERENNIAL GRASSES”	Up to and including grasses in the seed head stage.	8 (0.250)	16 (0.500)
Restriction: DO NOT apply as part of a tank-mix when applying Clefandim 480 EC for grass suppression. Add a crop oil concentrate at 1 qt/A by ground to the finished spray volume.			

SUGAR BEET

Table 12. CLEFANDIM 480 EC TANK-MIXED WITH STINGER® APPLIED TO SUGAR BEET
(Refer to the instructions tables above for specific grasses and growth stages)

PRODUCT(²)	APPLICATION RATES/ACRE(¹)		CROP OIL CONCENTRATE(³) (V/V)	
	Annual Grasses	Perennial Grasses	Ground	Air
Clefandim 480 EC + Stinger (clopyralid) (EPA Reg No: 62719-73)	3 to 4 fl oz (0.094 to 0.125 lb ai)	4 to 8 fl oz (0.125 to 250 lb ai)	1%	1%
	Refer to Stinger label for use rate.			

- (¹) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** alone (without a tank-mix herbicide), according to the appropriate size and rate requirements.
- (²) 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 advised in these situations.
- (³) Always use a crop oil concentrate at the listed rate (but not less than 1 pt/A) in the finished spray volume.

RESTRICTION: DO NOT USE METHYLATED SEED OIL.

GROUND APPLICATION

Use of sufficient spray volumes and pressure is essential to ensure complete coverage. Use a minimum of 10 gals and a maximum of 20 gals of spray solution per acre. Spray pressures must reflect a minimum of 30 psi and a maximum of 60 psi at the nozzle. **DO NOT** use flood nozzles.

AERIAL APPLICATION

Use of sufficient spray volumes is essential to ensure complete coverage. Use a minimum of 5 gals and a maximum of 15 gals of spray solution per acre.

Table 13. TANK-MIX APPLICATION OF CLEFANDIM 480 EC AND FUNGICIDES FOR CONTROL OF GRASS WEEDS AND DISEASES IN SUGAR BEET

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)
	ANNUAL GRASSES	PERENNIAL GRASSES	
Clefandim 480 EC + EMINENT® ESP (tetraconazole) (EPA Reg No: 10163-403)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Eminent label for use rate.	4 to 8 fl oz (0.125 to 0.250 lb ai) + Refer to Eminent label for use rate.	1%
⁽¹⁾ If grass regrowth occurs, or an additional flush of new grass emerges, make a second application of Clefandim 480 EC alone (without a tank-mix fungicide) according to the appropriate size and rate requirements.			
⁽²⁾ Refer to Clefandim 480 EC and fungicide label for rates and weeds and diseases controlled.			
⁽³⁾ Always use a crop oil concentrate at the listed rate (but not less than 1 pt/A) in the finished spray volume.			

Table 14. TANK-MIX APPLICATION OF CLEFANDIM 480 EC AND INSECTICIDES FOR CONTROL OF GRASS WEEDS AND INSECTS IN ALFALA, COTTON, MINT, PEANUT (INCLUDING PERENNIAL), SOYBEAN AND SUNFLOWER

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE (V/V) ⁽³⁾	CROP					
	ANNUAL GRASSES	PERENNIAL GRASSES		Alfalfa ⁽⁴⁾	Cotton	Mint ^(4,5)	Peanut	Soybean	Sunflower
Clefandim 480 EC + Orthene® 75 S SOLUBLE POWDER (acephate) (EPA Reg No: 5481-8971) or Orthene 97 (acephate) (EPA Reg No: 5481-8978)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Orthene 75 S SOLUBLE POWDER or Orthene 97 label for use rate.	4 to 8 fl oz (0.125 to 0.250 lb ai) + Refer to Orthene 75 S SOLUBLE POWDER or Orthene 97 label for use rate.	1%		X	X	X		
Clefandim 480 EC + Orthene 90 S ⁽⁶⁾ (acephate) (EPA Reg No: 5481-8974)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Orthene 90 S label for use rate.	4 to 8 fl oz (0.125 to 0.250 lb ai) + Refer to Orthene 90 S label for use rate.	1%		X	X	X	X	
Clefandim 480 EC + Danitol® 2.4 EC Insecticide (fenpropathrin) (EPA Reg No: 59639-35)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Danitol 2.4 EC Insecticide label for use rate.	4 to 8 fl oz (0.125 to 0.250 lb ai) + Refer to Danitol 2.4 EC Insecticide label for use rate.	1%		X		X		
Clefandim 480 EC + Asana® XL (esfenvalerate) (EPA Reg No: 59639-209)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to Asana XL label for use rate.	4 to 8 fl oz (0.125 to 0.250 lb ai) + Refer to Asana XL label for use rate.	1%						X
Clefandim 480 EC + BAYTHROID® XL (B-cyfluthrin) (EPA Reg No: 264-840)	5 to 8 fl oz ⁽⁷⁾ (0.156 to 0.250 lb ai) + Refer to BAYTHROID XL label for use rate.	5 to 8 fl oz (0.156 to 0.250 lb ai) + Refer to BAYTHROID XL label for use rate.	1%	X					
Clefandim 480 EC + dimethoate	5 to 8 fl oz ⁽⁷⁾ (0.156 to 0.250 lb ai) + Refer to dimethoate label for use rate.	5 to 8 fl oz (0.156 to 0.250 lb ai) + Refer to dimethoate label for use rate.	1%	X					

⁽¹⁾If grass regrowth occurs, or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC** alone (without a tank-mix insecticide) according to the appropriate size and rate requirements.

⁽²⁾Refer to **Clefandim 480 EC** and insecticide label for rates and weeds and insects controlled.

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

⁽⁴⁾Certain insecticides may cause temporary phytotoxic symptoms on alfalfa and mint foliage. Refer to the insecticide label for further information. It is suggested that prior to using any of these insecticide/herbicide tank-mixtures, that a small area of the field be treated first and observations for crop injury be made prior to treating the whole field.

⁽⁵⁾The **Clefandim 480 EC** rate needs to be 3 to 4 fl oz/A (0.094 to 0.125 lb ai) for annual grass control in baby mint, minimum of 4 fl oz/A (0.125 lb ai) for annual grass control in established mint and 4 to 8 fl oz/A for perennial grass control. Crop oil concentrate must be added at the rate of 1.0 to 2.0 pt/A.

⁽⁶⁾Insecticide tank-mix use with Orthene 90 S in soybean is permitted only in a state having an approved Section 24(c) registration for Orthene 90 S use in soybean.

⁽⁷⁾The **Clefandim 480 EC** rate needs to be 3 to 4 fl oz/A (0.094 to 0.125 lb ai) for annual grass control in seedling alfalfa.

Table 15. INSTRUCTIONS FOR ROUNDUP READY VOLUNTEER CORN CONTROL IN ROUNDUP READY SOYBEAN WITH CLEFANDIM 480 EC TANK-MIX

Roundup Ready Volunteer Corn Height (inches)	Clefandim 480 EC Rate fl oz/A	Glyphosate ⁽¹⁾ rate for formulations with built in adjuvant	Adjuvant
<12	2 (0.0625 lb ai)	Refer to glyphosate label for use rate.	Non-ionic surfactant @ 0.125 to 0.25% v/v plus ammonium sulfate @ 8.5 to 17 lbs per 100 gals/ of carrier
12 to 18	2.5 (0.078 lb ai)		
18 to 24	3 (0.094 lb ai)		

Roundup Ready Volunteer Corn Height (inches)	Clefandim 480 EC Rate fl oz/A	Glyphosate ⁽¹⁾ rate for formulations without built in adjuvant	Adjuvant
<12	2 (0.0625 lb ai)	Refer to glyphosate label for use rate.	Crop oil concentrate @ 1 pt/A plus ammonium sulfate @ 8.5 to 17 lb per 100 gals of carrier
12 to 18	2.5 (0.078 lb ai)		
18 to 24	3 (0.094 lb ai)		

⁽¹⁾Glyphosate formulation must be labeled for use on Roundup Ready soybean.

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

- Apply only to actively growing grass and broadleaf weeds at specified height or growth stage listed on each label.
- Apply under favorable soil moisture and humidity which exist a few days after rainfall or within seven days after irrigation.
- Tank-mix applications may sometimes result in reduced grass control. If regrowth occurs, or an additional flush of new grass emerges, make a second application of **Clefandim 480 EC**, as specified in the respective size and rate tables.
- Avoid contact with foliage, green stems, or fruit crops, or any desirable plants and trees, other than soybean with the Roundup Ready gene as severe injury or destruction will result.
- This tank-mix may be applied postemergence to Roundup Ready soybean up through the full flowering stage.

Restrictions

- **DO NOT** tank-mix **Clefandim 480 EC** when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.
- **DO NOT** apply less than 60 days before harvest.
- **DO NOT** allow the **Clefandim 480 EC** plus Roundup to mist, drip, drift or splash onto desirable vegetation as minute quantities of the tank-mix can cause severe damage or destruction to the crops, plants or other areas on which treatment was not intended. The likelihood of injury occurring from drift of this product is greatest when winds are gusty or in excess of 5 miles per hour. Even under lesser wind velocities, avoid conditions that allow spray drift to occur including combinations of spray pressure and nozzle type that will result in fine particles (mist) that are likely to drift.

TABLE 16. CLEFANDIM 480 EC IN TANK-MIXES TO CONTROL ANNUAL AND PERENNIAL GRASSES IN FALLOW LAND

PRODUCT	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽²⁾ (V/V)	
	Annual Grasses	Perennial Grasses	Ground	Air
Clefandim 480 EC + 2,4-D ester or Clarity® (dicamba) (EPA Reg No: 7969-137)	3 to 4 fl oz (0.094 to 0.125 lb ai) + Refer to 2,4-D ester or Clarity label for use rate.	4 to 8 fl oz	1%	1%
⁽¹⁾ Refer to Clefandim 480 EC label for weed height and species control. Review 2,4-D labels for crop restrictions, use rates and weeds controlled.				
⁽²⁾ 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.				

Table 19. CLEFANDIM 480 EC FOR THE CONTROL AND/OR SUPPRESSION OF TALL FESCUE IN NATIVE PRAIRIE WARM-SEASON GRASS RESTORATION PROJECTS

PRODUCT	PRODUCT RATES	GRASS WEEDS CONTROLLED/SUPPRESSED		WEED STAGES
		Common Name	Scientific Name	
Clefandim 480 EC	5 to 6 fl oz/A (0.156 to 0.188 lb ai)	Tall Fescue	<i>Festuca arundinacea</i>	4 to 6 inches tall (40 to 60% green-up)
Adjuvant: Clefandim 480 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. Advised Mixing Order: Thoroughly mix spray grade ammonium sulfate (AMS) in water, add Clefandim 480 EC , then add crop oil concentrate.				

SPECIAL APPLICATION INSTRUCTIONS

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.

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.

Apply only to fields that have warm-season grasses established for 2 years. Applications of **Clefandim 480 EC** to emerged warm-season grasses may cause injury.

NOTE: **Clefandim 480 EC** applications are most effective if applied when average nighttime temperatures are consistently greater than or equal to 47°F.

Restrictions

- **DO NOT** mow area for 2 weeks after the **Clefandim 480 EC** application.
- **DO NOT** use flood jet nozzles.
- **DO NOT** apply to warm-season grasses grown for seed.
- **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.

TABLE 20. CLEFANDIM 480 EC FOR THE SUPPRESSION OF TALL FESCUE SEED-HEADS IN NON-PRODUCING AGRICULTURAL AREAS

Product	Product Rate	Suppression	Application Timing
Clefandim 480 EC	0.75 to 1 fl oz/A (0.023 to 0.031 lb ai)	Tall Fescue Seed-Heads (<i>Festuca arundinacea</i>)	(50 to 90% Tall Fescue green-up)

ADJUVANT: **Clefandim 480 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.

Advised Mixing Order: Thoroughly mix spray grade ammonium sulfate in water, add **Clefandim 480 EC**, then add crop oil concentrate.

SPECIAL APPLICATION INSTRUCTIONS

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

Use the higher **Clefandim 480 EC** rate if less tall fescue green matter is present.

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 nozzles.

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

Restrictions

- **DO NOT** mow area for two weeks after the **Clefandim 480 EC** application.
- **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.

DIRECTIONS FOR USE IN ORNAMENTALS

ORNAMENTALS SPECIFIC DIRECTIONS AND RESTRICTIONS FOR CLEFANDIM 480 EC	
Use Rates Per Acre	Special Use Instructions
3-8 fl oz (0.094 to 0.250 lb ai)	<p>For ornamental plant uses, Clefandim 480 EC can be used to control labeled grass weeds in greenhouses, lathhouses, shadehouses, and around outdoor ornamentals, including nurseries, parks, roadside plantings, and structure landscapes. The plants listed below have been tested for use with Clefandim 480 EC applications. See tables with listed ornamentals (ornamental trees, ground covers, garden flowers and plants, and shrubs).</p> <p>Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt per 50 gals (0.25% v/v).</p> <p>Use of crop oil concentrate is not advised since it may injure flowers and foliage.</p> <p>For repeat application make on a minimum of a 14-day interval.</p> <p>Restrictions</p> <ul style="list-style-type: none"> • Clefandim 480 EC must not be applied to non-bearing fruit or nut crops which are grown for root stock. • DO NOT apply more than 8 fl oz (0.250 lb ai) per acre per application. • DO NOT make more than 2 applications per acre per year. • For repeat applications make on a minimum of a 14-day interval. • DO NOT apply more than 16 fl oz (0.500 lb ai) per acre per year.

IMPORTANT

Clefandim 480 EC successfully controls weeds in newly transplanted and established non-grassy ornamentals. Plant safety to **Clefandim 480 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 advised that the user determine if herbicide can be used safely on a few plants prior to widespread application. Neither the seller nor the manufacturer of **Clefandim 480 EC** have investigated the safety factor to ornamental plants not listed on the label.

The following plants have been tested for use with for **Clefandim 480 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>
Golden Chain Tree	<i>Laburnum anagyroides</i>
Maples	<i>Acer</i> spp.
Mulberry, White	<i>Morus alba</i>
Oaks	<i>Quercus</i> spp.
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</i> spp.
Alyssum*, Sweet	<i>Lobularia maritima</i>
Asparagus Fern	<i>Asparagus setaceus</i>
Bleeding Heart	<i>Dicentra spectabilis</i>
Cast Iron Plant	<i>Aspidistra elatior</i>
Chrysanthemum	<i>Chrysanthemum</i> spp.
Cinquefoil	<i>Potentilla</i> spp.
Coleus	<i>Coleus</i> spp.
Coralbells	<i>Heuchera sanguinea</i>
Cranesbill	<i>Geranium</i> spp.
Dahlia	<i>Dahlia</i> spp.
Daisy, Trailing African	<i>Osteospermum fruticosum</i>
Daylily	<i>Hemerocallis</i> spp.
Dusty Miller	<i>Senecio cineraria</i>
Euonymus	<i>Euonymus</i> spp.
Gazania	<i>Gazania</i> spp.
Geranium, House	<i>Pelargonium hortorum</i>
Heather, False	<i>Cuphea hyssopifolia</i>
Hosta	<i>Hosta fortunei</i>
Iris	<i>Iris</i> spp.
Jasmine Tobacco	<i>Nicotiana alata</i>
Loosestrife	<i>Lythrum salicaria</i>
Marigold	<i>Tagetes</i> spp.
Partridgeberry	<i>Mitchella repens</i>
Petunia*	<i>Petunia hybrida</i>
Phlox	<i>Phlox</i> spp.
Pinks	<i>Dianthus</i> spp.
Portulaca	<i>Portulaca grandiflora</i>
Salvia	<i>Salvia</i> spp.
Saxifrage	<i>Saxifraga</i> spp.
Sedum	<i>Sedum</i> spp.
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</i> spp.
Verbena	<i>Verbena</i> spp.
Violet	<i>Viola</i> spp.
Yarrow, Common	<i>Achillea millefolium</i>
Zinnia	<i>Zinnia elegans</i>

SHRUBS	
COMMON NAME	SCIENTIFIC NAME
Abelia	<i>Abelia</i> spp.
Anise, Purple	<i>Illicium floridanum</i>
Aucuba	<i>Aucuba</i> spp.
Azalea*	<i>Rhododendron</i> spp.
Bamboo	<i>Bambusa</i> spp.
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>
Camellia, Common	<i>Camellia japonica</i>
Candytuft	<i>Iberis sempervirens</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</i> spp.
Holly	<i>Ilex</i> spp.
Honeysuckle	<i>Lonicera</i> spp.
Indian Hawthorn	<i>Raphiolepis indica</i>
Jasmine	<i>Jasminum</i> spp.
Jasmine, Asiatic	<i>Trachelospermum asiaticum</i>
Jasmine, Star	<i>Trachelospermum jasminoides</i>
Juniper	<i>Juniperus</i> spp.
Lantana	<i>Lantana</i> spp.
Nandina* Bamboo, Heavenly	<i>Nandinia domestica</i>
Oleander, Common	<i>Nerium oleander</i>
Oregon Grape	<i>Mahonia aquifolium</i>
Photinia	<i>Photinia</i> spp.
Pittosporum	<i>Pittosporum</i> spp.
Podocarpus	<i>Podocarpus</i> spp.
Privet	<i>Ligustrum</i> spp.
Pyracantha	<i>Pyracantha</i> spp.
Rhododendron	<i>Rhododendron</i> spp.
Rose	<i>Spiraea bumalda</i>
Sweet Olive	<i>Osmanthus fragrans</i>
Viburnum	<i>Viburnum tinus</i>
Wisteria	<i>Wisteria</i> spp.
Yellow Sage/Shrub Verbena	<i>Lantana camara</i>

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

INSTRUCTIONS FOR ANNUAL GRASSES IN ORNAMENTALS

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

GRASS SPECIES	SCIENTIFIC NAME	WEED* HEIGHT INCHES	RATE FL OZ/ACRE ⁽¹⁾ (lb ai/A)	HIGH RATE ⁽²⁾ (lb ai/A)
Barnyardgrass	<i>Echinochloa crus-galli</i>	2 to 8	4 (0.125)	8 (0.250)
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2 to 6	4	8
Brome				
California	<i>Bromus carinatus</i>	2 to 6	4	8
Cheat	<i>Bromus secalinus</i>	2 to 6	4	8
Downy	<i>Bromus tectorum</i>	2 to 6	4	8
Ripgut	<i>Bromus diandrus</i>	2 to 6	4	8
Canarygrass	<i>Phalaris canariensis</i>	1 to 4	4	8
Crabgrass				
Hairy	<i>Digitaria adscendens</i>	2 to 6**	4	8
Large	<i>Digitaria sanguinalis</i>	2 to 6**	4	8
Smooth	<i>Digitaria ischaemum</i>	2 to 6**	4	8
Southern	<i>Digitaria ciliaris</i>	2 to 6**	4	8
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2 to 6**	4	8
Fall Panicum	<i>Panicum dichotomiflorum</i>	2 to 8	4	8
Field Sandbur	<i>Cenchrus incertus</i>	2 to 6	4	8
Foxtail				
Giant	<i>Setaria faberi</i>	2 to 12	4	8
Green	<i>Setaria viridis</i>	2 to 8	4	8
Yellow	<i>Setaria glauca</i>	2 to 8	4	8
Goosegrass	<i>Eleusine indica</i>	2 to 6**	4	8
Itchgrass	<i>Rottboellia cochinchinensis</i>	2 to 6	4	8
Junglerice	<i>Echinochloa colona</i>	2 to 6	4	8
Lovegrass (Stinkgrass)	<i>Eragrostis cilianensis</i>	2 to 6	4	8
Rabbitsfootgrass	<i>Polypogon monspeliensis</i>	1 to 4	4	8
Red Rice	<i>Oryza sativa</i>	1 to 3	4	8
Rygrass				
Hardy	<i>Lolium remotum</i>	2 to 6	4	8
Italian	<i>Lolium multiflorum</i>	2 to 6	4	8
Seedling Johnsongrass	<i>Sorghum halepense</i>	4 to 10	4	8
Shattercane	<i>Sorghum bicolor</i>	6 to 18	4	8
Southwestern Cupgrass	<i>Eriochloa gracilis</i>	2 to 6	4	8
Sprangletop				
Amazon	<i>Leptochloa panicoides</i>	2 to 6	4	8
Bearded	<i>Leptochloa fascicularis</i>	2 to 6	4	8
Mexican	<i>Leptochloa uninervia</i>	2 to 6	4	8
Red	<i>Leptochloa filiformis</i>	2 to 6	4	8
Texas Panicum	<i>Panicum texanum</i>	2 to 6	4	8
Volunteer Cereals				
Barley	<i>Hordeum vulgare</i>	2 to 6	4	8
Oats	<i>Avena sativa</i>	2 to 6	4	8
Rye	<i>Secale cereale</i>	2 to 6	4	8
Wheat	<i>Triticum aestivum</i>	2 to 6	4	8
Volunteer Corn	<i>Zea mays</i>	4 to 12	3 (0.094)	4
Volunteer Corn	<i>Zea mays</i>	12 to 24	4	8
Volunteer Grain Sorghum	<i>Sorghum bicolor</i>	8 to 12	4	8
Wild Oats	<i>Avena fatua</i>	2 to 6	4	8
Wild Proso Millet	<i>Panicum miliaceum</i>	2 to 10	4	8
Witchgrass	<i>Panicum capillare</i>	2 to 8	4	8
Woolly Cupgrass	<i>Eriochloa villosa</i>	2 to 8	4	8

*Generally occurs between 3-leaf stage and tillering.
**Length of lateral growth.
⁽¹⁾ 3 fl oz/A (0.094 lb ai/A) = approximately 0.07 fl oz/1000 sq ft, 4 fl oz/A (0.125 lb ai/A) = approximately 0.1 fl oz/1000 sq ft.
⁽²⁾ 8 fl oz/A (0.250 lb ai/A) = approximately 0.2 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).

**INSTRUCTIONS FOR ANNUAL BLUEGRASS CONTROL WITH
CLEFANDIM 480 EC IN ORNAMENTALS**

GRASS SPECIES	WEED STAGE	RATE FL OZ/ ACRE (lb ai/A)	HIGH RATE (lb ai/A)
Annual Bluegrass (<i>Poa annua</i>)	to 4-leaf	3 (0.094)	8 (0.250)

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).

Restrictions

- **DO NOT** apply more than 8 fl oz (0.250 lb ai) per acre per application.
- **DO NOT** make more than 2 applications per acre per year.
- For repeat applications make on a minimum of a 14-day interval.
- **DO NOT** apply more than 16 fl oz (0.500 lb ai) per acre per year.

**INSTRUCTIONS FOR PERENNIAL GRASSES WITH
CLEFANDIM 480 EC IN ORNAMENTALS**

Apply only to actively growing grasses at specified weed heights.

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

Restrictions

- **DO NOT** apply more than 8 fl oz (0.250 lb ai) per acre per application.
- **DO NOT** make more than 2 applications per acre per year.
- For repeat applications make on a minimum of a 14-day interval.
- **DO NOT** apply more than 16 fl oz (0.500 lb ai) per acre per year.

GRASS SPECIES	WEED HEIGHT (inches)	RATE FL OZ/ ACRE ⁽¹⁾ (lb ai/A)	HIGH RATE ⁽²⁾ (lb ai/A)
Bermudagrass (<i>Cynodon dactylon</i>)			
First Application	3 (or up to 6" runners)	4 (0.125)	8 (0.250)
Repeat Application(s) (if regrowth occurs)	3 (or up to 6" runners)	4	8
Quackgrass (<i>Elytrigia repens</i>)			
First Application	4 to 8	4	8
Repeat Application(s) (if regrowth occurs)	4 to 8	4	8
Rhizome Johnsongrass (<i>Sorghum halepense</i>)			
First Application	12 to 24	4	8
Repeat Application(s) (if regrowth occurs)	6 to 18	3 (0.094)	4 (0.125)
Wirestem Muhly (<i>Muhlenbergia frondosa</i>)			
First Application	4 to 8	4	8
Repeat Application(s) (if regrowth occurs)	4 to 8	4	8

⁽¹⁾ 3 fl oz/A (0.094 lb ai/A) = approximately 0.07 fl oz/1000 sq ft, 4 fl oz/A (0.125 lb ai/A) = approximately 0.1 fl oz/1000 sq ft.

⁽²⁾ 8 fl oz/A (0.250 lb ai/A) = approximately 0.2 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).

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE:

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to PRECAUTIONARY STATEMENTS on label for hazards associated with the handling of this material. **DO NOT** walk through spilled material. Dispose of pesticide as directed below. In spill or leak incidents, keep unauthorized people away.

PESTICIDE DISPOSAL:

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

Non-refillable container. Rigid, Non-refillable containers small enough to shake (i.e., with capacities equal to or less than 5 gallons). DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix-tank. Fill the container 1/4 full with water 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. Offer for recycling, if available or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix-tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix-tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

Non-refillable containers. Rigid Non-refillable containers that are too large to shake (i.e., with capacities greater than 5 gallons or 50 lbs). DO NOT reuse or refill this container. After emptying product from container, rinse and either recycle or dispose of the container as follows: Bottom Discharge IBC (e.g. Schuetz Caged IBC or Snyder Square Stackable).

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix-tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal.

Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

Top Discharge IBC, Drums, Kegs (e.g. Snyder 120 Next Gen, Bonar B120, Drums, and Kegs). Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or rinsate collection system. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill.

[Batch Code will be placed on the container.]

Warranty and Disclaimer Statement

Read the entire DIRECTIONS FOR USE and Warranty and Disclaimer Statement before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The DIRECTIONS FOR USE of this product must be followed carefully. It is impossible to eliminate all risks associated with the use of this product including risks that may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors. Such risks are all beyond the control of Longwind Cropscience USA LLC ("Longwind") and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. All such risks shall be assumed by the user or buyer and to the extent permitted by applicable law, the user or buyer agree to hold Longwind harmless for any claims relating to such risks.

Longwind warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the DIRECTIONS FOR USE, subject to the inherent risks described above, when used in accordance with the DIRECTIONS FOR USE under normal conditions. To the extent permitted by applicable law, this warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Longwind, and the user or buyer assume the risk of any such use.

To the extent permitted by applicable law, Longwind disclaims all other warranties, expressed or implied, including any warranty of merchantability or fitness for a particular purpose. To the extent permitted by applicable law, Longwind, manufacturer, and seller disclaim and shall not be liable for any special, incidental, indirect, or consequential damages (including claims based on breach of warranty, contract, negligence, tort, strict liability or otherwise) resulting from the use, handling, application, storage, or disposal of this product or for damages in the nature of penalties, and the user and buyer waive any right that they may have to such damages. No agent, representative or employee of Longwind is authorized to make any warranty, guarantee or representation beyond those contained herein or to modify the warranties contained herein.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF LONGWIND, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT LONGWIND'S ELECTION, THE REPLACEMENT OF THE PRODUCT.

Cobra, *Resource* and *Valor* are registered trademarks of Valent U.S.A. LLC.

Asana and *Danitol* are registered trademarks of Sumitomo Chemical Co., Ltd.

Classic is registered trademark of E.I. du Pont de Nemours and Company.

Basagran, Clarity, Pursuit and Raptor are registered trademarks of BASF.

Baythroid, Bronate Advanced, Buctril, Liberty and Liberty Link are registered trademarks of Bayer.

Dual II Magnum is registered trademark of Syngenta.

FirstRate and Stinger are registered trademarks of Dow AgroSciences LLC.

Eminent is a registered trademark of ISAGRO S.p.A.

Orthene is a registered trademark of OMS Investments, Inc.

Rhonox is a registered trademark of Nufarm UK Limited.

Roundup Ready is a registered trademark of Monsanto Company.

Ultra Blazer is a registered trademark of United Phosphorus, Inc.