

Product Name: CLEFANDIM 480 EC Herbicide  
APVMA Approval No: 91942/133998



Label Name:	CLEFANDIM 480 EC Herbicide
-------------	----------------------------

Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
------------------	--------------------------------------------------------------------------------------------

Constituent Statements:	ACTIVE CONSTITUENT: 480 g/L CLETHODIM SOLVENT: 422 g/L LIQUID HYDROCARBONS
-------------------------	-------------------------------------------------------------------------------

Mode of Action:	GROUP <b>1</b> HERBICIDE
-----------------	--------------------------

Statement of Claims:	For the control of certain grass weeds in beetroot, cabbage, canola, celery, cotton, forestry, lettuce, non-bearing fruit trees, onions, ornamentals, peanuts, pulses (including adzuki beans, broad beans, chickpeas, faba beans, field peas, lentils, lupins and mung beans), potatoes, soybeans, and pasture legume (lucerne, clover and medic) seed crops and pastures (including pastures containing chicory and plantain) as per the Directions for Use table.
----------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Net Contents:	1 L - 1000 L
---------------	--------------

Restrains:	<b>RESTRAINTS:</b> DO NOT apply without the addition of an adjuvant. DO NOT apply to plants that are stressed by moisture or temperature extremes. DO NOT apply if rain is expected within one hour of application. DO NOT apply more than once to any one crop. <b>SPRAY DRIFT RESTRAINTS:</b> Specific definitions for terms used in this section of the label can be found at <a href="http://apvma.gov.au/spraydrift">apvma.gov.au/spraydrift</a> DO NOT allow bystanders to come into contact with the spray cloud. DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations*. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas. DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application. DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.
------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Directions for Use:	This section contains file attachment.
---------------------	----------------------------------------

Withholding Periods:	<p><b>WITHHOLDING PERIODS</b></p> <p><b>HARVEST:</b>  PASTURE LEGUMES (LUCERNE, CLOVER AND MEDIC) SEED CROPS AND PASTURES: NOT REQUIRED WHEN USED AS DIRECTED.</p> <p>CANOLA, COTTON, PEANUTS, PULSES (ADZUKI BEANS, BROAD BEANS, CHICKPEAS, FABIA BEANS, FIELD PEAS, LENTILS, LUPINS, MUNG BEANS) AND SOYBEANS: NOT REQUIRED WHEN USED AS DIRECTED.</p> <p>FORESTRY: NOT REQUIRED WHEN USED AS DIRECTED.</p> <p>BEETROOT, CABBAGE: DO NOT APPLY LATER THAN 7 DAYS BEFORE HARVEST.</p> <p>ONIONS: DO NOT APPLY LATER THAN 14 DAYS BEFORE HARVEST.  LETTUCE, POTATOES: DO NOT APPLY LATER THAN 4 WEEKS BEFORE HARVEST.  CELERY: DO NOT APPLY LATER THAN 9 WEEKS BEFORE HARVEST.</p> <p><b>GRAZING:</b>  PASTURE LEGUME (LUCERNE, CLOVER AND MEDIC) SEED CROPS AND PASTURES: DO NOT GRAZE OR CUT FOR STOCK FEED FOR 14 DAYS AFTER APPLICATION.</p> <p>CANOLA, PEANUTS, PULSES (ADZUKI BEANS, BROAD BEANS, CHICKPEAS, FABIA BEANS, FIELD PEAS, LENTILS, LUPINS, MUNG BEANS) AND SOYBEANS: DO NOT GRAZE OR CUT FOR STOCK FEED FOR 21 DAYS AFTER APPLICATION.</p> <p>COTTON: DO NOT GRAZE OR CUT COTTON FORAGE OR STUBBLE FOR STOCK FEED.</p>
----------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Trade Advice:	
---------------	--

General Instructions:	<p><b>GENERAL INSTRUCTIONS</b></p> <p><b>CLEANING SPRAY EQUIPMENT:</b>  Before using CLEFANDIM 480 EC Herbicide:  Ensure that the recommended clean-out procedure for the previous product (particularly sulfonylurea herbicides) sprayed with the equipment was done properly.</p> <p>After using CLEFANDIM 480 EC Herbicide:  Empty the tank and drain the whole system.  Thoroughly wash inside the tank using a pressure hose, drain the tank and clean all filters in the tank, pump line and nozzles.  Use of a household detergent will aid in cleaning the equipment. Add detergent to the part-filled spray tank and thoroughly circulate through pumps, hoses and nozzles. Drain the system and thoroughly rinse twice with clean water.  Rinse water should be discharged onto a designated disposal area, or if this is unavailable, onto unused land away from desirable plants and water sources.</p> <p><b>MIXING:</b>  To ensure even mixing, half-fill the spray tank with clean water and add the required amount of product. Add spray additive and agitate thoroughly, then add the remainder of the water. Agitate again before spraying commences.</p>
-----------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**APPLICATION:**

**Ground Application:**

CLEFANDIM 480 EC Herbicide should be applied with calibrated spray equipment producing MEDIUM spray droplets according to the ASAE S572 definition for the standard nozzles. Apply in a minimum of 50 litres of water per hectare. Use 150 L/ha when spraying dense populations.

**Aerial Application:**

CLEFANDIM 480 EC Herbicide can be applied through aircraft fitted with boom or Micronair equipment. A spray volume of 20 to 30 L/ha is recommended, and equipment should be adjusted to MEDIUM spray droplets.

Best results will be obtained when aerial applications are made in a light crosswind.

Applications should not be made during temperature inversions or in conditions of very low relative humidity. Care should be taken to avoid drift damage to adjoining grass crops.

**USE OF Clefandim 480 HILOAD HERBICIDE ON PASTURE LEGUME (LUCERNE, CLOVER AND MEDIC) SEED CROPS AND PASTURES AND PASTURE HERBS:**

CLEFANDIM 480 EC Herbicide has been demonstrated to be safe when applied to the following cultivars during early establishment.

**Pasture legumes:**

**Clover (Trifolium spp.)**

Annual: Subterranean clover (Dalkeith, Dalsa, Goulburn, Koala, Nungarrin, Riverina, Seaton Park and York A), Arrowleaf clover (Zulu II), Balansa clover (Enduromax, Frontier, Paradana), Berseem clover (Elite II), Gland clover (Prima), Persian clover (Prolific, Leeton), Rose clover (Hykon).

Perennial: Strawberry clover (Palestine), White clover (NuSiral).

**Lucerne and medics (Medicago spp.)**

Lucerne (Aurora, Field, Genesis, Hunterfield, Multileaf, Salado, Sardi SEVEN, Sceptre and Venus), Barrel medic (Sephi, Jester Paraggio, Caliph), Burr medic (Scimitar, Santiago), Snail medic (Silver).

**Serradella (Ornithopus spp.)**

French or Pink serradella (Cadiz), Yellow serradella (Charano, Santorini).

**Pasture herbs:**

**Chicory (Puna II) and Plantain (Tonic)**

Apply CLEFANDIM 480 EC Herbicide when plants have reached 2 – 4 trifoliolate leaf stage, or after 40 days from sowing. Some pasture varieties may exhibit an initial reduction in crop vigour or biomass, however, these symptoms are transient and crops recover fully with no effect on yield.

**CAUTION:**

Ornamentals and Trees - While CLEFANDIM 480 EC Herbicide is generally selective to grass plants (i.e. it is active against grasses), tests should always be made on a small number of plants not previously tested.

DO NOT use on Gymnosperms (pines, conifers, etc) unless a prior test has been conducted to check safety on the relevant species.

**Resistance Warning:**

**RESISTANT WEEDS WARNING:**

CLEFANDIM 480 EC Herbicide is a member of the cyclohexanedione group of herbicides. CLEFANDIM 480 EC Herbicide has the inhibition of acetyl coA carboxylase mode of action. For weed resistance management, CLEFANDIM 480 EC Herbicide is a Group 1 Herbicide. Some naturally-occurring weed biotypes resistant to CLEFANDIM 480 EC Herbicide and other Group 1 Herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by CLEFANDIM 480 EC Herbicide or other Group 1 Herbicides. Since occurrence of resistant

	individuals is difficult to detect prior to use, Jiangsu Yunfan Chemical Co Ltd accepts no liability for any losses that may result from the failure of CLEFANDIM 480 EC Herbicide to control resistant weeds.
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Precautions:	<p>Re-entry DO NOT enter treated areas until spray has dried. If prior entry is necessary wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.</p>
--------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Protections:	<p>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS DO NOT apply CLEFANDIM 480 EC Herbicide if wind is likely to cause drift onto susceptible crops/plants, cropping lands or pastures. CLEFANDIM 480 EC Herbicide should not be applied through misting equipment or any other method likely to cause excessive drift. Care should be taken to avoid damage to adjoining native grasses or grass crops.</p> <p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT DO NOT contaminate streams, rivers or waterways with the chemical or used containers.</p>
--------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Storage and Disposal:	<p>STORAGE AND DISPOSAL Store in the closed, original container in a dry, cool well ventilated area out of direct sunlight. Protect from frost. Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, State or Territory government regulations. DO NOT burn empty container or product.</p>
-----------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Safety Directions:	<p>SAFETY DIRECTIONS Harmful if swallowed. Will irritate eyes and skin. Avoid contact with eyes and skin. When using together with other products, consult their label safety directions. When preparing spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length chemical resistant gloves and face shield or goggles. If applying by boomspray equipment wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves. If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.</p>
--------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

First Aid Instructions:	<p>FIRST AID If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766. If swallowed, do NOT induce vomiting. If in eyes wash out immediately with water.</p>
-------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

First Aid Warnings:	
---------------------	--

## DIRECTIONS FOR USE

CROP	CROP GROWTH STAGE	WEEDS CONTROLLED	RATE (mL/ha)	STAGE OF WEED GROWTH	STATE	CRITICAL COMMENTS	
<p>Canola</p> <p>Pulse crops (including adzuki beans, broad beans, chickpeas, faba beans, field peas, lentils and lupins#).</p> <p>Pasture legume (lucerne, clover and medic) seed crops and pastures<sup>1</sup> (including pastures containing chicory and plantain).</p>	<p><b>Canola:</b> DO NOT APPLY after flower buds become visible (green buds).</p> <p><b>Adzuki beans:</b> DO NOT APPLY after first flower buds are visible.</p> <p><b>Chickpeas, faba beans, broad beans, field peas:</b> DO NOT APPLY beyond full flowering.</p> <p><b>Lentils:</b> Apply up to the 7 node/early branching stage of crop growth.</p> <p><b>Lupins:</b> DO NOT APPLY after 80% of flowers have opened.</p>	Annual ryegrass ( <i>Lolium rigidum</i> ), Annual phalaris ( <i>Phalaris minor</i> )	75 to 250	2-leaf to fully tillered	Qld, NSW, ACT, Vic, Tas, SA, WA only	<p>Always apply with D-C-Trate at 2L/100L or Hasten at 1L/100L or Kwickin at 1L/100L or Uptake at 500mL/100L spray volume.</p> <p>The lower doses will provide effective control if applied under ideal conditions to weeds that are smaller, actively growing and free from temperature or water stress.</p> <p>See COMPATIBILITY and CAUTION in GENERAL INSTRUCTIONS for mixture recommendations with insecticides, fungicides and other herbicides.</p> <p>#NOT QLD</p> <p><sup>1</sup>See use of CLEFANDIM 480 EC Herbicide in pastures under General Instructions.</p>	
		Barley grass ( <i>Hordeum leporinum</i> ), Brome grass ( <i>Bromus diandrus</i> ), Wild oats ( <i>Avena</i> spp.)	86 to 250				
		Volunteer wheat ( <i>Triticum aestivum</i> ), Volunteer oats ( <i>Avena sativa</i> )	98 to 250 (86 to 250 in WA only)	2- to 5-leaf stage			Qld, NSW, ACT only
		Volunteer barley ( <i>Hordeum vulgare</i> )	250				
		Silver grass ( <i>Vulpia bromoides</i> ) - suppression only	124 to 250				
		Paradoxa grass ( <i>Phalaris paradoxa</i> )	124 to 188	5-leaf to fully tillered			
	188 to 250						

CROP	CROP GROWTH STAGE	WEEDS CONTROLLED	RATE (mL/ha)	STAGE OF WEED GROWTH	STATE	CRITICAL COMMENTS
<p>Cotton (Qld, NSW and NT only), Peanuts, Mung beans, Soybeans.</p> <p>Pasture legume (lucerne, clover and medic) seed crops and pastures<sup>1</sup> (including pastures containing chicory and plantain).</p>	<p><b>Cotton:</b> DO NOT APPLY after full flowering (mid bloom).</p> <p><b>Peanuts:</b> DO NOT APPLY after the pod fill stage of crop development.</p> <p><b>Mung beans:</b> DO NOT APPLY after first flower buds are visible.</p> <p><b>Soybeans:</b> DO NOT APPLY after first flower buds are visible.</p>	<p>Barnyard grass (<i>Echinochloa</i> spp.), Blown grass (<i>Agrostis aveacea</i>), Crowsfoot grass (<i>Eleusine indica</i>), Feathertop Rhodes grass (<i>Chloris virgata</i>), Liverseed grass (<i>Urochloa panicoides</i>), Red sprangletop grass (<i>Leptochloa filiformis</i>), Seedling Johnson grass<sup>2</sup> (<i>Sorghum halepense</i>), Summer grass (<i>Digitaria</i> spp.), Volunteer sorghum (<i>Sorghum</i> spp.)</p>	<p>124 to 188</p> <p>188 to 250</p>	<p>2- to 5-leaf Stage</p> <p>5-leaf to fully tillered</p>	<p>Qld, NSW, ACT, Vic, WA, NT only</p>	<p>Always apply with D-C-Trate at 2L/100L or Hasten at 1L/100L or Kwickin at 1L/100L or Uptake at 500mL/100L spray volume.</p> <p>The lower doses will provide effective control if applied under ideal conditions to weeds that are smaller, actively growing and free from temperature or water stress.</p> <p>See COMPATIBILITY and CAUTION in GENERAL INSTRUCTIONS for mixture recommendations with insecticides, fungicides and other herbicides.</p> <p><sup>1</sup>See use of CLEFANDIM 360 EC Herbicide in pastures under General Instructions.</p> <p><sup>2</sup>Only Johnson grass seedlings germinating from seed will be controlled. Seedlings that appear later as shoots from underground stems will not be controlled, and more than one application may be required to control emerging shoots.</p>

CROP	WEEDS CONTROLLED	RATE (mL/ha)	STAGE OF WEED GROWTH	STATE	CRITICAL COMMENTS
Beetroot, Cabbage, Celery, Lettuce, Potatoes, Onions	Barnyard grass ( <i>Echinochloa</i> spp.), Blown grass ( <i>Agrostis aveacea</i> ), Crowsfoot grass ( <i>Eleusine indica</i> ), Feathertop Rhodes grass ( <i>Chloris virgata</i> ), Liverseed grass ( <i>Urochloa panicoides</i> ), Paradoxa grass ( <i>Phalaris paradoxa</i> ), Red sprangletop grass ( <i>Leptochloa filiformis</i> ), Seedling Johnson grass <sup>1</sup> ( <i>Sorghum halepense</i> ), Summer grass ( <i>Digitaria</i> spp.), Volunteer sorghum ( <i>Sorghum</i> spp.)	124 to 188  188 to 250	2- to 5-leaf stage  5-leaf to fully tillered	All States	<p>Always apply with D-C-Trate at 2L/100L or Hasten at 1L/100L or Kwickin at 1L/100L or Uptake at 500mL/100L spray volume.</p> <p>The lower doses will provide effective control if applied under ideal conditions to weeds that are smaller, actively growing and free from temperature or water stress.</p> <p>Use a spray volume of 150L/ha when spraying dense grass populations.</p> <p><sup>1</sup>Only Johnson grass seedlings germinating from seed will be controlled. Seedlings that appear later as shoots from underground stems will not be controlled, and more than one application may be required to control emerging shoots.</p>
	Annual ryegrass ( <i>Lolium rigidum</i> ), Annual phalaris ( <i>Phalaris minor</i> )	75 to 250	2-leaf to fully tillered		
	Barley grass ( <i>Hordeum leporinum</i> ), Brome grass ( <i>Bromus diandrus</i> ), Wild oats ( <i>Avena</i> spp.)	86 to 250			
	Volunteer wheat ( <i>Triticum aestivum</i> ), Volunteer oats ( <i>Avena sativa</i> )	98 to 250 (86 to 250 in WA only)			
	Volunteer barley ( <i>Hordeum vulgare</i> )	250			
	Silver grass ( <i>Vulpia bromoides</i> ) - suppression only (not Qld, WA)	124 to 250			
	Winter grass ( <i>Poa annua</i> )	250			

CROP	WEEDS CONTROLLED	RATE (mL/ha)	STAGE OF WEED GROWTH	STATE	CRITICAL COMMENTS
Forestry, non-bearing fruit trees and ornamentals	Annual ryegrass ( <i>Lolium rigidum</i> ), Annual phalaris ( <i>Phalaris minor</i> ), Barley grass ( <i>Hordeum leporinum</i> ), Barnyard grass ( <i>Echinochloa</i> spp.), Blown grass ( <i>Agrostis aveacea</i> ), Brome grass ( <i>Bromus diandrus</i> ), Crowsfoot grass ( <i>Eleusine indica</i> ), Feathertop Rhodes grass ( <i>Chloris virgata</i> ), Liverseed grass ( <i>Urochloa panicoides</i> ), Paradoxa grass ( <i>Phalaris paradoxa</i> ), Red sprangletop grass ( <i>Leptochloa filiformis</i> ), Seedling Johnson grass <sup>1</sup> ( <i>Sorghum halepense</i> ), Silver grass ( <i>Vulpia bromoides</i> ) - suppression only (not QLD, WA), Summer grass ( <i>Digitaria</i> spp.), Volunteer sorghum ( <i>Sorghum</i> spp.), Volunteer wheat ( <i>Triticum aestivum</i> ), Volunteer oats ( <i>Avena sativa</i> ), Volunteer barley ( <i>Hordeum vulgare</i> ), Winter grass ( <i>Poa annua</i> ).	250	2-leaf to fully tillered	All States	Apply after plants have recovered from transplant shock and are showing signs of active growth.  Always apply with D-C-Trate at 2L/100L or Hasten at 1L/100L or Kwickin at 1L/100L or Uptake at 500mL/100L spray volume.  Use a spray volume of 150L/ha when spraying dense grass populations.  DO NOT use on Gymnosperms (pines, conifers, etc) unless a prior test has been conducted to check safety on the relevant species.  See COMPATIBILITY and CAUTION in GENERAL INSTRUCTIONS for particular species.  <sup>1</sup> Only Johnson grass seedlings germinating from seed will be controlled. Seedlings that appear later as shoots from underground stems will not be controlled, and more than one application may be required to control emerging shoots.

**NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION**