Clodinafop 240 EC

HERBICIDE

ACTIVE CONSTITUENT: 240 g/L CLODINAFO-P-PROPARGYL
60 g/L CLOQUINTOCET-MEXYL
SOLVENTS: 575 g/L LIQUID HYDROCARBONS
100 g/L N-METHYL-2-PYRROLIDONE

GROUP A HERBICIDE

Controls Wild Oats, Paradoxa Grass (Annual Phalaris), Canary Grass and Annual Ryegrass in Wheat. Highly active on Wild Oats and can be mixed with many broadleaf herbicides.

IMPORTANT: Read this booklet before use.

APVMA Approval No: 67006/54939
DIRECTIONS FOR USE

Restraints:
DO NOT apply if rainfall is expected within 2 hours.
DO NOT apply to weeds or crops which are under stress. For example, due to very dry, very wet, frosty or diseased conditions, nutrient deficiency or high insect pressure.
DO NOT apply to weeds or crops immediately after a prolonged period of frosts.
DO NOT apply under poor growing conditions.

<table>
<thead>
<tr>
<th>CROP</th>
<th>WEEDS CONTROLLED</th>
<th>STATE</th>
<th>RATE</th>
<th>WEED GROWTH STAGE</th>
<th>CRITICAL COMMENTS</th>
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</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>Wild Oats</td>
<td>Qld, Nthn NSW only</td>
<td>65 mL + 1 L of D-C-Trate oil or 500 mL Hasten or Uptake oil per 100 L of water.</td>
<td>2 leaf to late jointing (Zadoks 12-37)</td>
<td>NOT TO BE MIXED WITH BROADLEAF HERBICIDES AT THESE RATES. Apply at 85 mL/ha when weeds are not actively growing. Where low water volumes are used, DO NOT use less than the minimum oil volumes specified (See Minimum Oil Volumes). Cold water: Under cold water conditions (10°C or less), use Hasten instead of D-C-Trate or Uptake.</td>
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<td>85 mL + 1 L of D-C-Trate oil or 500 mL Hasten or Uptake oil per 100 L of water.</td>
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<td>2 leaf to mid tillering</td>
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<td>85 mL + 1 L of D-C-Trate oil or 500 mL Hasten or Uptake oil per 100 L of water.</td>
<td></td>
<td>MAY BE TANK MIXED WITH COMPATIBLE HERBICIDES. Apply in mixtures for broadleaf weed control only when weeds are actively growing. When mixing Apparent Clodinafop 240 EC with certain broadleaf weed herbicides some reduction in grass weed control may occur. Unless otherwise specified always use D-C-Trate, Uptake or Hasten when tank mixing broadleaf herbicides. Apply at 125 mL/ha when weeds are not actively growing. Where low water volumes are used, DO NOT use less than the minimum oil volumes specified (See Minimum Oil Volumes). Cold water: Under cold water conditions (10°C or less), use Hasten instead of D-C-Trate or Uptake.</td>
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<td>125 mL + 1 L of D-C-Trate oil or 500 mL Hasten or Uptake oil per 100 L of water.</td>
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<td>2 leaf to early tillering</td>
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<td>Sthn NSW, Vic, SA, WA only</td>
<td>65 mL + 1 L of D-C-Trate oil or 500 mL Hasten or Uptake oil per 100 L of water. Or 100 mL of a 100% non-ionic surfactant per 100 L of water.</td>
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<td>Paradoxa Grass (Phalaris paradoxa), Canary Grass (Phalaris minor)</td>
<td>Qld, NSW, Vic CA only</td>
<td>85 mL + 1 L of D-C Trate oil or 500 mL Hasten or Uptake per 100 L of water.</td>
<td>2 leaf to late jointing (Zadoks 12-37)</td>
<td>NOT TO BE MIXED WITH BROADLEAF HERBICIDES AT BELOW 160 mL/ha. Apply in mixtures for broadleaf weed control only when weeds are actively growing. When mixing Apparent Clodinafop 240 EC Herbicide with certain broadleaf weed herbicides some reduction in grass weed control may occur.</td>
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<td>160 mL + 1 L of D-C Trate oil or 500 mL Hasten or Uptake per 100 L of water.</td>
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<td>2 to 3 leaf</td>
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<td>2 leaf to early tillering</td>
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<td>2 to 5 leaf</td>
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<td></td>
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<td>2 leaf to early tillering</td>
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Apparent Clodinafop 240 EC Herbicide should be applied only when weeds are actively growing.

**RESISTANT WEEDS WARNING**

**GROUP A HERBICIDE**

Apparent Clodinafop 240 EC Herbicide is a member of the aryloxyphenoxypropionat ("fop") group of herbicides. Apparent Clodinafop 240 EC Herbicide has the inhibition of fat (lipid) synthesis, (or inhibitors of acetyl CoA carboxylase) mode of action. For weed resistance management Apparent Clodinafop 240 EC Herbicide is a Group A herbicide. Some naturally-occurring weed biotypes resistant to Apparent Clodinafop 240 EC Herbicide and other Group A 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 Apparent Clodinafop 240 EC Herbicide or other Group A herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Apparent Pty Ltd accepts no liability for any losses that may result from the failure of Apparent Clodinafop 240 EC Herbicide to control resistant weeds.

Weed biotypes resistant to diclofop-methyl and other “grass specific” herbicides can also often be resistant to Apparent Clodinafop 240 EC Herbicide. Before using Apparent Clodinafop 240 EC Herbicide on a population resistant to or suspected to be resistant to “grass specific” herbicides, have a resistance test conducted to ensure that it is susceptible to Apparent Clodinafop 240 EC Herbicide.

Large numbers of healthy surviving weeds can be an indication that resistance is developing. Efforts should be made to prevent seed set of the surviving weeds.

DO NOT make more than one application of a Group A herbicide with the inhibition of fat (lipid) synthesis (or inhibitors of acetyl CoA carboxylase) mode of action to a crop in the same season. If the user suspects that the target weed population is resistant to herbicides with this mode of action, Apparent Clodinafop 240 EC or other Group A herbicides should not be used.

Strategies to minimise the risk of herbicide resistance are available. The above recommendations should be incorporated into an Integrated Weed Management (IWM) Program. Consult your farm chemical supplier, consultant, local Department of Agriculture or Primary Industries, or local Apparent Pty Ltd representative for details.

**MIXING**

Fill the spray tank to one quarter full. Then add Apparent Clodinafop 240 EC into the stream of incoming water. Good agitation at the time Apparent Clodinafop 240 EC is added to the tank will ensure good mixing. Add the required amount of D-C Trate*, Hassten* or Uptake* oil just before the tank is full of water and with the agitators in motion.

**MIXING ORDER**

Some products may react with other products if they are not mixed in the correct order. The general mixing order of products should be:

1. Water conditioners or buffers
2. Water dispersible granules (WG)
3. Wettable powders (WP)
4. Flowsable or suspension concentrates (SC)
5. Emulsifiable concentrates (EC) (Apparent Clodinafop 240 EC)
6. Water based or soluble concentrates
7. Oils and wetters - eg Hasten, BS 1000

It is important to ensure that each individual component of the tank mix is fully dissolved and in solution before the next product is added to the tank mix, otherwise mixing problems may occur.

**MINIMUM OIL VOLUMES**

The minimum amount of oil to be applied with Apparent Clodinafop 240 EC will depend on the type of oil used. When applying Apparent Clodinafop 240 EC using low water volumes, DO NOT use less than the minimum oil volumes specified below:

- For oils normally applied at 1% v/v (eg D-C Trate), DO NOT apply less than 500 mL oil/ha.
- For oils normally applied at 0.5% v/v (eg Uptake, Hasten), DO NOT apply less than 250 mL oil/ha.

**CLEANING SPRAY EQUIPMENT**

After using Apparent Clodinafop 240 EC, empty the tank completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose, drain the tank and clean any filters in the tank, pump, line and nozzles.

To rinse: After cleaning the tank as above, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.

To decontaminate: Before spraying cereals (except wheat), maize, sorghum or other sensitive crops, wash the tank and rinse the system as above. Drain and repeat the rinsing procedure. Then quarter fill the tank and add a liquid alkali detergent (eg SURF*, OMO*, DRIVE*) at 0.5 L/100 L of water and circulate throughout the system for at least fifteen minutes. Drain the whole system. Remove filters and nozzles and clean them separately. Finally flush the system with clean water and allow to drain. Dispose of all water used for cleaning in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots.

**APPLICATION**

**Ground Application:** Boom spray with flat fan nozzles. Ensure good spray coverage is obtained. Apply using 50 to 110 L water per hectare. The ideal droplet size is 200 to 300 microns VMD.

**Aircraft Application:** For best results use 20 to 30 L water per hectare and spray at 2 m to 3 m above the crop. Ideal droplet size is 250 to 350 microns VMD. For rotary atomizers (micronairs) this can be achieved using blade angles of 55° to 65°. Where booms and nozzles are attached, flat fan nozzles with a spray angle of 65° to 90° should be used. Avoid applying Apparent Clodinafop 240 EC if wind speeds are greater than 5 m/s. If spraying in calm conditions use larger droplets and reduce flying height.

**COMPATIBILITY**

When Apparent Clodinafop 240 EC is applied with compatible herbicides always use a recommended oil. Only use a 100% non-ionic surfactant when mixing with diethylhexyl based products.

**Grass Herbicides:** Apparent Clodinafop 240 EC is compatible with diclofop methyl, eg Nugrass*.

**Broadleaf Herbicides:** Some broadleaf weed herbicides are incompatible with Apparent Clodinafop 240 EC because they reduce the effectiveness of Apparent Clodinafop 240 EC or because in mixture they may cause crop yellowing. For the latest information on compatibility of Apparent Clodinafop 240 EC with broadleaf herbicides refer to your local reseller or Apparent Pty Ltd Representative.

**Incompatible:** The following herbicides are known to be incompatible with Apparent Clodinafop 240 EC: Diuron, LOGRAN*, Barbel* (promoxynyl + dicamba + MCPA) and all 2,4-D formulations. Herbicides which are incompatible with Apparent Clodinafop 240 EC must be applied separately. In this situation,
apply Apparent Clodinafop 240 EC first and then allow at least 10 days between its application and application of the broadleaf weed herbicide.

**Insecticides:** Apparent Clodinafop 240 EC is compatible with Supraside*.

**PRECAUTIONS**

**Re-entry Period:**
Do NOT enter treated areas without protective clothing until the spray has dried.

**PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS**

DO NOT apply on or near shrubs, trees, lawns or crops other than wheat. DO NOT drain or flush equipment on or near desirable trees or other plants, where their roots may extend, or in situations where by movement of soil or by seepage absorption of the herbicide may occur. DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray to drift onto nearby susceptible plants, adjacent crops, crop lands or pastures. DO NOT allow spray to drift onto adjacent fallow land.

**PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

DO NOT apply to irrigation drains or channels. DO NOT contaminate dams, streams, creeks and rivers with the chemical, spray mixture, used containers or equipment washings.

**STORAGE AND DISPOSAL**

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Triple or preferably pressure 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 500 mm 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 containers or product.

**SAFETY DIRECTIONS**

Harmful if swallowed. Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid inhaling spray mist. Avoid contact with eyes and skin. When opening the container, preparing spray wear and using the product wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length butyl rubber gloves and face shield or goggles. If product on skin, immediately wash area with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

**FIRST AID**

If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia: 131126. If swallowed, do NOT induce vomiting. Give a glass of water. If in eyes, hold eyes open and flood with water for at least 15 minutes and see a doctor.

**SAFETY DATA SHEET**

Additional information is listed in the safety data sheet (SDS) which is available from the supplier.

**CONDITIONS OF SALE**

The use of Apparent Clodinafop 240 EC Herbicide being beyond the control of the manufacturer no warranty expressed or implied is given by Apparent Pty Ltd regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Apparent Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.