

READ SAFETY DIRECTIONS BEFORE OPENING OR USING



# Embargo Herbicide

Active Constituent: 400 g/L oryzalin

For pre-emergent control of certain grass and broadleaf weeds in turf

|       |   |           |
|-------|---|-----------|
| GROUP | D | HERBICIDE |
|-------|---|-----------|

APVMA Approval No: 65075/59274

Pack Size: 5L, 20L

## DIRECTIONS FOR USE

### Restrictions

DO NOT apply to newly seeded, sodded or sprigged turf. Delay application until turf is at 100% cover and root system is developed beyond a 3 cm depth.

DO NOT use on turf under stress.

DO NOT use on Bent grass or Wintergrass, where they are desired species.

DO NOT use on golf greens or bowling greens.

DO NOT apply to foliage of desirable plants.

DO NOT use near newly planted shrubs, young ornamental and species with shallow surface roots.

DO NOT apply if forecast heavy rain or storms are likely to cause runoff.

DO NOT irrigate to the point of runoff.

DO NOT apply by aircraft or through any type of irrigation equipment.

DO NOT blend Embargo Herbicide onto dry fertiliser or any other granular material.

| Situation  | Weeds Controlled   | Rate / ha | Critical Comments   |
|--|--|-----------|---|
| <b>Turf Established</b><br>Common Couch<br>Hybrid Couch<br>Kikuyu<br>Buffalo | Wintergrass ( <i>Poa annua</i> )<br>Annual Ryegrass ( <i>Lolium spp</i> )  | 5 L       | Apply prior to germination of the weeds (usually from late summer to mid-autumn, February to May).<br>Apply every 16 weeks from early February to the end of August.<br>The product should be incorporated by 10-15 mm of spray irrigation or rainfall as soon as possible, at least within one day of application.<br>Allow at least 18 weeks between last application and overseeding/oversowing.       |
|  | Crabgrass ( <i>Digitaria sanguinalis</i> )<br>Summergrass ( <i>Digitaria ciliaris</i> )<br>Barnyard grass ( <i>Echinochloa crusgalli</i> )<br>Chickweed ( <i>Stellaria media</i> )<br>Crowsfoot grass ( <i>Eleusine indica</i> )<br>Parramatta grass ( <i>Sporobolus spp</i> )<br>SUPPRESSION ONLY | 5 L       | Apply prior to germination of the weeds (usually from early spring to summer, September to December).<br>Apply every 16 weeks from early September to the end of February.<br>The product should be incorporated by 10-15 mm of spray irrigation or rainfall as soon as possible, at least within one day of application.<br>Allow at least 18 weeks between last application and overseeding/oversowing. |

An addition of a soil penetrant is recommended to ensure an even matrix flow through the soil profile. The addition of crop oil concentrate may result in crop injury and reduced compatibility in the spray tank.

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

### WITHHOLDING PERIOD

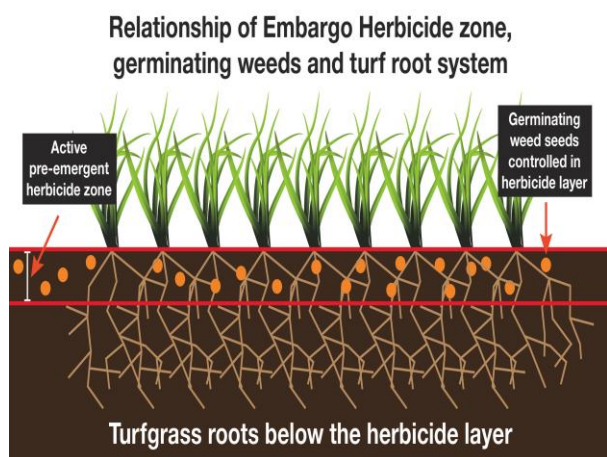
DO NOT graze treated turf/lawn or feed turf/grass clippings from any treated area to poultry or livestock.

## GENERAL INSTRUCTIONS

Turf Culture Embargo Herbicide (hereinafter 'Embargo Herbicide') is a selective pre-emergent surface applied herbicide that provides residual control of grass and broadleaf weeds in established turf. Embargo Herbicide controls susceptible weeds by preventing growth and development of newly germinated weeds. Embargo Herbicide is safe to use on established turf species listed in the table above.

Embargo Herbicide inhibits the steps in plant cell division responsible for chromosome separation and cell wall formation, therefore stopping root growth. Embargo Herbicide does not translocate through the roots into the stem and leaves.

Embargo Herbicide's selectivity is primarily through soil profile placement. Achieving this soil profile placement of the herbicide correctly is vital to obtain high efficacy; applicators should ensure an even matrix flow through the soil profile to achieve a consistent and even zone of herbicide activity (See graphic below).



After application plants which have the majority of their root system in the herbicide profile zone cannot effectively absorb the water and nutrients required for root and plant development, hence good even coverage and incorporation is required to ensure the weeds cannot recover by establishing roots outside the zone of herbicide activity.

Small seeded plants (i.e. annual grass weeds) are affected more by the herbicide than established grasses as they germinate in the soil profile zone of herbicide placement (i.e. 100% of their germinating root system is affected by the herbicide).

Warm Season grasses can be less prone to root inhibition due to the fact that they have multiple fibrous root systems with established roots beyond the depth of the zone of herbicide activity and are therefore are still able to obtain moisture and nutrients.

**Soil Preparation:** Areas to be treated should be free of established weeds. Remove trash (weed residue, prunings etc.) from the surface before applying the product.

**Soil Activation:** Moisture in the form of rain or sprinkler irrigation (10 - 15mm) is required to activate the product

otherwise efficacy may be reduced (refer Critical Comments).

## RESISTANT WEEDS WARNING

Embargo Herbicide is a member of the dinitroaniline group of herbicides. Embargo Herbicide has the inhibition of tubulin formation mode of action. For weed resistance management, Embargo Herbicide is a Group D herbicide. Some naturally occurring weed biotypes resistant to Embargo Herbicide and other Group D 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 Embargo Herbicide or other Group D herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Turf Culture Pty Ltd accepts no liability for any losses that may result from the failure of Embargo Herbicide to control resistant weeds. Strategies to minimise the risk of herbicide resistance are available. Contact your supplier, consultant or the local Department of Agriculture.

## MIXING

Add the required quantity of Embargo Herbicide to the partly filled spray tank while agitating. Fill tank and agitate to ensure thorough mixing. Continue agitation while spraying. Reseal partly used container immediately.

## COMPATIBILITY

As formulations of other manufacturer's products are beyond the control of Turf Culture Pty Ltd, and water quality varies with location, all mixtures should be tested prior to mixing commercial quantities.

## APPLICATION

DO NOT apply aerially or through any type of irrigation system or equipment.

**Ground Application:** Spray nozzles should be uniformly spaced and of the same size, and should provide accurate and uniform application. Use spray nozzles that produce a medium spray quality. To ensure accuracy, calibrate sprayer before use and calibrate frequently. Apply at a volume of 400 to 800 L of water per hectare. Higher volumes should be used for severe weed infestations to ensure adequate spray coverage. Good even coverage with the spray is essential for optimum weed control. Observe sprayer nozzles frequently during the spraying operation to ensure that the spray pattern is uniform. Avoid overlapping of spray runs. Avoid application under conditions when uniform coverage cannot be obtained or when spray drift may occur.

When spraying avoid overlapping, and shut off spray booms while starting, turning slowing and when stopped. Neglecting these procedures will cause higher rates of application resulting in crop damage. Delay spraying if heavy rain is expected within a few hours.

### **INSTRUCTIONS TO AVOID SPRAY DRIFT**

DO NOT allow spray to drift onto adjacent turf sites or ornamental plants as even small amounts may injure sensitive plants. When drift may be a problem, take steps to reduce spray drift including:

DO NOT spray if wind is greater than 10 km/hr or if winds are gusting.

Use extreme caution when conditions are favourable for drift, i.e. high temperatures and low relative humidity, especially when sensitive plants are located nearby. All plants not listed as turf species, under 'Situation' in the Directions for Use table on this label, should be considered as sensitive plants.

If sensitive plants are downwind, extreme caution must be used under all conditions. Drift from applications of this herbicide is likely to result in damage to sensitive plants adjacent to the treatment site.

DO NOT apply unless there is a 30 metre downwind buffer distance between the treated areas and native vegetation.

DO NOT apply unless there is a 10 metre downwind buffer distance between the area being sprayed and natural water bodies.

### **FREQUENCY OF APPLICATION**

Apply no more than 15L of this product over a 12-month period.

### **APPLICATION RECORDS**

Users of this product **MUST make an accurate written record** of the details of each spray application within 24 hours following application and keep this record for a minimum of 2 years. The spray application details to be record are:

1. Date, with start and finish times of application
2. Location / address of area(s) sprayed
3. Full name of the product, product batch number (BN) and date of manufacture (DOM)
4. Amount of product used per hectare and the number of hectares treated
5. Turf species/situation and weed/pest
6. Wind speed and direction during application
7. Air temperature and relative humidity during application
8. Spray irrigation or rainfall after application, start time, duration and amount (mm)
9. Equipment used; nozzle brand, type, spray angle, operating pressure and total water volume applied per hectare
10. Name of person applying this product

(Additional record details may be required by the State or Territory where this product is used)

### **PRECAUTIONS**

**Re-entry period** – DO NOT enter treated area until spray has dried.

### **SPRAYER CLEANUP**

To avoid subsequent injury to crops immediately after spraying thoroughly remove all traces of Embargo Herbicide from mixing and spray equipment. This is best conducted using a specialist boom-cleaning product, such as Turf Culture Refresh Boom Clean.

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

When applying spray, avoid contact with leaves and other parts of trees and vines.

Do not apply under weather conditions or from spraying equipment that may result in chemical movement by spray drift or storm run-off drift onto nearby susceptible plants/crops, cropping lands or pastures.

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

Do NOT contaminate dams, rivers, drains or streams with chemical or used container.

### **STORAGE AND DISPOSAL**

Keep out of reach of children.

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**

Avoid contact with eyes and skin. DO NOT inhale spray mist. When preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), and elbow-length PVC gloves. Wash hands after use. After each days use wash gloves and contaminated clothing.

### **FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

### **MATERIAL SAFETY DATA SHEET**

For further information refer to the Material Safety Data Sheet (MSDS), which is available from the supplier or from the manufacturer's website: [www.turfculture.com.au](http://www.turfculture.com.au)

### **CONDITIONS OF SALE**

The use of Turf Culture Embargo Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Turf Culture 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 Turf Culture Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.