



**RLP  
APPROVED**

Product Name: Marino 400 Herbicide  
APVMA Approval No: 95630/146554

Label Name:	Marino 400 Herbicide
Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	ACTIVE CONSTITUENT: 400 g/L METRIBUZIN
Mode of Action:	GROUP 5 HERBICIDE
Statement of Claims:	For Selective Post-Emergent Weed Control in Turf
Net Contents:	1 - 5 L
Restraints:	This section contains file attachment.
Directions for Use:	This section contains file attachment.
Other Limitations:	
Withholding Periods:	DO NOT graze treated turf/lawn or feed turf/grass clippings from any treated area to poultry or livestock. DO NOT use grass cuttings for compost.
Trade Advice:	

General Instructions:	<p>Marino 400 Herbicide is a selective post-emergent herbicide for application after the emergence of weeds, for the control of certain weeds in established turf. Marino 400 Herbicide is absorbed by roots, shoots and leaves of weeds.</p> <p>The degree of control resulting from application of Marino 400 Herbicide is primarily dependent upon weed species, weed size at application, environmental conditions, amount of Marino 400 Herbicide applied and growing conditions. Weed control is improved when ample soil moisture exists, and weeds are actively growing, rather than when the soil is dry and weeds are under stress from the lack of moisture.</p> <p><b>Mixing</b></p> <p>Add the required quantity of Marino 400 Herbicide to the partly filled spray tank while agitating.</p> <p>Fill tank and agitate to ensure thorough mixing. Continue agitation while spraying. Reseal partly used container immediately.</p> <p><b>Application</b></p> <p><b>Ground Application:</b> 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.</p> <p>Good weed 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.</p> <p>DO NOT apply aerially or through any type of irrigation system or equipment.</p> <p>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 turf damage. Delay spraying if heavy rain is expected within a few hours.</p> <p><b>Frequency of application:</b> Apply no more than 2 applications of this product over a 12-month period.</p> <p><b>Spray Drift</b></p> <p>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 Crop section on this label should be considered as sensitive plants.</p> <p>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.</p> <p><b>Tracking</b></p> <p>Light cycles of irrigation will limit the chance of tracking once the rainfastness period has concluded.</p> <p><b>Sprayer Cleanup</b></p> <p>To avoid subsequent injury to crops immediately after spraying thoroughly remove all traces of Marino 400 Herbicide from mixing and spray equipment. This is best conducted using a specialist boom-cleaning product.</p> <p><b>Compatibility</b></p> <p>DO NOT mix with products or fertiliser with high salt content, i.e. ferrous sulphate or ammonium sulphate. DO NOT mix with soil amendments products (i.e. kelps, seaweed, humic &amp; fulvic acids etc.).</p>
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	As formulations of other manufacturers' products are beyond the control of Turf Culture, all mixtures should be tested prior to mixing commercial quantities, compatibility testing should consist of assessing both; uniformed mixtures (i.e. no separation) and no rapid sediment build up (i.e. no flocculation).
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Resistance Warning:	<b>RESISTANT WEEDS WARNING</b> <b>GROUP 5 HERBICIDE</b> Marino 400 Herbicide is a member of the triazinones group of herbicides and has the inhibitors of photosynthesis at photosystem II mode of action. For weed resistance management the product is a group 5 herbicide. Some naturally occurring weed biotypes resistant to the product and other group 5 herbicides may exist through normal genetic variability in 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 this product or other group 5 herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Turf Culture accepts no liability for any losses that may result from the failure of this product to control the resistant weeds.
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Precautions:	<b>Re-Entry Period or Re-Handling</b> DO NOT allow entry into treated areas until the spray has dried for low exposure activities (such as irrigation and mowing), unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use. DO NOT allow entry into treated areas for 6 days for high exposure activity (such as hand transplanting) unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.
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Protections:	<b>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS</b> DO NOT apply under weather conditions or from spraying equipment that may cause spray to drift onto nearby susceptible plants/crops, cropping lands, pastures and other non-target plants or natural and impounded lakes, dams or other waterways. Avoid applications to areas where product may accumulate under the drip line of trees or where product may come into contact with roots of desirable plants. See Instructions to Avoid Spray Drift section above.  <b>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</b> Dangerous to aquatic organisms. DO NOT contaminate streams, rivers or watercourses with the chemical or used containers.
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Storage and Disposal:	Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. This container can be recycled if it is clean, dry, free of visible residues and has the drumMUSTER logo visible. Triple-rinse container for disposal. Dispose of rinsate by adding it to the spray tank. DO NOT dispose of undiluted chemicals on-site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any drumMUSTER collection or similar container management program site. The cap should not be replaced but may be taken separately. 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.
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Safety Directions:	Harmful if swallowed. May irritate the eyes. Repeated exposure may cause allergic disorders. Avoid contact with eyes. When opening the container, mixing and loading and
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preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves and face shield or goggles. Wash hands after use. After each day's use wash gloves, face shield or goggles and contaminated clothing.

**First Aid Instructions:** If poisoning occurs, contact a doctor or Poisons Information Centre.  
Phone Australia 13 11 26.

**First Aid Warnings:**

### **Restraints**

**DO NOT** apply to turf that is stressed by any cause (such as severe weather conditions, waterlogging, drought, excessive soil acidity or alkalinity, poor nutrient status, disease, nematode or insect damage) as crop injury may result.

**DO NOT** store a suspension of Marion 400 Herbicide for more than two days, otherwise significant breakdown may occur.

**DO NOT** store tank mixes of Marino 400 Herbicide.

**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 heavy rain or storms are likely to cause runoff are forecast.

**DO NOT** irrigate to the point of runoff for at least 2 days after application.

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

**DO NOT** apply when turf or weeds are not actively growing.

**DO NOT** apply where Winter Grass, Ryegrass, Crabgrass or Bent grasses are desired species.

**DO NOT** use on golf or bowling greens.

**DO NOT** apply to newly seeded, sodded or sprigged turf. Delay application until turf is at 100% cover and root system is developed beyond 15 cm depth.

**DO NOT** apply within 10 metres of desired cool season grass varieties (i.e. Bent /Winter Grass greens).

### **Spray Drift Restraints**

Specific definitions for terms used in this section of the label can be found at: [apvma.gov.au/spraydrift](http://apvma.gov.au/spraydrift)

**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 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** spray if wind is greater than 10 km/hr or if winds are gusting.

**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.

**DO NOT** apply with a nozzle height greater than 50 cm above the ground.

**DO NOT** apply by a boom sprayer unless the following requirements are met:

- Spray droplets not smaller than a **MEDIUM** spray droplet size category
- Minimum distances between the application site and downwind sensitive areas (see 'Mandatory Downwind Buffer Zones' section in the following table titled 'Buffer Zones for Boom Sprayers') are observed.

### **Buffer Zones for Boom Sprayers**

<b>Application rate</b>	<b>Mandatory Downwind Buffer Zones</b>	
	<b>Natural Aquatic Areas</b>	<b>Vegetation Areas</b>
Up to maximum label rate	5 metres	40 metres

**DIRECTIONS FOR USE**

Situation	Weeds Controlled	Rate	Critical Comments
<b>Established Turf as listed:</b>  Buffalo ( <i>Stenotaphrum secundatum</i> ),  Couch, Common ( <i>Cynodon dactylon</i> ),  Couch, Hybrid ( <i>Cynodon dactylon x Cynodon transvaalensis</i> ),  Qld Blue Couch ( <i>Digitaria didactyla</i> ),  Zoysia ( <i>Zoysia japonica</i> )  DO NOT use on Chewing's Fescue, Rye (annual or perennial).	Crowsfoot grass ( <i>Eleusine indica</i> ),  Winter grass ( <i>Poa Annua</i> ),  Summer grass ( <i>Digitaria ciliaris</i> )	1 to 1.5 L per ha	<p>For all applications best results will be obtained when applying with a minimum water volume of 400 to 800 L/ha.</p> <p>Allow at least 8 weeks between last application and overseeding with cool season grasses for winter cover.</p> <p>Transient discolouration may occur. Varietal differences in certain Couch, Hybrid Couch grasses &amp; Buffalo may produce more pronounced effects and it is recommended that small areas be tested for turf safety before large-scale application occurs.</p> <p>Avoid exceeding application rates through overlapping sprayed areas.</p> <p>Apply the higher rate where weed infestations are greater.</p> <p><b>Seedling Weeds</b> Apply to actively growing weeds at the 2 - 4 leaf stage for optimum control.</p> <p><b>Tillered Weeds</b> Apply to actively growing weeds having up to 4 tillers, but before seed set.</p>

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