

Product Name: Submarino Terbutryn-MCPA Herbicide  
APVMA Approval No: 92797/136683



Label Name:	Submarino Terbutryn-MCPA Herbicide
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Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	ACTIVE CONSTITUENTS: 275 g/L TERBUTRYN 160 g/L MCPA present as the potassium salt
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Mode of Action:	GROUP 5   4 HERBICIDE
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Statement of Claims:	For the Control of Seedling Broadleaf Weeds in Wheat, Barley, Some Varieties of Oats, Pasture and Sugarcane as specified in the Directions for Use.
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Net Contents:	Contents : 1 L - 1000 L
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Restraints:	<p><b>RESTRAINTS</b></p> <p>DO NOT apply to crops undersown with legumes. DO NOT spray if weeds are wilted by dry or cold weather. DO NOT spray if rain is expected within 6 hours. DO NOT spray cereals or pastures on days when the temperature is greater than 22oC. DO NOT add a wetting agent or a spraying oil for use in cereals or pasture.</p> <p><b>Spray drift restraints</b></p> <p>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>.</p> <p>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. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.</p>
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	<p>DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.</p> <p>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 1 to 2 hours before sunset and persist until 1 to 2 hours after sunrise.</p>
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Directions for Use:	This section contains file attachment.
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Other Limitations:	
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Withholding Periods:	<p><b>WITHHOLDING PERIODS</b></p> <p>DO NOT GRAZE BARLEY, WHEAT, OATS OR PASTURE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.</p> <p>DO NOT APPLY THE TANK MIX OF SUBMARINO TERBUTRYN-MCPA HERBICIDE AND AMETRYN (500 g/L) LATER THAN 9 MONTHS BEFORE HARVEST.</p>
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Trade Advice:	
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General Instructions:	This section contains file attachment.
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Resistance Warning:	<p><b>RESISTANT WEEDS WARNING</b></p> <p><b>GROUP 5 4 HERBICIDE</b></p> <p>Submarino Terbutryn-MCPA Herbicide is a member of both the triazines and phenoxy's groups of herbicides. Submarino Terbutryn-MCPA Herbicide has the inhibitor of photosynthesis at photosystem II and disruptor of plant cell growth modes of action. For weed resistance management Submarino Terbutryn-MCPA is a group 5 and 4 herbicide. Some naturally occurring weed biotypes resistant to Submarino Terbutryn-MCPA and other group 5 or 4 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 Submarino Terbutryn-MCPA Herbicide or other inhibitors of photosynthesis at photosystem II, or disruptor of plant cell growth herbicides.</p> <p>Since the occurrence of resistant weeds is difficult to detect prior to use, Submarino Pty Ltd accepts no liability for any losses that may result from the failure of Submarino Terbutryn-MCPA Herbicide to control resistant weeds.</p>
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Precautions:	
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Protections:	<p><b>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND THE ENVIRONMENT</b></p> <p>Dangerous to fish. DO NOT contaminate streams, rivers, or watercourses with the chemical or used containers.</p> <p><b>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS</b></p> <p>DO NOT apply under weather conditions or from spraying equipment that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures. Avoid spray drift</p>
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onto susceptible crops such as cotton, tobacco, tomatoes, vines, lupins, fruit trees and ornamentals.

Storage and Disposal:	<p><b>STORAGE AND DISPOSAL</b></p> <p>Store in the closed, original container in a cool, well-ventilated locked area away from children, animals, food, feedstuffs, seed and fertilisers. DO NOT store for prolonged periods in direct sunlight.</p> <p>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.</p> <p>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 watercourses, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.</p>
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Safety Directions:	<p><b>SAFETY DIRECTIONS</b></p> <p>Harmful if swallowed. Attacks eyes. Will irritate the skin. Avoid contact with skin. Repeated exposure may cause allergic disorders. When preparing the spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length chemical resistant gloves and goggles. If product in eyes, wash it out immediately with 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, goggles and contaminated clothing.</p>
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First Aid Instructions:	<p><b>FIRST AID INSTRUCTIONS</b></p> <p>If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.</p>
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First Aid Warnings:	
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## DIRECTIONS FOR USE

Crop	Weeds Controlled		State	Rate /ha	Critical Comments
Wheat, barley and certain oat varieties②	Australian Crassula, Cape Weed, Charlock, Fumitory-Red, Fumitory-White, Indian Hedge Mustard, Melilotus/ Hexam scent, Paterson's Curse, Rough Poppy, Rounded Chamomile, Sheepweed/Corn Gromwell, Turnip Weed, Wards weed, Wild Turnip, Yellow Burr Weed	<i>Crassula sieberiana</i> <i>Arctotheca calendula</i> <i>Sinapis arvensis</i> <i>Fumaria densiflora</i> <i>Fumaria parviflora</i> <i>Sisymbrium orientale</i> <i>Melilotus indica</i>  <i>Echium plantagineum</i> <i>Papaver hybridum</i> <i>Matricaria matricarioides</i> <i>Buglossoides arvensis</i>  <i>Rapistrum rugosum</i> <i>Carrichtera annua</i> <i>Brassica tournefortii</i> <i>Amsinckia spp.</i>	NSW, Vic, SA & WA only	1 L	<p>Spray actively growing weeds at the 2 to 6 leaf stage when cereals have 3 to 5 leaves on the main stem, i.e. Zadoks scale code Z 13- 15.</p> <p>Ensure Yellow Burr weed plants are at the 2 to 6 leaf stage. If plants are older than this use the higher rate. DO NOT spray this weed, after the 12 leaf stage.</p>
Fat-hen, Scented Woolly Sage	<i>Chenopodium album</i> <i>Salvia lanigera</i>	SA & WA only			
Ball Mustard①, Deadnettle, Mallee Catchfly, Pimpernel, Speedwell- Ivyleaf, Three- cornered Jack/ Spiny Emex/ Doublegee, Toadrush, Wireweed	<i>Neslia paniculata</i> <i>Lamium amplexicaule</i> <i>Silene apetala</i> <i>Anagallis arvensis</i> <i>Veronica hederifolia</i> <i>Emex australis</i>  <i>Juncus bufonius</i> <i>Polygonum aviculare</i>	NSW, Vic, SA & WA only	1.5 L	<p>Spray actively growing weeds at the 2 to 6 leaf stage when cereals have 3 to 5 leaves on the main stem, i.e. Zadoks scale code Z 13- 15. For Three-cornered Jack apply at the 1 to 4 true leaf stage.</p> <p>Control of Ivyleaf Speedwell may at times be variable.</p>	
Saffron Thistle Stemless Thistle	<i>Carthamus lanatus</i> <i>Onopordum acaulon</i>	SA & WA only			

Crop	Weeds Controlled		State	Rate /ha	Critical Comments
<b>Pastures</b> Use on Sub. clover (min 1 trifoliate leaves) based pasture with either/or Ryegrass, Phalaris, Cocksfoot (grasses min. 2 leaves)	Paterson's Curse (cotyledon to 2 leaf)	<i>Echium plantagineum</i>	NSW, Vic, SA, and WA only	300 to 500 mL	<p>Apply soon after the break to the season when the weeds are up to the 2 leaf stage. Apply by boom spray or aircraft. Use the highest rate when the majority of plants are at the 2 leaf stage.</p> <p>Some reduction in clover growth may occur for a period after application. Plants usually recover and grow normally.</p> <p>Pasture should be growing well with adequate fertiliser and mite/insect control to help reduce the establishment of later germinating seedlings.</p> <p>Larger weeds present at spraying may not be controlled. <b>DO NOT</b> use on medics. <b>DO NOT</b> apply in less than 50 L/ha water.</p> <p><b>DO NOT</b> use on seed crops. <b>DO NOT</b> spray after mid-August as damage may occur.</p>
<b>Pastures</b> Use on mixtures of either/or Sub. Clover (min. 3 trifoliate leaves) Balansa clover (established plants) White clover (min. 5 trifoliate leaves) with either/or Ryegrass, Phalaris, Cocksfoot (grasses min. 3 leaves)	Capeweed (seedlings up to 20 cm diam.) Long Storksbill (seedlings up to 8 cm diam.) Paterson's Curse (seedlings up to 20 cm diam.) Toadrush (1-5 leaves) Crassula (1-5 cm diam.)	<i>Arctotheca calendula</i>  <i>Erodium botrys</i>  <i>Echium plantagineum</i>  <i>Juncus bufonius</i>  <i>Crassula spp</i>	As above	1 L to 1.5 L	<p>Apply by boom spray or aircraft. Use the highest rate when weeds are greater than 7 cm in diameter. Where a selective grass herbicide is to be used, apply Submarino Terbutryn-MCPA Herbicide prior to the application of the selective grass herbicide.</p> <p>Some reduction in clover growth may occur for a period after application. Plants usually recover and grow normally.</p> <p><b>DO NOT</b> use on medics.</p> <p><b>DO NOT</b> apply in less than 50 L/ha water.</p> <p><b>DO NOT</b> use on seed crops.</p> <p><b>DO NOT</b> spray after mid-August as damage may occur.</p>

Crop	Weeds Controlled	State	Rate /ha	Critical Comments
<b>Sugarcane</b> (plant and ratoon)	<p>Bellvine Morning glory Red convolvulus Pink convolvulus Star of Bethlehem Blackberry nightshade Red pigweed Giant (black) pigweed Pink burr Square weed Thornapple Sowthistle Native jute Calopo Rattlepod Annual ground cherry</p> <p><b>Suppression only</b> Bluetop ④ Common sensitive plant</p>	<p><i>Ipomoea plebeian</i> <i>Ipomoea purpurea</i> <i>Ipomoea hederifolia</i> <i>Ipomoea triloba</i> <i>Ipomoea quamoclit</i> <i>Solanum nigrum</i> <i>Portulaca oleracea</i> <i>Trianthema portulacastrum</i> <i>Urena lobata</i> <i>Spermacoce latifolia</i> <i>Datura stramonium</i> <i>Sonchus oleraceus</i> <i>Corchorus trilocularis</i> <i>Calapogonium mucunoides</i> <i>Crotalaria spp.</i> <i>Physalis ixocarpa</i></p> <p><i>Ageratum houstonianum</i> <i>Mimosa pudica</i></p>	<p>Qld, NSW, WA, NT only</p>	<p>2 to 4 L ③</p> <p>Apply post-emergent to broadleaf weeds up to 8 leaf or 30 cm diameter stage, vines to 1 m. Application should be made when weeds are growing actively and not suffering from moisture stress or waterlogging. Under cool conditions (&lt;22° C) control may be slower and less effective. Can be applied over the top of cane. Some initial leaf yellowing and scorch may result but cane normally recovers well within 4 weeks. Caution should be exercised on new varieties of cane which may not have been tested. Use the lower rates on small weeds (less than 4 leaf) and the higher rates for larger weeds. Apply in a spray volume of 200-400 L/ha and ensure thorough coverage. Use the higher spray volumes where weed density is high or weeds are more advanced.</p> <p>④ Bluetop will only be suppressed. Use a minimum of 3 L/ha, on weeds less than 10 cm.</p> <p>Common sensitive plant - use a minimum of 3 L/ha</p>

Crop	Weeds Controlled		State	Rate /ha	Critical Comments
Sugarcane (plant and ratoon)	Green summer grass Crowsfoot grass Barnyard grass Guinea grass  Summer grass Bluetop Centro Wild Rose Bellvine Morning glory Red convolvulus Pink convolvulus Star of Bethlehem Giant sensitive plant Common sensitive plant Stinking passion vine Square weed Cinderella weed Giant (Black) pigweed Pink Burr Thornapple Sowthistle Native jute Calopo Rattlepod Annual ground cherry Blackberry nightshade	<i>Brachiaria miliiformis</i> <i>Eleusine indica</i> <i>Echinochloa colona</i> <i>Panicum maximum</i> var Hamil <i>Digitaria ciliaris</i> <i>Ageratum houstonianum</i> <i>Centrosema pubescens</i> <i>Cleome aculeata</i> <i>Ipomoea plebeiana</i> <i>Ipomoea purpurea</i> <i>Ipomoea hederifolia</i> <i>Ipomoea triloba</i> <i>Ipomoea quamoclit</i> <i>Mimosa invisa</i> <i>Mimosa pudica</i>  <i>Passiflora foetida</i> <i>Spermacoce latifolia</i> <i>Synedrella nodiflora</i> <i>Trianthema portulacastrum</i> <i>Urena lobata</i> <i>Datura stramonium</i> <i>Sonchus oleraceus</i> <i>Corchorus trilocularis</i> <i>Calopogonium mucunoides</i> <i>Crotalaria spp</i> <i>Physalis ixocarpa</i> <i>Solanum nigrum</i>	Qld, NSW, WA, NT only	3 L (+ 3 L ametryn 500 g/L)  to  4 L (+ 3.7 L ametryn 500 g/L) ③	<b>Use in a tank mix with ametryn (500 g/L)</b> Apply between the early (1-4 leaf) and late (20 cm for grasses [Guinea grass and summer grass max. 15 cm] and 30 cm for broadleaf weeds) post-emergent stages of weeds. Use the lower rates on small weeds (less than 4 leaf) and for short residual control and the higher rates for large weeds and medium residual control. Where residual control is required the tank mix should be applied to moist soil and when rain or irrigation is expected within 10 days. Application should be made when weeds are growing actively and not suffering from moisture stress or waterlogging. Under cool conditions (<22°C) control may be slower and less effective. Apply in a spray volume of 200-400 L/ha and ensure thorough coverage. Use the higher volumes where weed density is high or weeds are more advanced. DO NOT apply this mixture by air. DO NOT apply over the top of cane. Use a directed spray to minimise contact with sugarcane foliage and shading of weeds. <b>CAUTION:</b> Contact with the foliage of ametryn sensitive cane varieties such as Q119, Q122 and H56-752 should be avoided as they are susceptible to phytotoxicity from the tank mix. Caution should be exercised on new varieties of cane, which may not have been tested.

① Suppression only at 1.5 L/ha.

② Tolerant oat varieties are listed under the Crop Safety sub heading in the General Instructions section.

③ Add BS1000 120 mL/100 L or Agral 200 mL/100 L (Sugarcane only)

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

## **GENERAL INSTRUCTIONS**

### **MIXING**

Submarino Terbutryn-MCPA Herbicide mixes readily with water. Half fill the spray tank with water. Shake the container several times before use and add the recommended quantity to the tank. Keep the spray mixture well agitated during mixing and spraying using either mechanical or venturi type agitation that has sufficient water movement for the solution to remain in suspension. Reseal part used containers immediately. Wash sprayer thoroughly with clean water after use.

## **APPLICATION**

### **Boom Sprayer**

Calibrate the sprayer before use to ensure the correct application rate is applied per hectare. Check boom height for even application.

Cereal and pastures: Apply 50 to 100 L of water/ha using no smaller than 80 mesh pump and jet filters. Use the higher volume if the weed infestation is heavy or the crop cover is dense.

Sugarcane: Apply 200 to 400 L of water/ha using no smaller than 80 mesh pump and jet filters. Use the higher volume if the weed density is high or on more advanced weeds. Thorough coverage is necessary. Always add the required wetter.

### **Aircraft**

Apply 20 to 30 L of water/ha. The higher volume is preferred due to more reliable results. Weed control following aerial application may not be as good as from ground application.

## **COMPATIBILITY**

This product can be tank mixed with Ally herbicide for the control of specific weeds such as Capeweed, Sheepweed and Toadrush. DO NOT tank mix with Hoegrass or Achieve as significant crop injury and reduced weed control will occur. In pastures this product can be mixed with MCPA amine and the insecticides; dimethoate, phoset, lambda-cyhalothrin, alpha-cypermethrin and omethoate (ensure good agitation is maintained with this product and avoid use of cold water). In sugarcane this product can be tank mixed with Agral, BS1000 wetter, 2,4-D amine and ametryn (500 g/L). When tank mixing read both labels and adhere to the crop recommendations and directions that are most restrictive. The compatibilities given are based on experience and are considered correct. However, as changes in climatic conditions can alter the sensitivity of plants to mixtures of sprays, Submarino Pty Ltd accepts no responsibility for the behaviour of such mixtures.

## **TIMING**

Weeds should be sprayed while actively growing and at the 2 to 6 true leaf stage when they are most susceptible. As a general guide Submarino Terbutryn-MCPA Herbicide should be applied approximately 5 to 8 weeks after planting. Extremes of cold or drought are unfavourable. The most favourable conditions are when soil is moist, weather fine and rain unlikely within 6 hours following application. In pasture, weeds should be up to 20 cm diameter but refer to the directions for use table for specific details. In sugarcane, apply Submarino Terbutryn-MCPA Herbicide alone to broadleaf weeds up to the 8 leaf or 30 cm diameter stage, vines to 1m length.

## **CROP SAFETY**

Research has shown that although some early growth check and leaf margin scorch can occur in oats, if grain yield is measured, the following varieties are tolerant or moderately tolerant to Submarino Terbutryn-MCPA Herbicide.

Tolerant: (apply up to 1.5 L/ha) Bandicoot, Coolabah, Mortlock, Potaroo, Swan, Wallaroo, West.

Moderately Tolerant: (DO NOT exceed 1 L/ha) Dalyup, Windjardie.

DO NOT spray other oat varieties unless you seek advice before spraying.

In pastures sub. clover growth may be reduced for a period after application but plants usually recover and spring growth is not normally affected.

Sugarcane varieties such as Q122 may show yellowing and some leaf scorch immediately after spraying but plants normally recover within 4 weeks.