



Australian Pesticides &
Veterinary Medicines Authority

Product Name: Submarino Prosulfocarb 800 EC Herbicide
APVMA Approval No: 95814/147275

Label Name:	Submarino Prosulfocarb 800 EC Herbicide
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Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	ACTIVE CONSTITUENT: 800 g/L PROSULFOCARB
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Mode of Action:	GROUP 15 HERBICIDE
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Statement of Claims:	For the control of Annual Ryegrass (<i>Lolium rigidum</i>) in Barley and Wheat.
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Net Contents:	5 - 1000 L
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Restraints:	This section contains file attachment.
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Directions for Use:	This section contains file attachment.
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Other Limitations:	
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Withholding Periods:	WITHHOLDING PERIODS: Barley, Wheat. HARVEST: NOT REQUIRED WHEN USED AS DIRECTED. GRAZING: DO NOT GRAZE TREATED AREAS OR CUT FOR STOCKFOOD FOR 10 WEEKS AFTER APPLICATION.
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Trade Advice:	
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General Instructions:**GENERAL INSTRUCTIONS**

Submarino Prosulfocarb 800 EC Herbicide is a short residual, soil applied, pre-emergent herbicide that is absorbed by the roots and shoots (coleoptile) of germinating seedlings with inhibition of growth in the meristematic region. Foliar uptake is possible but of lower effect. Upstream translocation in the plant occurs but movement in the phloem is very unlikely. Best activity can be expected from applications before or shortly after the germination of target weeds.

For pre-emergent application, the product should be applied to a moist smooth seedbed free of soil clods and emerged weeds. Product efficacy may be reduced by improper incorporation, high levels of crop or trash residues, stones or foreign matter and in areas of extremely high weed seed density such as header rows. For optimal efficacy and crop safety in barley and wheat avoid shallow seeding and ensure accurate seed placement that avoids placement of seed in the herbicide band. Avoid water repellent soils, soils subject to water logging or where furrow walls are likely to collapse. Duration and effectiveness of weed control will depend on use rate, soil type and rainfall or irrigation after application. Adequate rainfall or irrigation should occur within 10 days of application, as this herbicide requires sufficient available soil moisture to ensure soil movement and uptake by emerging weed seeds.

A registered post-emergent selective graminicide may be required for the control of later germinating Annual Ryegrass cohorts. Submarino Prosulfocarb 800 EC Herbicide should be used as part of an integrated weed management program that utilises all available weed control tactics.

Crop Tolerance

The selectivity of Submarino Prosulfocarb 800 EC Herbicide is a combination of positional and physiological selectivity. Positional selectivity must be maintained by sowing at an adequate depth below the herbicide band. The physiological selectivity of Submarino Prosulfocarb 800 EC Herbicide is given by the ability of cereals to metabolise the herbicide to inactive compounds more rapidly than susceptible weed species. Environmental factors such as rainfall events following application and soil type will influence product movement into the seed zone. Crop injury may occur when used in sandy soils with high leaching potential or in all soil types when heavy rainfall is received between sowing and emergence. Crop injury may also result from tank mixes with other herbicides. Shallow seeding is not recommended due to the greater potential for movement of herbicide within close proximity of the emerging crop. Conditions resulting in poor root development or the occurrence of crop stresses including waterlogging, drought, frost, nutrient deficiency or disease can result in unacceptable crop damage and yield loss as a result of root uptake of herbicide. Although crop tolerance has been clearly demonstrated in a wide range of registered crop cultivars, differences in relation to the tolerance of recent and future release cultivars may exist. Risk of crop damage may be exacerbated where varieties with short coleoptile length are planted in conjunction with the use of some fungicide seed treatments.

Tillage System

IBS with knife or blade points: Working speed should ensure adequate incorporation of product but avoid soil throw into the adjacent seeding row. Use of presswheels will minimise potential for herbicide to be dragged back into seeding rows. Weed control may be reduced in seeding rows as a result of concentration of herbicide in crop inter-rows. A knife or blade point is defined as being <12 mm in width, having no wings, inverted T or blade and is generally on a minimum 200 mm row spacing.

Full disturbance or conventional cultivation, including trailing harrows/prickle chain: Care should be taken to ensure seed placement below the herbicide band as crop damage may result where seed is sown too shallow. Consult trifluralin label for tank mix rate selection.

PRODUCT MUST BE INCORPORATED INTO THE SOIL WITHIN 7 DAYS OF APPLICATION

Mixing

Submarino Prosulfocarb 800 EC Herbicide is an emulsifiable concentrate that mixes readily with water. Fill the spray tank to one quarter full. Add Submarino Prosulfocarb 800 EC Herbicide and continue adding water to make up to the final spray volume. Agitate while mixing and spraying.

When tank mixing wettable powder or water dispersible granule formulations should be added to the tank first followed by suspension concentrates (flowables), water soluble salts then Submarino Prosulfocarb 800 EC Herbicide or other emulsifiable concentrate formulations. Maintain thorough agitation during mixing and application. Agitate tank mixes vigorously if allowed to stand.

Note: Tank mix spray solutions should NOT be left standing in the vat overnight.

Application

DO NOT apply by air.

Apply by ground rig only in a minimum of 50 L water/ha. Water rate selection should be based on soil type and stubble load. Stubble loads above 40 to 50% ground coverage can reduce weed control below acceptable levels. Water volumes greater than 70 L/ha are recommended in order to reduce the impact of stubble in direct drill or minimum tillage systems. Use a nozzle delivering spray quality in the coarse to very coarse spray range.

Sprayer Clean Up

After using Submarino Prosulfocarb 800 EC Herbicide, 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.

Resistance Warning:

**RESISTANT WEEDS WARNING
GROUP 15 HERBICIDE**

Submarino Prosulfocarb 800 EC Herbicide is a member of the thiocarbamates group of herbicides.

This product has the inhibitors of fat synthesis mode of action. For weed resistance management, this product is a Group 15 herbicide. Some naturally occurring weed biotypes resistant to this product and other Group 15 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 this product or other Group 15 herbicides. 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 this product to control resistant weeds. Advice as to strategies and alternative treatments that can be used should be obtained from your local supplier, consultant, local Department of Agriculture, Primary Industries Department or Submarino Pty Ltd representative.

Resistant Management

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 1 application of a Group 15 herbicide with the inhibition of fat acid synthesis 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, Submarino Prosulfocarb 800 EC Herbicide or other Group 15 herbicides should not be used. Strategies to minimise the rest of herbicide resistance are available. The above recommendations should be incorporated into an Integrated Weed Management (IWM) Program that uses a diverse range of options to manage grass weeds and avoids over reliance on any 1 method of control. Consult your farm chemical supplier, consultant, local Department of Agriculture or primary Industries, or local Submarino Pty Ltd representative for details.

Precautions:	<p>Re-Entry Period</p> <p>DO NOT enter treated areas until the spray has dried 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.</p>
Protections:	<p>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS</p> <p>DO NOT sow susceptible crops within 9 months of herbicide application.</p> <p>DO NOT allow spray to drift onto adjacent fallow land.</p> <p>DO NOT apply on or near shrubs, trees, lawns or crops other than wheat or barley.</p> <p>DO NOT drain or flush equipment on or near desirable trees or other plants, where their roots may extend, or in situations whereby movement of soil or by seepage absorption of the herbicide may occur.</p> <p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</p> <p>HIGHLY TOXIC TO AQUATIC ORGANISMS.</p> <p>DO NOT contaminate streams, rivers or watercourses with the chemical or used containers.</p>
Storage and Disposal:	<p>STORAGE AND DISPOSAL</p> <p>Store in the closed, original container in a cool, well-ventilated area. 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. If not recycling, break, crush, or puncture and deliver empty packaging 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.</p> <p>Refillable containers: Empty contents fully into application equipment. Close all valves and return to the point of supply for refill or storage.</p>
Safety Directions:	<p>SAFETY DIRECTIONS</p> <p>Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Avoid contact with eyes and skin. When opening the container, preparing the product for use and using the product, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length chemical resistant gloves and face shield or goggles. In addition, when opening the container and mixing and loading, wear a disposable mist face mask covering mouth and nose. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves and face shield or goggles and contaminated clothing.</p>
First Aid Instructions:	<p>FIRST AID</p> <p>If poisoning occurs, contact a doctor or Poisons Information Centre. Phone 13 11 26.</p>
First Aid Warnings:	

RESTRAINTS

DO NOT apply more than 2.5 L/ha per single growing season.

DO NOT use in seeding/tillage systems that cannot ensure accurate seed placement and adequate spatial separation of seed and herbicide.

DO NOT apply to soils prone to waterlogging, sodic soils or soils affected by physical compaction.

DO NOT apply if heavy rains or storms that are likely to cause runoff are forecast within 2 days of application.

DO NOT irrigate treated fields to the point of run off within 3 days of application.

DO NOT apply by air.

Spray Drift Restraints

Specific definitions for terms used in this section of the label can be found at 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 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 1 to 2 hours before sunset and persist until 1 to 2 hours after sunrise.

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

- Spray droplets not smaller than a COARSE spray droplet size category.
- Minimum distances between the application site and downwind sensitive areas (see “Mandatory buffer zones” section of the following table titled ‘buffer zones for boom sprayers’) are observed.

Buffer zones for boom sprayers

Application rate	Boom height above the target canopy	Mandatory downwind buffer zones (metres)	
		Natural aquatic areas	Vegetation areas
Up to maximum label rate	0.5 m or lower	25	10
	1.0 m or lower	60	35

DIRECTIONS FOR USE

Situation	Weeds Controlled	Rate/ha	Critical Comments
Barley, Wheat	Annual Ryegrass (<i>Lolium rigidum</i>)	2.5 L	Apply pre-emergent and incorporate mechanically by sowing operation (IBS). Application should be made to a moist seedbed up to 7 days prior to sowing and sufficient rain to thoroughly wet the top 3 to 4 cm of soil should occur within 10 days after spraying. Avoid soil throw into adjacent seeding rows or sites where furrow walls may collapse. Refer to crop tolerance, incorporation and tillage requirements under General Instructions.

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