Product Name: PROLAN 500 HERBICIDE

APVMA Approval No: 60335/119018

RLP APPROVED

DISPLAYED BY INFOPEST

Label Name:	PROLAN 500 HERBICIDE
Signal Headings:	READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	500 g/L ORYZALIN
Mode of Action:	GROUP D HERBICIDE
Statement of Claims:	For pre-emergent control of certain annual grasses and broadleaf weeds in non-bearing and bearing fruit and nut orchards, vineyards, nursery stock, ornamentals, amenity plantings, established and newly planted turf and industrial areas and rights of way as specified in the Directions for Use table
Net Contents:	10L 20L 5L
Restraints:	
Directions for Use:	
Other Limitations:	
Withholding Periods:	WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED

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

Trade Advice:	

General Instructions:	GENERAL INSTRUCTIONS Prolan 500 Herbicide is a pre-emergent surface applied herbicide, which will control the specified annual grasses and broadleaf weeds in the situations listed. Soil Preparation: Areas to be treated should be free of established weeds. Remove or thoroughly mix trash (weed residue, prunings etc.) into the soil before applying the product. Soil Activation: Moisture in the form of rain or sprinkler irrigation (10-15mm) is required within 21 days of application to activate the product otherwise efficacy may be reduced. If moisture is not received within the period, incorporate the product into the top 2.5cm of soil (excluding established turf and newly planted turf). Turf: Mechanical incorporation is not possible. Moisture in the form of rain or sprinkler irrigation (10-15mm) is therefore required within 21 days of application to activate the product otherwise efficacy may be reduced. MIXING The required amount of Prolan 500 Herbicide should be added to half-full spray tank and agitated well during completion of filling. Do not leave spray solutions to stand overnight. APPLICATION Ground Application/Boomspray: Apply Prolan 500 Herbicide in 200 to 450 litres water per hectare. Apply uniformly, especially within the dripline of trees and shrubs, so that application above label rates does not occur. Use a properly calibrated low pressure (170 to 340 kPa) herbicide sprayer. Provide good by-pass or other agitation of the spray suspension in the tank before and during application. Soil treated with this product may be shallow cultivated without loss of herbicidal activity. Turf: 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 200 to 450 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. DO NOT apply aerially (except Tea-Tree plantations) or through any type of irrigation system or equipment. 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. Tea-Tree: Aerial Application: Apply by fixed wing aircraft or helicopter using only closed mixing/loading systems. Use accurately calibrated equipment to deliver 30-50L water/ ha. DO NOT apply with smaller than coarse spray droplets according to the ASABE S572 definition for standard nozzles. 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 Crop section 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. Ground Application: • 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. COMPATIBILITY Prolan 500 Herbicide is compatible with paraquat, glyphosate, oxyfluorfen and simazine.

Resistance Warning:	GROUP D HERBICIDE Prolan 500 Herbicide is a member of the dinitroaniline group of herbicides. Prolan 500 Herbicide has the inhibition of tubulin formation mode of action. For weed resistance management, Prolan 500 Herbicide is a Group D herbicide. Some naturally occurring weed biotypes resistant to the product 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 Prolan 500 Herbicide or other Group D herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Sipcam Pacific Australia Pty Ltd accepts no liability for any losses that may result from the failure of Prolan 500 Herbicide to control resistant weeds. Strategies to minimise the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of Agriculture or Sipcam representative.

Precautions:	

Protections:	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 Very toxic to aquatic life. Do NOT contaminate wetlands or watercourses with product or used containers.

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 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 500mm 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 container or product.

Safety Directions:	Avoid contact with eyes and skin. Do not inhale spray mist.

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

First Aid Warnings:	

Crop Group				**Weeds Controlled**	**Rate /ha**	**Critical Comments**
Banana [1]				**Grasses:** Barnyard Guinea grass Love grass Paradoxa grass Pigeon grass Spiny burr grass (Gentle Annie / Innocent Weed) Summer grass (Crabgrass [3]) **Broadleaf Weeds:** Deadnettle Fathen Fumitory Portulaca (Pigweed) Sowthistle Wireweed (Hogweed) **Brassica species**: [4] Blackberry nightshade Caltrop Paddy melon Silverleaf nightshade	Short term control (up to 4 months) 4.5L Long term control (6-8 months) 6.8L	See GENERAL INSTRUCTIONS DO NOT apply by aircraft or through any type of irrigation equipment. [1] **DO NOT** use as a pre-emergent at the time of planting with tissue culture banana planting material. [2] **Western Australia only**: Vineyards on medium loam or heavier soil types, heavily infested with crabgrass may be sprayed with up to 9.9L/ha of Prolan 500 and together with pome fruit and all Prunus species on these soils spraying can be immediately after transplanting from nurseries providing buds are still dormant and no functional leaves are present. [3] **Western Australia only**: Apply early in summer for crabgrass *(Digitaria sanguinalis*) control and incorporation with overhead irrigation. [4] Control of these weeds may range from poor to excellent depending upon soil temperature, time of germination, depth of weed seed in the soil and amount and timing of soil moisture.
Grape [2]						
Pome Fruit	Apple	Pear	(see also non-bearing fruits)			
Stonefruit	Apricot Cherry	Peach Plum & prune	Nectarine			
Citrus	Grapefruit	Orange	(see also non-bearing fruits)			
Nuts	Almonds Macadamia	Pecan	Walnut			
Non-bearing berryfruits	Blackberry Blueberry Boysenberry	Currant Gooseberry Loganberry	Raspberry			
Non-bearing – fruits including nursery stock of the following:	Avocado Custard apple Feijoa Guava Kiwifruit	Lemon Litchi Mandarin Mango Nashi	Olive Passionfruit Pawpaw Persimmon Rambutan			
Nursery stock and / or seedling stage conifers including species of the following genus:	*Abies* (fir trees) *Chamaecyparis* (Lawson and False cypress) *Cryptomeria cupressus* (cypress) *Junperus* (Junipers)	*Picea* (Spruces) *Pinnus* (pine) *Platycladus orientalis* (oriental arborvitae) *Podocarpus*	*Pseudotsuga menziessii* (Douglas fir or Oregon pine) *Sequoia sempervirens* (Coastal redwood) *Taxus cuspidata* (Japanese yew) *Thuja*			

<table>
<tr><th colspan="2">Crop Group</th><th>Weeds Controlled</th><th>Rate /ha</th><th>Critical Comments</th></tr>
<tr><td rowspan="2">Nursery stock, ornamentals and amenity plantings comprising of the following:</td><td>Australian native species of the genus:
Acacia (wattles)
Agonis (WA peppermint, Willow (or Honey) myrtle)
Allocasuarina
Banksia
Boronia
Callistemon (bottlebrush)
Callitris (Cypress pine)
Calytrix
Cassia
Casuarina (Oaks and sheoak)
Chamelaucium uncinatum (Geraldton wax)
Clematis
Correa
Eriostemon myoporoides (Wax flower)
Eucalyptus
Grevilla
Hakea
Hardenbergia (sarsaparilla)
Hibbertia
Kennedia
Lechenaultia
Laptospernum and Melaleuca (tea trees)
Prostanthera (mintbush)
Thryptomene
Westringia</td><td rowspan="3">Grasses:
Barnyard
Guinea grass
Love grass
Pigeon grass
Paradoxa grass
Spiny burr grass
(Gentle Annie / Innocent Weed)
Summer grass (Crabgrass [3])

Broadleaf Weeds:
Deadnettle
Fathen
Fumitory
Portulaca (Pigweed)
Sowthistle
Wireweed (Hogweed)

Brassica species: [4]
Blackberry nightshade
Caltrop
Paddy melon
Silverleaf nightshade</td><td rowspan="2">Short term control (up to 4 months) 4.5L

Long term control (6-8 months) 6.8L</td><td rowspan="2">See GENERAL INSTRUCTIONS
DO NOT apply by aircraft or through any type of irrigation equipment.

[3] Western Australia only: Apply early in summer for crabgrass (Digitaria sanguinalis) control and incorporation with overhead irrigation.

[4] Control of these weeds may range from poor to excellent depending upon soil temperature, time of germination, depth of weed seed in the soil and amount and timing of soil moisture.</td></tr>
<tr><td>Exotic species of the genus:
Abelia
Acalypha
Acer (maples)
Arctostaphylos
Ardisia
Azalea
Baccharis (groundsel bush)
Bauhinia
Berberis (barberry)
Betula (birch tree)
Bignonia
Buxus (box)
Calluna
Camellia
Ceanothus
Cistus
Clyostoma
Coleonema
Coprosma
Cotoneaster
Cuphea
Cytisus (broom)
Dodonea (hopbush)
Erica (heath)
Escallonia
Euonymus
Eutaxia
Fatshedera
Fuschia
Felicia
Gardenia
Ginko
Hibiscus
Ilex
Jasminum
Justicia
Kalmia
Koelreuteria
Lagenaria
Lagerstroemia
Lantana
Lavendula (lavender)
Leucodendron
Leucothoe
Ligustrum
Liquidambar
Liriope
Lonicera (honeysuckle)
Magnolia
Mahonia
Malus
Metrosideros
Monstera
Myrtus
Nandina
Nerium (oleander)
Osmanthus
Parahebe
Philadelphus
Philodendron
Phoenix
Photinia
Pieris
Pittosporum
Populus
Prunus
Pseudopanax
Pyracantha
Quercus
Raphiolepis
Rhododendron
Rosa (roses)
Rosemarinus (rosemary)
Russelia
Spiraea
Syringa
Syzygium
Taxus
Trachelospermum (Rhymncospermum)
Umbellularia
Viburnum
Washintonia
Weigela
Xylosma
Yucca</td></tr>
<tr><td>Tea-Tree Oil plantations [5]</td><td>Tea-Tree (Melaleuca alternifolia)</td><td>6.8L</td><td>[5] Apply at time of planting and soon after harvesting. For Ground Application: Apply in 200-450 L water /ha.
For Aerial Application: Apply in 30-50L water/ha. Use only closed mixing/loading systems.
See GENERAL INSTRUCTIONS for further instructions.</td></tr>
</table>

Crop Group	Weeds Controlled	Rate /ha	Critical Comments
Turf Established Common couch Hybrid couch Kikuyu	Wintergrass (*Poa annua*) Annual ryegrass (*Lolium* spp)	4L	Apply prior to germination of the weeds (usually from late summer to mid autumn, February to May). Apply every 16 weeks from early February to the end of August. 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. Allow at least 18 weeks between last application and overseeding/oversowing. DO NOT apply by aircraft or through any type of irrigation equipment.
	Crabgrass Chickweed		Apply prior to germination of the weeds (usually from early spring, September to December) Apply every 16 weeks from early September to the end of February. 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. Allow at least 18 weeks between last application and overseeding/oversowing. DO NOT apply by aircraft or through any type of irrigation equipment.
Turf Newly planted (i.e. line planted or sprigged) common couch, hybrid couch and kikuyu.	Wintergrass (*Poa annua)* Annual ryegrass (*Lolium* spp) Crabgrass Chickweed	2.4L	Apply within the first 24 to 48 hours of the stolons being planted. 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. Apply every 8 weeks from planting; a maximum of 3 applications can be made from planting. Allow at least 10 weeks between last application and overseeding/oversowing. Note: the area that is being line planted or sprigged with stolons should be sprayed out with a non selective herbicide prior to planting. DO NOT apply by aircraft or through any type of irrigation equipment.

Crop Group	Weeds Controlled	Rate /ha	Critical Comments
Industrial areas and Rights of Way	**Grasses**: Barnyard Grass Guinea grass Love grass Pigeon grass Paradoxa grass Spiny burr grass (Gentle Annie / Innocent Weed) Summer grass (Crabgrass[3]) Wintergrass (*Poa annua)* Annual Rye Grass (*Lolium Spp)* **Broadleaf Weeds:** Deadnettle Fathen Fumitory Portulaca (*Pigweed)* Sowthistle Wireweed (Hogweed) Chick weed **Brassica species [4]** Blackberry nightshade Caltrop Paddy melon Silverleaf nightshade	Short term Control (up to 4 months) 4.5L Long term control (6-8 months) 6-8L	See GENERAL INSTRUCTIONS for further instructions. Apply using boomspray equipment. DO NOT apply by aircraft or through any type of irrigation equipment. For adequate incorporation a rainfall event of at least 15mm is required to move Prolan 500 Herbicide into the soil. [3] **Western Australia only** Apply early in summer for crabgrass (*Digitaria sanguinalis) control and incorporation with overhead irrigation.* *[4] Control of these weeds may range from poor to excellent depending upon soil temperature, time of germination, depth of weed seed in the soil and amount and timing of soil moisture.*

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

RESTRAINTS
DO NOT use on newly seeded turf areas.
DO NOT use on turf under stress.
DO NOT use on Bent grass or Wintergrass.
DO NOT use on golf greens or bowling greens.
DO NOT apply if forecast heavy rain or storms are likely to cause runoff.
DO NOT irrigate to the point of runoff.

SPRAY DRIFT RESTRAINTS
DO NOT apply Prolan 500 Herbicide by fixed wing aircraft unless wind speed is more than 3 kilometres per hour and less than 15 km/hr as measured at the application site and/or the air temperature is above 30°C, or when the wind is blowing towards susceptible crops.

Aquatic environment
DO NOT apply if there are aquatic and wetland areas including aquacultural ponds downwind from the application area and within the **mandatory no-spray zones** shown in Table A below.

Table A- No-Spray Zones for Protection of the Aquatic Environment		
FOR AERIAL APPLICATION		
Wind Speed Range at Time of Application	**Downwind Mandatory No-Spray Zone**	
	Fixed-Wing	**Helicopter**
from 3 to 8 kilometres per hour	400 m	250 m
from 8 to 14 kilometres per hour	650 m	350 m
from 14 to 20 kilometres per hour	*	450 m

*Not permitted for fixed wing as this is beyond the model capability to model downwind spray zone of >800 m at the highest wind speed.

Terrestrial environment
DO NOT apply if there are non-target vegetation or animal habitat downwind from the application area and within the mandatory no-spray zones shown in Table B below.

Table B – No-Spray Zones for Protection of the Terrestrial Environment		
FOR AERIAL APPLICATION		
Wind Speed Range at time of Application	**Downwind Mandatory No-Spray Zone**	
	Fixed-Wing	**Helicopter**
from 3 to 8 kilometres per hour	400 m	250 m
from 8 to 14 kilometres per hour	600 m	350 m
from 14 to 20 kilometres per hour	*	400 m

*Not permitted for fixed wing as this is beyond the model capability to model downwind spray zone of >800 m at the highest wind speed.