

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

# Surflan\* 500

## Flowable Herbicide

ACTIVE CONSTITUENT: 500 g/L ORYZALIN

GROUP	<b>D</b>	HERBICIDE
-------	----------	-----------

For pre-emergent control of certain annual grasses and broadleaf weeds in non-bearing and bearing fruit and nut orchards, vineyards, nursery stock, ornamentals and amenity plantings as specified in the Directions for Use Table.

APVMA Approval No. 31814/10/0604 (31814/5/0604, 31814/20/0604)

## Contents (5 Litres, 10 Litres, 20 Litres)

\* Trademark of United Phosphorus Ltd

**UNITED PHOSPHORUS LTD**

ABN 76 066 391 384

**Suite 14, L3, 30 ATCHISON ST.**

**ST LEONARD'S NSW 2065 AUSTRALIA**

TELEPHONE 02 9460 8480

FACSIMILE 02 9460 8980

**Surflan 500 Flowable Herbicide**

**DIRECTIONS FOR USE**

CROP GROUP				WEEDS CONTROLLED	RATE L/HA	CRITICAL COMMENTS
Banana <sup>1</sup>				<b>Grasses:</b> Barnyard Guineagrass Love Paradoxa Pigeon Spiny burr (Gentle Annie/Innocent Weed) Summer grass (Crabgrass <sup>3</sup> )	Short term control (up to 4 months) 4.5 L	See GENERAL INSTRUCTIONS <sup>1</sup> DO NOT use as a pre-emergent at the time of planting with tissue culture banana planting material. <sup>2</sup> <b>Western Australia only:</b> Vineyards on medium loam or heavier soil types, heavily infested with crabgrass may be sprayed with up to 9.5 L/ha of Surflan 500 and together with pome fruit and all <i>Prunus</i> species on these soils spraying can be immediately after transplanting from nurseries providing buds are still dormant and no functional leaves are present. <sup>3</sup> <b>Western Australia only:</b> Apply early in summer for crabgrass ( <i>Digitaria sanguinalis</i> ) control and incorporate with overhead irrigation <sup>4</sup> 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 <sup>2</sup>						
Pome Fruit	Apple	Pear	(see also non-bearing fruits)			
Stonefruit	Apricot Cherry	Peach Plum & prune	Nectarine			
Citrus Fruit	Grapefruit	Orange	(see also non-bearing fruits)			
Nuts	Almonds Macadamia	Pecan Walnut			Long term control (6 to 8 months) 6.8 L	
Non-bearing berryfruits	Blackberry Blueberry Boysenberry	Currant Gooseberry Loganberry	Raspberry	<b>Broadleaf Weeds:</b> Deadnettle Fathen Fumitory <i>Portulaca</i> (Pigweed) Sowthistle Wireweed (Hogweed)		
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:	<i>Abies</i> (fir trees) <i>Chamaecyparis</i> (Lawson and false cypress) <i>Cryptomeria</i> Cupressus (cypress) <i>Juniperus</i> (Junipers)	<i>Picea</i> (spruces) <i>Pinus</i> (pine) <i>Platycladus orientalis</i> (oriental arborvitae) <i>Podocarpus</i>	<i>Pseudotsuga menziesii</i> (Douglas fir or Oregon pine) <i>Sequoia sempervirens</i> (Coastal redwood) <i>Taxus cuspidata</i> (Japanese yew) <i>Thuja</i>	<b>Brassica species</b> <sup>4</sup> Blackberry nightshade Caltrop Paddymelon Silverleaf nightshade		

Ancillary panel 1 continued

Nursery stock, ornamentals, and amenity plantings comprising of the following:	Australian native species of the genus:			<b>Grasses:</b> Barnyard Guineagrass Love Paradoxa Pigeon Spiny burr (Gentle Annie/Innocent Weed) Summer grass (Crabgrass <sup>3</sup> )  <b>Broadleaf Weeds:</b> Deadnettle Fathen Fumitory Portulaca (Pigweed) Sowthistle Wireweed (Hogweed)  <b>Brassica species<sup>4</sup></b> Blackberry nightshade Caltrop Paddymelon Silverleaf nightshade	Short term control (up to 4 months) 4.5 L  Long term control (6 to 8 months) 6.8 L	See GENERAL INSTRUCTIONS
	<i>Acacia</i> (wattles)	<i>Casuarina</i> (Oaks and sheoak)	<i>Grevillea</i> <i>Hakea</i> <i>Hardenbergia</i> (sarsaparilla)			<sup>1</sup> DO NOT use as a pre-emergent at the time of planting with tissue culture banana planting material.
	<i>Agonis</i> (WA Peppermint, Willow (or Honey) myrtle)	<i>Chamaelaucium</i> (Geraldton wax)	<i>Hibbertia</i> <i>Kennedia</i> <i>Lechenaultia</i> <i>Leptospermum</i> and <i>Melaleuca</i> (teatrees)			<sup>2</sup> <b>Western Australia only:</b> Vineyards on medium loam or heavier soil types, heavily infested with crabgrass may be sprayed with up to 9.5 L/ha of Surflan 500 and together with pome fruit and all <i>Prunus</i> species on these soils spraying can be immediately after transplanting from nurseries providing buds are still dormant and no functional leaves are present.
	<i>Allocasuarina</i> <i>Banksia</i> <i>Boronia</i> <i>Callistemon</i> (Bottlebrush) <i>Callitris</i> (Cypress pine) <i>Calytrix</i> <i>Cassia</i>	<i>Correa</i> <i>Eriostemon</i> <i>myoporoides</i> (Wax flower) <i>Eucalyptus</i>	<i>Prostanthera</i> (Mintbush) <i>Thryptomene</i> <i>Westringia</i>			<sup>3</sup> <b>Western Australia only:</b> Apply early in summer for crabgrass ( <i>Digitaria sanguinalis</i> ) control and incorporate with overhead irrigation.
					<sup>4</sup> 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.	

Ancillary panel 2

**DIRECTIONS FOR USE (continued)**

CROP GROUP	WEEDS CONTROLLED			RATE L/HA	CRITICAL COMMENTS	
Nursery stock, ornamentals, and amenity plantings comprising of the following:	<b>Exotic species</b> <i>Abelia</i> <i>Acalypha</i> <i>Acer</i> (maples) <i>Arctostaphylos</i> <i>Ardisia</i> <i>Azalea</i> <i>Baccharis</i> (groundsel bush) <i>Bauhinia</i> <i>Berberis</i> (barberry) <i>Betula</i> (birch trees) <i>Bignonia</i> <i>Buxus</i> (box) <i>Calluna</i> <i>Camellia</i> <i>Ceanothus</i> <i>Cistus</i> <i>Clystoma</i> <i>Coleonema</i> <i>Coprosma</i> <i>Cotoneaster</i> <i>Cuphea</i> <i>Cytisus</i> (broom) <i>Dodonea</i> (hopbush) <i>Erica</i> (heath) <i>Escallonia</i>	<b>of the genus:</b> <i>Euonymus</i> <i>Eutaxia</i> <i>Fatshedera</i> <i>Fuchsia</i> <i>Felicia</i> <i>Gardenia</i> <i>Gingko</i> <i>Hibiscus</i> <i>Ilex</i> <i>Jasminum</i> <i>Justicia</i> <i>Kalmia</i> <i>Koelreuteria</i> <i>Lagenaria</i> <i>Lagerstroemia</i> <i>Lantana</i> <i>Lavendula</i> (lavender) <i>Leucodendron</i> <i>Leucothoe</i> <i>Ligustrum</i> <i>Liquidambar</i> <i>Liriope</i> <i>Lonicera</i> (honeysuckle) <i>Magnolia</i> <i>Mahonia</i> <i>Metrosideros</i> <i>Monstera</i> <i>Myrtus</i> <i>Nandina</i> <i>Nerium</i> (oleander)	<i>Osmanthus</i> <i>Parahebe</i> <i>Philadelphus</i> <i>Philodendron</i> <i>Phoenix</i> <i>Photinia</i> <i>Pieris</i> <i>Pittosporum</i> <i>Populus</i> (poplar) <i>Prunus</i> <i>Pseudopanax</i> <i>Pyracantha</i> <i>Quercus</i> <i>Rhaphiolepis</i> <i>Rhododendron</i> <i>Rosa</i> (roses) <i>Rosmarinus</i> (rosemary) <i>Russelia</i> <i>Spiraea</i> <i>Trachelospermum</i> <i>(Rhyncospermum)</i> <i>Umbellularia</i> <i>Viburnum</i> <i>Washingtonia</i> <i>Weigela</i> <i>Xylosma</i> <i>Yucca</i>	<b>Grasses:</b> Barnyard Guineagrass Love Paradoxa Pigeon Spiny burr (Gentle Annie/Innocent Weed) Summer grass (Crabgrass <sup>3</sup> )  <b>Broadleaf Weeds:</b> Deadnettle Fathen Fumitory <i>Portulaca</i> (Pigweed) Sowthistle Wireweed (Hogweed)  <b>Brassica species<sup>4</sup></b> Blackberry nightshade Caltrop Paddymelon Silverleaf nightshade	Short term control (up to 4 months) 4.5 L  Long term control (6 to 8 months) 6.8 L	See GENERAL INSTRUCTIONS <sup>1</sup> DO NOT use as a pre-emergent at the time of planting with tissue culture banana planting material. <sup>2</sup> <b>Western Australia only:</b> Vineyards on medium loam or heavier soil types, heavily infested with crabgrass may be sprayed with up to 9.5 L/ha of Surflan 500 and together with pome fruit and all <i>Prunus</i> species on these soils spraying can be immediately after transplanting from nurseries providing buds are still dormant and no functional leaves are present. <sup>3</sup> <b>Western Australia only:</b> Apply early in summer for crabgrass ( <i>Digitaria sanguinalis</i> ) control and incorporate with overhead irrigation. <sup>4</sup> 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.

Tea-tree oil plantations <sup>5</sup>	Tea-tree ( <i>Melaleuca alternifolia</i> )	6.8 L	<sup>5</sup> Apply at time of planting and soon after harvesting. Apply in 200 to 450 L/ha water.
---------------------------------------	--	-------	---

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

**GENERAL INSTRUCTIONS:**

Surflan 500 Flowable Herbicide is a pre-emergent surface applied herbicide which will control the specified annual grasses and broadleaf weeds in the crops 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 (12.5 mm) 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 2.5 cm of soil.

**MIXING**

The required amount of Surflan 500 should be added to a half-full spray tank and agitated well during completion of filling. Do not leave spray solutions to stand over night.

**APPLICATION**

Apply Surflan 500 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. Surflan 500 is compatible with paraquat, glyphosate, oxyfluorfen and simazine.

**RESISTANT WEEDS WARNING**



Surflan 500 Flowable Herbicide is a member of the dinitroanilines group of herbicides. The product has the inhibitor of tubulin formation mode of action. For weed resistance management, the product 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 this product or other Group D herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, United Phosphorus Ltd accepts no liability for any losses that may result from the failure of this product 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 local United Phosphorus Ltd representative.

**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 onto nearby susceptible plants/crops, cropping lands or pastures.

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

DO NOT contaminate streams, rivers or waterways with the 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

**SAFETY DIRECTIONS:**

- Avoid contact with eyes and skin.
- Do not inhale spray mist.

**FIRST AID**

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

**MATERIAL SAFETY DATA SHEET**

Additional information is listed in the Material Safety Data Sheet for Surflan 500 Flowable Herbicide which is available from United Phosphorus on request. Call Customer Service 02 9580 9790.

**CONDITIONS OF SALE:** United Phosphorus accepts responsibility for the consistent quality of the product; however since the use and application of the product is beyond control, the company accepts no responsibility whatsoever for any loss, damage or other result following the use of the product whether used in accordance with directions or not; other than those mandatorily imposed by statutes, the liability is limited to the replacement of the goods and is conditional upon a claim made in writing and, where necessary, a sufficient part of the goods being returned for proper examination by the company within thirty days of sale.

Batch No.

DOM

Bar Code